

**SELF-THERAPY FOR TRAUMATIC BRAIN INJURY:  
TEACHING YOURSELF TO PREVENT HEAD-INJURED MOMENTS**

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## Introduction: Start Here!

This guidebook explains basic information about fixing a traumatic brain injury (TBI). The professional world has only gotten good at treating TBI since 1974, which at this writing is 34 years ago. I began to study neuropsychology in 1980 and brain rehabilitation in 1981. Brain rehabilitation has always been done in a hospital, clinic, or professional office, never as self-help. However, over 90% of the people who have these injuries don't get brain rehabilitation, and over 99.9% do not get the advanced methods that have proven to work best. Since I have been teaching patients how to fix their own injuries in my programs for many years, I saw no reason why the methods couldn't be put into a book--this book--and used on a self-help basis. I wrote this book in 2003-2004, putting into it every technique I regularly used for TBI patients. I decided to make the book available to everyone who might need it, so I posted it on my organization's Web site for free. Hundreds of people have downloaded this book and then told me that it helped them. We have used it as the core recovery curriculum of my organization, GiveBack, Inc., for more than a hundred survivors from Central Florida. It seems to work for those who use it, and it has done very well for those who worked their programs hard. I hope it works for you. Let me know.

But please keep this in mind: Professional rehabilitation is a time-tested approach, whereas self-help is not. Get professional help if you can. Try to get it from the most expert provider you can find. Turn to self-help methods only after you have used up your professional therapy resources. Self-help is not a form of professional rehabilitation. I cannot prescribe therapies for you, or supervise those therapies, in the way I would in my office. So what this book provides is education. It teaches you a different way to look at your behavior and your life and offers you some techniques that could improve your functioning. These are things you can try out on your own to see how much they might help you. If you can get a family member or responsible friend to work with you on your self-therapy, so much the better. If you can get a professional counselor or therapist, even one who has never worked with head injury before, to learn them with you and help you to build your self-therapy program, so much the better.

Here are the basic ideas behind recovery from TBI:

1. Head injuries don't heal up. The injury continues to cause problems in your life until you recognize that you have to fix it and get it done. Fixing means finding a better way to run your brain. The fix works only as long as you run it in the new way. So fixing your brain is not a job you finish doing--it's a way of life.
2. Brain fixes are not obvious. The injury makes your brain send out a signal that you're doing fine. Those who take this signal at face value don't realize that the injury messed up their thinking skills, so they don't learn to fix the problem no matter how many years pass. Survivors only get on top of the problem when they start to recognize that the brain injury is affecting them, and set about finding out what it has done.
3. The only good fix for a damaged brain is self-therapy. No doctor or psychologist or therapist, or for that matter, family member or friend or priest or minister or rabbi can fix you, because what is wrong with you is happening inside your head. You are running the programs you created to run your old brain. Those programs don't work properly on your new brain. Until you learn to re-program the things you do, you'll go on having *head-injured moments*, unexpected foul-ups that make your life harder.
4. Most survivors never figure out how to fix the injury; they go on to have the problems for the rest of their lives. Fixing a head injury is unnatural, and it's not easy to do. It's not a common-sense process--if it were, most people would be doing it on their own. It requires watching yourself closely, changing your habits, and developing self-discipline. However, once you set up the new habits, it's not complicated like rocket science. Once you set up a basic program of self-therapy, recovery begins to grow from there. Your recovery gains momentum, becomes more real to you, and feels more rewarding, the more you work your program.

5. Most people are accustomed to looking to their doctors to fix them when the problem is an illness or an injury. That is not likely to be a good strategy when it comes to TBI. Doctors receive no training on how to fix this injury, even if they specialized in neurology, psychiatry, or rehabilitation. In the United States, only a handful of doctors and other professionals are experts on how to fix TBI. You probably don't have any in your home town. Your best bet is to learn how to do the fix yourself, and to get your family to help.

6. You should not believe what anyone tells you about TBI. It has become a hot topic lately, so there are now many Web sites distributing partially accurate or even totally bogus information. Everyone claims to be an expert. If you have good sense, you won't take what I say on faith, either. There are only a few reasonable ways to put confidence in what people tell you. The first one is the approval of professional credentialing organizations. My credentials as an expert in rehabilitation are signified by the diploma of the American Board of Professional Psychology (ABPP). My contributions to the field of neuropsychology are recognized by my election to the status of a Fellow of the National Academy of Neuropsychology. My programs have been accredited in TBI by the high standards of the Commission on the Accreditation of Rehabilitation Facilities (CARF). These are major league accrediting bodies in TBI. However, there are also bogus accrediting bodies, so when you check out credentials, you also need to check out the accrediting agencies. Information is also likely to be more reliable if it has been published in a major professional journal. This manual provides you with a set of articles, chapters, and books that are expert sources for the information presented. Watch for the most important journals, such as the *Journal of Head Trauma Rehabilitation* and *Brain Injury*. Getting bad advice is awfully easy to do, and it can harm your recovery.

7. You can get rehabilitation for TBI in almost any town in the USA, but most of it is not fully specialized. We have had effective rehabilitation in this country since 1978, and the knowledge of how to do it has spread slowly. I trained under one of designers of the original high-tech program. That approach is still the most effective method we have. If you have the \$70,000, you should consider attending that program. It is located at New York University's Rusk Institute of Rehabilitation Medicine, under the field's founder, Dr. Yehuda Ben-Yishay. Expert programs are also offered at Barrow Neurologic Institute in Phoenix, Arizona, under Dr. George Prigatano, Robert Wood Johnson Rehabilitation Institute in Edison, New Jersey (where I trained), under Dr. Keith Cicerone, or Mount Sinai Hospital in New York, under Dr. Wayne Gordon.

8. People who find a knowledgeable self-therapy teacher don't always learn self-therapy. Many of them are not willing to learn. To learn self-therapy, you need to admit that you don't know everything you need to know about your brain. Some people believe they already know themselves and reject the idea that someone else can teach them about themselves. If you believe this, self-therapy will not work for you. This guide book can help you only if you are open to learning things about yourself that you don't already know.

If you happen to have a brain injury of some other kind (such as a stroke, a tumor, brain damage from lack of oxygen or anoxia, a brain infection, or other causes) you are welcome to check out these concepts and instructions and try to apply them to yourself. I have used these ideas and approaches with my patients who had other kinds of brain injuries, and many of them fit, and work, quite well. However, the fit is not perfect, and there will be things in this book that do not apply to a non-traumatic brain injury.

If you want to read up on the topics in this introduction, a good place to start is the Web sites for the Mayo Clinic, Mt. Sinai Hospital in New York City, and the Brain Injury Association. A good general introduction can be found in Head Injury: The Facts, and a pair of guide books called How to Do CRT, by two experienced British therapists. You may also find this guide's companion book for family members useful. If you would like to read some of the professional publications on this topic, I can recommend Principles of Neuropsychological Rehabilitation, by George Prigatano, the expert in Phoenix. However, keep in mind that professional books and papers (including the ones I have written) are not written in English, but in a kind of techno-speak language for psychologists. You'll probably want to use a medical dictionary like Taber's Cyclopedic Medical Dictionary. All books recommended here are listed at the end of this book.

## CHAPTER ONE: LEARNING ABOUT THE INJURY

1. "I have a head injury that damaged my brain and changed my life."
2. "Hope and prayer can give me strength, but I'm the only one who can fix my life."
3. "My injury hides itself from me, but I can teach myself to see what it's doing to me."

Head-injury survivors can spend their lives trying to prove that the injury has not changed them in any important way. It's easy to do, and there is plenty of evidence. Most survivors can still do everything they could do before the injury, even their most advanced job and hobby skills. If they could run a computer before, they can still do it. If they knew how to do brain surgery or rocket science, they still do. If they could speak four languages, they still can. If they knew the whole history of ancient Sumeria or ancient Motown, they haven't forgotten it. They are 98% the same as they always were. But they usually feel 100% the same, and often they work hard to claim to be 100% the same.

They are the ones who don't recover.

There is another way to live after a head injury. It involves working to notice what has changed. Most survivors don't do this. It would be unpleasant and negative, and many people want to think positive and feel good. Besides, all survivors get a powerful feeling from inside that they are doing things correctly at all times. The injury has shut down the brain's quality control system, jamming it in the "all clear" position. The brain says everything the survivor does, everything the survivor says, is coming out just right. It says "I am no different than I was before the injury." And it's not just a weak feeling--it's a feeling of total certainty, a lock, dead solid perfect, a slam dunk! It's the feeling the person has always gotten when things went *just* right. It feels good, and it feels right. So why question it?

Some people question it because it is their style to be concerned about screwing things up. They hate to fail, and they want to be extra careful. And the moment a survivor tries to be extra careful, that feeling of being right on the money, dead solid perfect in everything you say and do doesn't make sense. Because if you look for things you have screwed up, you can find them. There have been more errors, more missed opportunities, more things you wish you had said in another way, more bad decisions, more times when you forgot to do something important or forgot a critical message--yet each time, you felt okay about what you were doing. As soon as you look for the things you're doing wrong, you start to find them. And once you do this, you can see that for some reason these errors don't *feel* wrong when they occur. And for some strange reason, you aren't thinking of yourself as a person who makes more mistakes now, even though you should. As you think about that, you begin to realize that there's something wrong with how you evaluate yourself.

The survivors who realize this are the ones who start recovering on their own.

At first, it's hard to believe that something like this, something pretty major, could be wrong and you would have no idea about it, would even feel that it *can't* be wrong with you. Are you supposed to ignore your feelings, distrust your own strongest intuitions? To recover, you must consider that you might have these problems--not be convinced of them, but just decide to look into them. You need to avoid trying to prove how recovered you are and begin looking at the possibility that you are only 98% recovered. You need to start looking for the 2% that isn't recovered, because that's where you get back control of your life.

FOLLOW-UP: If you want to read publications on this topic, a good place to start is *Head Injury: The Facts*, written by Dorothy Gronwall and associates. Dr. Gronwall is a top neuropsychologist. One important professional book is written on this subject: *Awareness of Deficit After Brain Injury* by George Prigatano (the top program director from Arizona) and Daniel Schacter, a big league research scientist. Be prepared to have a medical dictionary available, because the language in this book is rather technical.

## CHAPTER TWO: Head-Injured Moments

4. **“Usually I can do everything I try to do, but sometimes I have head-injured moments.”**
5. **“I can’t feel or sense my head-injured moments; I learn about them by studying my actions.”**
6. **“If I pay attention to them, those moments can teach me how my new brain works.”**

A head-injured moment happens when you do something without enough quality control and it comes out less than perfect. Maybe you did it too quickly to get it just right. Maybe you would’ve done it better if you’d waited until the time was right, or had thought it all the way through, or had just been a little more careful about what you said and did. If you had a chance to do it again, you’d do it some other way.

Why do head-injured moments happen? That’s easy to explain. There are two ways to do anything--on automatic pilot (also known as doing them the easy way), and in the thoughtful-and-careful mode. You do routine things on automatic pilot--your chores, your morning routine, the drudgery duties of your job or schooling. You greet the mail carrier on automatic pilot. You buy items in the grocery store on automatic pilot. Once you have done a job for a few months, most job routines start to become habits, and you can do them on automatic pilot. Even rocket scientists and brain surgeons end up doing most of their jobs on automatic pilot when they get enough experience. It is estimated that the ordinary life of the ordinary adult is lived on automatic pilot 98% of the time. And after TBI, the automatic stuff works okay.

Sometimes you turn off the automatic pilot and think through what you’re about to do or say. That happens when doing something totally new. We all went into thoughtful/careful mode when we first learned how to ride a bike and how to drive a car and how to use a computer. We use that mode whenever the stakes are very high--when applying for a good job, when proposing marriage, when trying to get out of a traffic ticket, when a big bet or a big bonus is riding on how we perform, when handling or using something that is exceptionally valuable, or when we our work is being watched by someone important who might criticize us. We go off of automatic pilot when we run into hazards and dangers. What happened on Flight 93, when the passengers figured out that they were hijacked by terrorists? They stopped everything and made a plan. They became thoughtful and careful, and saved thousands of lives by deciding to take heroic action.

Most of the head-injured moments happen at times when thoughtful/careful mode is needed but the damaged brain doesn’t see that. The most serious problem in TBI is the breakdown of the system that watches to see when thoughtful/careful mode is needed, when the automatic pilot needs to be shut off. After TBI, the brain misreads the situation, fails to see the need for thoughtful/careful mode, and instead stays on automatic pilot. That causes the person to say or do things impulsively, while feeling as if what he or she is saying and doing is perfectly correct. The behavior comes out wrong, but the survivor is left feeling confused about why everyone is getting upset. The reason why is that we are expected to shut off the quick-and-dirty autopilot mode when something important needs to get done properly. In ordinary life, only a slob, or a jerk, or a loser, or a person with a bad attitude--someone who doesn’t care enough to be sure to get it right--would use the quick-and-dirty method when the stakes are high. Consequently, employers, friends, and family end up getting annoyed and then outright angry with the survivor for being so careless. It may take months or even years, but eventually the people in the survivor’s life begin to give up on him/her because of this failure to use normal quality control, this failure to try hard enough to get things right that really matter. Even though the head-injured moments are rare, they have a huge impact over the months and years. And if you watch for them and write them down, you can start to learn how to fix them.

FOLLOW-UP: The Gronwall and Prigatano and Schacter books discuss impulsive and careless errors and the failure to plan and problem solve when needed. More detailed explanations are provided in *The Executive Brain* by Elkhonon Goldberg, M. Marsel Mesulam’s 2002 chapter (see references), *The Frontal Lobes*, a classic book by Stuss and Benson, and *The Mind’s Past*, by neuropsychologist Michael Gazzaniga.

## CHAPTER THREE: Learning How to Recognize Head-Injured Moments

7. “My head-injured moments are like gold--the more I treasure them the faster I will recover.”
8. “To make sure that I remember and learn from them, I try to write down as many as I can.”

Head injuries break connections in the brain. Broken connections don't heal or fix themselves.

One very delicate brain connection usually gets broken in a head injury. It runs the brain's system to recognize when things go wrong. This is the part of the injury you need to watch for.

Because of this damage, survivors don't pay attention to their head-injured moments. They tend to ignore and forget their mistakes. This is why they think that their head-injured moments don't happen that often. They think they mess up only as often as they did before the injury.

If you are going to fix your head-injured moments, you have to know them. To know them, you have to study them. To study them, you have to make a written record of them, or many will be forgotten. If you keep good records, you'll begin to get a new understanding of your injury. This is the first step of self-therapy, the most important step. How well you do it determines how well your self-therapy works.

**Get a Therapy Notebook** (a 3-hole binder) in which you can start taking notes on your head-injured moments. Anything you do that doesn't work out the way you planned, or the way you wanted it to go, or that comes out less than perfect, for any reason, is a moment you should write up. Write what you were trying to do, what you did that you shouldn't have done, or what you didn't do that you should have done.

Your brain will try to convince you that you don't need to write things down, that you can remember them. Don't listen. The written record is your only protection against the facts slipping your mind. Your brain will tell you that you can write them down later on, when you have more free time. Don't listen. Write them down right away. Don't let yourself take any chance to forget.

When a head-injured moment happens, your brain will try to look past it, to overlook it. To notice your head-injured moments, you have to be **looking** for them. Make it your business to search for them and find them. The more effort you put into noticing them, the more you'll find.

When a head-injured moment becomes obvious, your brain will try to convince you that it doesn't count. There will be excuses and explanations. Ignore them. The way to recognize a head-injured moment is by the fact that something went wrong. Most head-injured moments don't feel like they're your fault. Your brain is locked into thinking that you haven't done anything wrong, and it has many ways to explain away your errors. If you listen, your brain will stop your recovery, so don't listen. Say to yourself, “This *could be* one that I should write down.” Make every mess-up count, by writing it down. The more “could-be” head-injured moments you write down, the sooner you'll learn to do self-therapy.

If a friend or family member points out a screw-up, thank them and write it down. Your brain will want to argue with them, and to get annoyed. It will try to make you feel nagged, criticized, picked on. Don't listen. Use the feedback to learn about yourself. The more items on your list, the sooner you take the next step in self-therapy.

Make sure you do everything you can to understand the information in this chapter. How you understand this chapter will determine how much self-therapy you can accomplish.

This book is telling you to doubt your own feelings about yourself. Your brain has been telling you, and will keep on telling you, that your thinking doesn't mess up any more often than it always did. Your brain is telling you that it's still normal. Why should you ignore those happy messages from your brain?

They come in loud and clear, and they sound so certain that you feel inclined to believe them completely.

If you take self-therapy seriously, you will gradually teach yourself why you need to second-guess your feelings about yourself. As soon as you start double-checking yourself carefully and keeping records on the things you mess up, you'll find evidence that your brain has changed. The closer you watch yourself, the more evidence you'll find. But the only way to find it is to start watching yourself more carefully than you ever have before. Your normal ways of knowing yourself will keep telling you that nothing has changed. That's how head injuries work.

If this sounds crazy or wrong to you, that's a natural reaction. Any reasonable person would react to this strange information that way at first. But keep thinking about it. What if it's true? If the injury has messed with the way you see yourself, you couldn't rely on your own thoughts to make sense of this issue. To make genuine sense of this, you will need two kinds of outside information.

**FOLLOW-UP:** First, is it true that a head injury makes a person's mind convinced that nothing is wrong with it even if it's seriously messed up? There are many ways you can get a good answer to that question. Check out what other people who are coping well with their head injuries say about what they learned about themselves. There is a great book by Claudia Osborne called Over My Head in which she explains how much her injury made her blind to what was wrong with her brain at first. Recovery stories by successful former patients are listed on [www.givebackorlando.com](http://www.givebackorlando.com), in which they explain how they were affected by this kind of brain-blindness until they learned how to watch themselves carefully. If you know any head injury survivors, ask them. If you don't, try a head injury chat room. What you will find is that almost everyone who is doing well with their injury tells the same story: "I thought I was thinking fine, and it was hard for me to learn better, but now I know I don't think like I used to."

You can also check out books and articles about head injury, where they talk about the issue of "awareness of deficit." The Prigatano and Schacter book is the best reference. The Gronwall and associates book mentions this issue. You can also find some interesting discussion in *Descartes' Error* by Antonio Damasio and *How Brains Think* by William Calvin, both of which are relatively easy to read. Finally, there is a more technical discussion of these issues in George Prigatano's *Principles of Neuropsychological Rehabilitation*.

The second question is, how is my own brain working differently now? Your family can probably tell you that your brain has changed, but they probably don't fully understand how it has changed. Your friends may not be willing to tell you--friends are supposed to stand by you when you get hurt, and if that means lying to the person about what is wrong, a good friend will do that. Only a great friend will make him or herself rude enough to tell you the whole truth. But that's okay--the first thing you are going to do in self-therapy is to learn how to study your own brain and figure out for yourself how it has changed.

## CHAPTER FOUR: Learning Where to Look to Find Head-Injured Moments

9. "No head-injured moment is too small to matter; they all teach me something about my new brain."  
10. "The more carefully I analyze my head injured moments, the better I know when to expect them."

It is actually quite hard for most survivors to spot their head-injured moments at first.

They mess up some little thing and the brain says, "This is just a tiny thing. It's not important enough to write down." Don't listen. Almost all of your head-injured moments are the tiny ones. It is tiny errors that cause most of your problems. By studying the little stuff, you can learn exactly how your head-injured moments work. If you toss your wallet toward your dresser-top and miss, that's just a little thing. But it tells you something important about your injury.

I learned about head-injured moments by noticing that they occur in patterns. I suggest that you do the same thing. Once you know the patterns, you will know what needs fixing. By the time you have one or two pages full of head-injured moments, you will start seeing the patterns.

Here is a pattern. Head injury makes you mess up when you do something new or unfamiliar, or try to deal with new or unfamiliar people or new or unfamiliar places. Survivors usually stop trying new things and exploring new places. They become "creatures of habit" or "couch potatoes." Try a few new things, new people, or new places. You'll soon notice how much harder they are to deal with, and how many head-injured moments they give you. Have you ever moved to a new home after your head injury, or tried a new job? What a hassle! There is no better way to have a bunch of head-injured moments for learning purposes.

Here is another pattern. When you get tired, your brain runs out of chemicals and starts to misfire. You get slower, more careless and confused. It happens when you don't get enough sleep the night before. It also happens when you concentrate on one thing for a period of time. The more tired you get, the more likely head-injured moments become. You messed up when you got tired before, but now you get tired quicker and mess up more when you are tired.

When you become emotional, your emotions steal the limited supply of energy your brain needs, and they also interfere with your thinking. Any strong emotion can mess your brain up.

The injury makes you tend to rush, and when you rush you tend to mess up. This usually gets worse under stress or pressure. If someone is watching or criticizing you, it's easy to mess up.

As tasks get harder, the injury prevents you from noticing that you have to be more careful. As many as half of your head-injured moments may happen on tasks you know how to do perfectly well, but you don't do them carefully enough this time.

The hardest tasks we have involve dealing with other people. They may not seem that hard, because your brain is supposed to work out how to deal with people automatically most of the time. But that only happens if your brain senses trouble coming. After head injury, that's the job of the broken system. Dealing with other people, especially in relationships, is often the biggest source of head-injured moments. Your parents may cut you some slack, but bosses, teachers, spouses or dates, friends, more distant family, and new acquaintances can be hard to deal with.

Add what you are learning about *when* your head-injured moments occur to your list. For example, you might write "another time I messed up after getting mad."

FOLLOW-UP: See *Head Injury Rehabilitation* by Wood, *Cognitive Rehabilitation* by Sohlberg and Mateer, *From Neuropsychology to Mental Structure* by Tim Shallice, and *The Organism*, by Kurt Goldstein.

## CHAPTER FIVE: Figuring Out What Went Wrong

### 11. “There is a pattern to my head injured moments. They affect me in certain, specific ways.”

Once you have a full page of head-injured moments, you can start to search for the patterns.

Self-therapy involves learning what head-injured moments look like and when they happen.

You may have an injury that causes special problems with slow reactions. Do you have trouble getting started in doing something? Do you sit around a long time before getting going? Do you procrastinate (waste time before getting started with a chore or a hard task)? Are you bored? Is it hard to make decisions? Are you the last one to be ready to order your food in a restaurant? If that is the kind of injury you have, then your life will be full of little opportunities that are missed, and minor hassles because of getting started too late. In the rehab world, we call these moments initiation problems. Once you recognize the pattern, you may find that these problems happen often, and once you put a label on them, you will probably start to recognize more of them. This means you are taking the second step of self-therapy.

Maybe your initiation isn't a problem, but you make quick decisions that aren't always well-thought-out. Some injuries cause people to react too quickly, before they have worked out the details of what to do. Do you speak your mind and then afterward realize that some of the things you said are upsetting other people or making trouble for you? Do you start to do things, and then realize that this is not the time and place, or that you don't have everything you need? Do you start to do something complicated and end up skipping some of the steps? Do you run into problems, and afterwards realize that you could have prevented those problems if you just gave it more thought? In the rehab world, we call these impulsivity problems. Many survivors have this pattern, and some have both the initiation problems and impulsivity.

Most survivors cannot think as well when they are bombarded by too much stimulation as when things are calm and quiet. Many kinds of stimulation can mess up the brain. It can be too much noise or too much commotion, too much to look at, or it can just be chaos or uncertainty. The problem with emotions interfering with thinking also comes into play here. Anger, fear, worry, stress, pressure, excitement, enthusiasm, all emotions can overload the brain. When you start to get overloaded, the first thing that happens is less thinking and more impulsivity. Then thinking gets confused. And finally, if the stimulation continues, the mind blanks out entirely.

Motivation can be a problem in two ways. Caring too much can over-stimulate your brain. Having nothing to do that you care about can leave you bored and empty, and feeling unwilling to do things carefully and correctly. Some head injury experts believe that the injury puts the chemicals that make you care about getting things done into short supply, so that you don't make enough effort. You become more like a person who simply doesn't care about anything.

Some good professional books that discuss these matters include the books by Wood, Goldstein and The Executive Brain by Elkhonon Goldberg and The Frontal Lobes by Stuss & Benson.

## CHAPTER SIX: Memory Issues

### 12. “For example, I tend to forget certain kinds of information that I need to remember.”

Although most survivors are not naturally aware of their symptoms in most areas, they do recognize their tendency to be forgetful.

The issue of memory is confusing, because some things are very easy to remember after a head injury, and others are very easy to forget.

There are two basic kinds of memory: remembering things you learned in the past, and learning new things. The first kind of memory is usually okay after a head injury. The second kind is usually a source of problems. Memory for learning new information is permanently weakened by almost all head injuries.

The ability to learn new information depends on how important the information is, how much it gets focused on and thought about. If you have to learn a lot of information quickly, for example, from reading a chapter one time, most people cannot remember all of it. After a head injury, most people cannot remember much of it, and some can't remember any of it.

For the same reason, survivors tend to forget many of the things that get mentioned in conversation. If the memory system is badly damaged, they may even forget that the conversation took place.

For the same reason, survivors often forget that they have already told something to someone, and they tell the same story twice, or make the same request twice.

For the same reason, survivors often forget where they have put things. Most people are not in the habit of thinking hard about where they put things. Looking for where the car was parked in a mall parking lot can be a total disaster.

New learning problems can be fixed, to some extent, simply by concentrating hard on new information and thinking about what makes it important to learn. This increases the chances that it will be remembered. Unfortunately, there are some things that need to be remembered for certain, so improving the chances of remembering is not good enough. Information that needs to be available for certain must be written down, or tape-recorded, or put into a computer.

Problems with new learning make it hard to remember head-injured moments. It is necessary to write them down because they seldom get thought about enough to be remembered.

People who are having good recoveries usually carry a pocket notebook to write down important things that come up. They usually have a pad of paper by the telephone so they can take notes. When they go to a training class, or a doctor's appointment, or a consultation with an attorney or an accountant, they bring a notebook or a tape recorder. We will discuss specific techniques to cope with different memory symptoms in later chapters of this book.

This material is discussed in [The Rehabilitation of Memory](#) by Barbara Wilson and [Introduction to Cognitive Rehabilitation](#) by McKay Moore Sohlberg & Catherine Mateer.

## CHAPTER SEVEN: Figuring Out How Big the Problem Is

### 13. “By knowing how severe my injury is, I can understand how much disability to expect from it.”

How much a head injury has changed a person depends on two factors. The more important factor is how many brain cells were killed in the accident. The term for this is the severity of the diffuse injury. Severity determines how serious the symptoms of the injury are. The second factor is the effects of a hole in the brain, also called a focal injury. Focal injuries are produced by strokes, tumors, gunshot wounds, shrapnel, injuries that break open the skull and hurt the brain underneath, and blood clots on the brain. Sometimes a head injury also produces a badly bruised area called a contusion. The effects of a focal injury depend on the size and the location of the hole. The issue of focal injury is somewhat complicated, so it will be discussed later on.

The severity of the injury is the main cause of disability. Disability refers to obstacles to functioning in real life. For example, severe head injury tends to produce social disability, which makes it more difficult to be socially popular, to make and keep friends, to have a satisfying marriage, and to get along with other people. It also produces educational and social disability, which makes it more difficult to succeed in school and in a job. Disability doesn't mean that a person cannot participate in these roles under all circumstances, but it does mean that unless the person makes exceptional effort, the participation will be of uneven quality. When people with severe injuries do not make special efforts, they often get excluded from these roles because of an unacceptable track record over time.

Severity is mainly determined by the length of coma.

A coma is usually considered to indicate a severe injury, and severe injury is associated with permanent disability. The point at which coma is determined in research studies comes when the patient is examined by the admitting physician in the hospital. That examination usually takes place more than an hour after the injury, so a coma lasting about two hours is the minimum level I regard as a severe injury.

If an injury produces less coma than one hour, or no coma, it may or may not produce permanent disability, but the shorter the coma, the lower are the chances of any disability.

If the coma is more than one hour, the amount of disability it produces will depend mainly on how much longer it is. Coma of one day has much more serious effects than coma of six hours. Coma of one month tends to limit a person's possibilities even if a great deal of effort is made. Coma of two months or more rarely allows the person to hold a mainstream job of any kind.

If you know your coma level, it tells you how important self-therapy is for your future. If you don't know it, you should find out. Coma extends from the loss of consciousness until the patient is able to follow commands or starts speaking, whichever comes first. Family members usually remember when their survivor came out of coma, and the information is also found in medical records. Some medical records rate coma by the Glasgow Coma Scale or GCS. Coma is considered a score of 8 or less on this scale.

Survivors differ in how much they know about their injury and how they receive information about it. A few survivors know that the injury has truly changed how they think, and the information on this page makes sense to them. Some others are surprised to read about how serious their injury is, but they are open-minded about it and feel determined to learn more and to do something about the injury. However, most survivors find this information hard to believe, and some actually get angry about it. Since most people with head injuries don't **feel** head injured, and don't **seem** head injured to themselves, their first reaction to head injury education is that it must not apply to them. This is true no matter how disabled they might be. So if this is your reaction, you need to understand that feeling like rejecting education about head injury is one of the main symptoms of a head injury.

If you are one of the people who finds this information hard to believe, there are several things you can do to square your feelings with the facts. First, check out the readings suggested in Chapter Three. “Is it really true that the brains of head-injured people tend to fool them into thinking they’re not affected? Because if that’s true of most people with head injuries, then I should probably suspect that I’m doing it, too. And I don’t want to hide from the facts.” Second, you need to gather some believable information about how to figure out the effects of a head injury. The readings at the end of this chapter are a good place to start, if you don’t mind reading things written in professional language. If not, you can try surfing the Net for information about coma length or duration or about the Glasgow Coma Scale. After you have done some reading, you will discover that these ideas about head injury effects are well-established and well-documented, and not just some off-the-wall notion. You can also try talking to knowledgeable survivors about this issue, either through GiveBack or through the Brain Injury Association (in the U. S., or Headway, in the U. K.). Once you know what the medical facts are, you can check them out with your family. “Am I really impulsive sometimes? Do I have a problem with being reliable about following through on my commitments? Am I hard to deal with and to get along with? How often do I seem to be unreasonable?” If you want the truth about your injury, go to the people who are willing to tell you the truth, and don’t just want to make you feel better about things. Once you know the truth, you will be ready to deal with your injury.

You can read up on these facts in Head Injury, edited by Paul Cooper, The Neurobehavioral Consequences of Closed Head Injury by Harvey Levin and associates, and Traumatic Brain Injury, edited by Erin Bigler.

## CHAPTER EIGHT: At the Crossroads of Recovery

14. **“I want to teach myself how to live like a self-therapist so that I can have more recovery.”**
15. **“I learn how to do self-therapy by watching other recoverers, and by reading recovery stories.”**
16. **“I know that by making recovery techniques a part of my day, I commit myself to recover.”**

You have finished reading about the basic issues in self-therapy. This is the point at which you choose your course of action.

If you have started recording your head-injured moments, you are engaged in self-therapy. You can gauge your progress by the number you have written down so far.

If you are interested in self-therapy but have not written anything down, you need to make a decision. You cannot “kind-of” do self-therapy, nor can you do it “mentally.” It requires a commitment to write down your head-injured moments. If you decide not to do that, you are not going to be doing self-therapy. This therapy has benefits only for active participants.

Most survivors have mixed feelings when they are done with their rehabilitation education. They are not convinced that they need to study their injuries, but they realize that it might be so. If that’s how you feel, that doesn’t have to limit your recovery through self-therapy. Many of the people who had the best recoveries were not convinced to do self-therapy for months, or even years, after starting rehab. Although they were not convinced, they starting doing it anyway. Once you do the therapy, you begin to learn the things that will eventually convince you to be a full-on self-therapist.

Some survivors have a very hard time noticing their errors at first. It can be extremely helpful to have a friend or family member keep a list of head-injured moments for you to use until you can recognize them on your own.

Some survivors reject the idea of recording their head-injured moments based on the feeling that their mind is working fine, or the feeling that they already know all they need to know about their mind. When family members tell me that their survivor has had this reaction, I suggest that they keep their own list of the head-injured moments from then on. They should offer the survivor the opportunity to look at their list any time, but leave it up to him or her. Those who eventually read the list often start to see the patterns of their symptoms in spite of their beliefs, and that can help them get started into self-therapy.

If you are doing your program right now, you are on a totally different pathway than most people with head injuries. Instead of overlooking and ignoring your symptoms, you are studying them. Instead of being ignorant about them, you are starting to understand them. Instead of being helpless to do anything about them, you are already starting to get some ideas about how you need to fix yourself. Stick with your self-therapy program, and the differences will get bigger as you begin to take control of your head injury.

A paper from my group is relevant to this chapter: “Models of Exceptional Recovery in Adaptation After Severe Traumatic Brain Injury: A Case Series”.

# CHEAT-SHEET FOR NOTICING HEAD-INJURED MOMENTS

1. Things I wish I had not done, or things I wish I had done differently.
2. Things I wish I had not said, or things I wish I had said differently.
3. Things I said or did that got a bad reaction out of other people.
4. Things I said or did too quickly.
5. Things I said or did without being careful enough.
6. Things I forgot to do.
7. Things I wanted to do but did not get around to doing.
8. Things I was told and later forgot.
9. Repeating myself without realizing it.
10. Forgetting where I put something.
11. Getting too emotional.
12. Wasting time.
13. Spending too much time on something that was unimportant.
14. Spending too little time on something that was important.
15. Being unable to put something out of my mind when I need to.
16. Making the same mistake I made before.
17. Taking unwise risks.
18. Misunderstanding people.
19. Having trouble getting others to understand me.
20. When search for something, overlooking it.

## CHAPTER NINE: Step Two: Taking Control of Your Life--The Action Window

1. When you notice a bad habit or you want to start a new good habit, you make a promise to yourself.
2. If your brain doesn't hold that promise in the front of your mind, you lose sight of it and break the promise. If you can't get yourself to change your habits, you are not in control of your life--it controls you.
3. The surest way to keep a promise in front of you is to put a dry-erase board up in your home and to write that promise on the board. We call that an action window because it is a call to act.
4. This works only if you use that board ONLY as an action window, and only put ONE action in it at a time. If you put more than one action in it, it won't command your attention, and thus it won't give you full control over yourself. What you put in the window needs to be treated as a promise you are going to keep.
5. You should put the action window in the room in which you spend the most time.
6. The first thing you might want to put in your action window is, "Write down my head-injured moments." You can keep that in your action window until the new habit is firmly in place, or until you come up with a message that is more important.
7. Treat what you put in the action window as a *sacred* promise to yourself. Don't ever let it slide. Prove to yourself that you can trust yourself to come through. Doing that will make the window powerful for you.
8. No one else is allowed to put something in your action window. It is for you and only you. If someone else puts something in there, erase it and replace it with the thing you want to take control of.

The action window is an original concept. There is no other source to read up on it. The use of signs to prompt action is discussed in the chapter by Gross and Schutz and in the book by Sohlberg and Mateer.

## **CHAPTER TEN: Keeping Appointments and Arrangements Yourself—The Appointment Book**

1. A classic head-injured moment: You have made a doctor's appointment or an arrangement to meet a friend. It slips your mind. You don't show up. When they ask you what happened, you say, "I forgot." Not good. You either look like you don't care, or like you don't have your life in order--bad either way.
2. Remembering appointments is based on a special kind of new learning called prospective memory. Prospective memory usually becomes unreliable after a head injury.
3. Most people realize that they have to write down their appointments.
4. Everyone does not realize that they have to write the appointments in a special place, and develop the habit of checking that place every day. Even more important: you have to write the appointment down as soon as you make it. If you make it while you are away from home, you have to write it down in that special place at your first opportunity. If you don't do it that way, you will forget to write it down sometimes. A system like this works only if you have air-tight rules for how to use it, and always follow those rules.
5. Many people have developed the habit of writing their appointments and arrangements on a calendar. That's okay, but for people with head injuries, a calendar is really not big enough to use for all necessary purposes. We will talk about other scheduling habits later on. Rehab programs strongly recommend using a daily planning book, like a Daytimer, rather than a calendar. It has plenty of room to record appointments, and it is portable, so you can take it with you when you go to someplace where you are going to make a new appointment.
6. One of the habits you see in people who make top recoveries is the use of a daily schedule book. It is strongly recommended.
7. If you start using a daily schedule book, you will need to develop the habit of checking it every day to see if you have anything scheduled. You can do it as a part of your morning routine. If you tend to be forgetful or to lose track of time easily, it may also be helpful to set an alarm watch or alarm clock to go off as a reminder to check your schedule again later in the day. An alarm watch is best for people who have a life outside of their home, because it goes with you wherever you go. You can buy a good digital alarm watch for about fifteen bucks.
8. The fanciest way to do this is by using a computerized portable organizer or PDA. This little gadget has a daily schedule in it, and multiple alarms you can set to remind you to do things. Most of them also have room to record notes. Although they can be very useful, they require some self-training to learn how to use them and get into the habit of using them all the time. You should buy one only if you are willing to put in the time and effort to make it work for you.

Daily schedules, alarm watches, and portable organizers are discussed in the Sohlberg and Mateer book and articles by McKerreacher, Powell & Oyebode and Oddy & Cogan.

## CHAPTER ELEVEN: Structure and Productivity—The Activity Routine

1. Many survivors have a life filled with free time.
2. In most cases, they don't make productive use of that time.
3. Some survivors who try to go to college or to work run into a time crunch almost every week. There is not enough free time to do all of the chores and tasks that need to get done.
4. The best way to manage or organize life after head injury is with structure. Structure is one of the few things that tends to make everything better.
5. Having a set routine is one kind of structure. People who get up at the same hour every day, and who get ready for the day right away, always have more productive time. Many people treat their disabled lifestyle like summer vacation from school—get up when you feel like it, as late in the day as you want, sit around and watch the tube for a while before getting cleaned up and dressed. Days that start this way usually end with nothing accomplished.
6. Some people defend their vacation lifestyle by saying that they might as well take it easy, since they don't have a job or something else important to do. But doing nothing special year after year is an empty life, and most people don't end up enjoying it. Recovery means finding new things to do that matter. You can't do that by taking it easy. The first step to making your life mean something is to structure it so that you have time set aside to do things that matter.
7. The easiest way to make sure you get chores done is to put them into your routine. Do them at the same time every day, or on the same day every week, depending on the type of chore.
8. A good way to develop routines is to mark out the chores and activities that you regularly do on your daily schedule form. That helps you to keep track of your routine while you build the habit.
9. Most people want to be productive and to contribute to their family. If they wait for something to come up, nothing changes. They have to take charge of their lifestyle. That means structuring it, and then finding useful things to do with the time.

You can read about this concept in [Brain Injury Rehabilitation](#) by Giles and Clark-Wilson.

## CHAPTER TWELVE: Memory for Daily Events—The Activity Diary

1. A frustrating and annoying memory symptom is the inability to remember what you have done day by day. This is a form of new learning called episodic memory. It is usually a leading problem area.
2. Sometimes, survivors can't remember whether they have done their chores. On occasion, they end up doing a chore twice because they forgot it was already done.
3. Gaps in episodic memory make people feel lost. They don't know what they've been doing or accomplishing, and what they need to do.
4. It's embarrassing when someone asks you what you did today and you can't recall.
5. If you have a self-therapy notebook, one way to handle this is to keep a daily diary of the things you do. Some people like to keep diaries. For others, it seems like extra work.
6. Another way to handle it is to let your spouse or parent answer these questions for you. However, that makes you dependent on them.
7. Perhaps the simplest and best way to handle it is to keep your daily schedule form in your notebook, so that you can use it as an activity diary while you use it as a schedule.
8. At the end of each hour, when you finish the activity and check your schedule to see what's planned for the next hour, make a check mark that indicates whether the activity was successful (in other words, that you met your goal), unsuccessful (that you fell short of meeting your goal), or incomplete, using the blanks on the right side of the schedule form. The last blank is for unexpected problems. Put a check mark if something that happened during that hour created a problem for you. After the = sign, jot down a little note about what the problem was. For example, the activity for that hour might be to work out at the YMCA, and you might be successful in having a full workout, but you might have to borrow money to buy a drink, or you might have left your MP-3 player at home when you wanted to listen to music while you worked out, or you might have bumped into one of the machines and bruised your knee.
9. Be sure to go to your schedule each hour to record the outcome of the completed hour and to check on what is planned for the next hour. This form is not used in the way most uninjured people use a day planner—checking it only occasionally. It is important not to rely on memory. Make sure you mark down the outcome while it is still fresh in your mind, and that you check the schedule to be sure you know what's coming next.
10. As long as you keep filling out daily schedule forms and keep them where you can find them, you can always know what you did every day.

The readings for this chapter are the same as for Chapter Ten.

## CHAPTER THIRTEEN: Using Your Daily Schedule as a Planning Technique

1. There is a third, and most powerful, way to use the daily schedule form: as a planning tool for the use of your time. When you plan how you are going to spend your time in advance, you structure yourself to get things done. This is how to take control of your productivity.
2. Survivors who have trouble getting everything done depend on their daily planning process to organize their time so that they accomplish their priorities. This applies to three groups in particular: (1) students in high school, college, graduate school, or job training; (2) workers in full-time jobs, particularly those who also have to manage a household without help; and (3) survivors who are parents of young children. People in all three groups tend to run out of time and energy before they get everything important accomplished. This makes their lives into total chaos. The daily schedule, used religiously, solves this problem.
3. We recommend that any survivor who wants to maximize recovery use this approach: set aside an hour in the evening to plan everything you intend to do tomorrow. Even plan out your leisure time activities. Don't leave any gaps in your schedule. That gives your day maximum structure, and allows you to keep your life full. You can also use your daily schedule to plan out your self-therapy sessions, therapeutic exercise, and other self-improvement routines.
4. Our patients have all been able to use this planning process effectively, but there may be some problems that need to be overcome before everything works smoothly.
5. One problem is that some people feel like living on the basis of a schedule gives up personal freedom. Structure is not intended to rob you of freedom in any way. Although you plan out today what you intend to do tomorrow, you can always change your plan at any time. Since you have two lines to write your plan, try to use the top line for the plan you make in advance. That leaves the bottom line to write in a new plan in case you change your mind. To keep your life well organized and to make sure you follow through on things you intend to do, be sure to rewrite your schedule any time you change it. This not only means putting in the thing you have decided to do instead, but also finding an opening in your schedule on a later day to do the thing you decided to cancel for today. For example, suppose you plan to do your laundry at 10:00 and to vacuum the floor at 11:00 today, but a friend comes over and suggests a trip to the zoo. If you decide to go to the zoo, you strike through the laundry and vacuuming tasks and write in the zoo trip in their place, but you also make sure to write in doing the laundry and the vacuuming in an open space in your schedule for tomorrow. This way, you get to do what you want, and also make sure to get your work done. You don't leave any room to forget or to get confused.
6. Some people have trouble filling out the form until they have had some practice. A family member or friend can help at first. This is the technique that seems to work best. First put in all of the activities that are done at a specific time. This includes when you get up and go through your morning dressing and grooming routine (if you have a set time to get up), family activities that are done at a certain time (for example, some families eat dinner at a specific time), television programs you watch at a certain time, and so on. The more you have your life organized so that your chores are done at a certain time, the easier it becomes to schedule them and to get them done (for example, if you take out the garbage or do the laundry, you can always do those things at a certain time on certain days). These entries are the same every week.
7. You can save work by making a master schedule form that already has your routine activities marked out, since they don't change from week to week. When you make appointments and arrangements for future events, you can mark them right into your schedule.
8. When you plan out your schedule for tomorrow, it will already have your routine activities and appointments marked in. Then you schedule any chores that you don't do on a routine basis. For example, this is where students mark in their homework assignments and their study time. Try to be as specific as you

can possibly be—put down exactly what task you plan to accomplish.

9. Many people also find it useful to keep a list of tasks and projects you want to do when you have the time. This “do list” can go in the front of the schedule section of your notebook. Any time you have an idea for a project, or accept an idea suggested by someone else, you can write it on this list. The “do list” works even better if you mark the items in some way that indicates how important they are. I mark my do list items with stars. If something is super important, it gets five stars. If it’s not very important, it gets one star. That way, I can look at my list and see right away which things are the best use of my time. When you are making out your daily schedule, and you have extra time with nothing scheduled in it, turn to your do list and it will give you ideas about how to use that open time productively. Transfer tasks from the do list to the daily schedule when you decide to do them.

10. The last thing to schedule is leisure time or “play” activities. Some people find it easy to anticipate the free-time activities they will want to engage in tomorrow, but others have trouble coming up with them. If this is a problem for you, make a list of all of the different ways you have used your leisure time since your injury—writing letters, telephone conversations, music, television shows, hobbies and craft activities, pleasure trips, window shopping, and whatever else you sometimes enjoy. This list becomes a menu from which you can select the free time activities to put into your schedule for tomorrow.

11. Some people have difficulty following their daily schedule because the injury tends to affect awareness of time. A schedule doesn’t work if you don’t follow it, and you can’t follow it if you lose track of the time. This can be solved with a digital watch that has an hour chime in it, or with a cuckoo clock, or even with a one-hour kitchen timer.

12. Many beginners at daily scheduling find that they don’t always plan the amount of time they need to get things done. Usually, people plan to do more than the time allows. By sticking closely to your schedule and re-scheduling tasks that did not get finished in the scheduled time, you will soon learn to estimate time more effectively.

13. Self-therapists who use their daily schedules well generally have the best recoveries.

14. Remember--your daily schedule is doing you no good as a planning technique if you fill it out only after a day is through. If you intend to work a full self-therapy program, that means always filling out your daily schedule a day in advance.

15. Sometimes patients at the rehabilitation clinic who are assigned to fill out daily schedules only do it Monday through Friday. They treat Saturday and Sunday as days on which they don't work on recovery, and days when they don't need to make good use of their time, or keep track of what they are doing. How much recovery do you want? If you want maximum recovery, your daily schedule is something you prepare and use 365 days a year, and even leap day in a leap year.

**DAY PLANNER for \_\_/\_\_/\_\_**

	<u>Planned Activity:</u>	<u>Outcome:</u>
7am	_____	__success __failure
	_____	__incomplete __problem=
730	_____	__success __failure
	_____	__incomplete __problem=
8am	_____	__success __failure
	_____	__incomplete __problem=
830	_____	__success __failure
	_____	__incomplete __problem=
9am	_____	__success __failure
	_____	__incomplete __problem=
930	_____	__success __failure
	_____	__incomplete __problem=
10am	_____	__success __failure
	_____	__incomplete __problem=
1030	_____	__success __failure
	_____	__incomplete __problem=
11am	_____	__success __failure
	_____	__incomplete __problem=
1130	_____	__success __failure
	_____	__incomplete __problem=
Noon	_____	__success __failure
	_____	__incomplete __problem=
1230	_____	__success __failure
	_____	__incomplete __problem=
1pm	_____	__success __failure
	_____	__incomplete __problem=
130	_____	__success __failure
	_____	__incomplete __problem=
2pm	_____	__success __failure
	_____	__incomplete __problem=
230	_____	__success __failure
	_____	__incomplete __problem=
3pm	_____	__success __failure
	_____	__incomplete __problem=
330	_____	__success __failure
	_____	__incomplete __problem=
4pm	_____	__success __failure
	_____	__incomplete __problem=
430	_____	__success __failure
	_____	__incomplete __problem=
5pm	_____	__success __failure
	_____	__incomplete __problem=
530	_____	__success __failure
	_____	__incomplete __problem=
6pm	_____	__success __failure
	_____	__incomplete __problem=
630	_____	__success __failure
	_____	__incomplete __problem=

7pm	_____	__success __failure
	_____	__incomplete __problem=
730	_____	__success __failure
	_____	__incomplete __problem=
8pm	_____	__success __failure
	_____	__incomplete __problem=
830	_____	__success __failure
	_____	__incomplete __problem=
9pm	_____	__success __failure
	_____	__incomplete __problem=
930	_____	__success __failure
	_____	__incomplete __problem=
10pm	_____	__success __failure
	_____	__incomplete __problem=
1030	_____	__success __failure
	_____	__incomplete __problem=
11pm	_____	__success __failure
	_____	__incomplete __problem=

## CHAPTER FOURTEEN: Step Three: Controlling Overstimulation

1. My patients have told me that most of their head-injured moments, at home, in the community, at work, and on the road, are caused by two things. The one that causes the most little problems is overstimulation. You probably don't realize how often you get overstimulated, or how much it messes you up, until you have been studying your head-injured moments for a while.
2. Overstimulation can make you forget things you know perfectly well under ordinary conditions. It can make you mess up when you are trying to do things that you know perfectly well how to do. It can mess up any task, any skill, in any situation, at any time.
3. You cannot stop overstimulation from creating a head-injured moment unless you know it's coming. Give it a label, so you can call it that to yourself when you see it coming. You can use the term overstimulation if you like five-dollar words. Some therapists prefer to use the word flooding, because it's like your brain gets flooded with stimulation and emotion and stops working properly. A group of powerful patients liked to call it "fishbrain" because when it comes over you, your brain thinks no better than a fish's brain. You can call it Justin Timberlake if you want. What you name it is not important, as long as you use the same name every time.
4. Once you feel it starting to affect you and you call it by name, tell yourself to get away from it (if it's coming from outside of you) or turn it down (if it's coming from inside of you). For example, many people get overloaded when they are in a group of people who are talking over one another. First, it becomes difficult to understand what they're saying, and then it becomes frustrating, and that brings on overload. Move to another room, and the overload goes away. Some people get overloaded by loud noises, like construction sounds or dog barking or baby crying. If that overloads you, either go to a quiet place, or if that is not possible, use ear plugs to cut down the noise. That will stop the overstimulation right away. Bright, flashing lights mess some people up—the kind they have in rave clubs. Leave the club, and your brain will be fine.
5. If the overstimulation results from putting pressure on yourself or getting upset or too emotional, you need to chill out right away. Get yourself into a comfortable position, preferably sitting down, and relax. Take a couple of deep breaths and let them out slowly. Think of calm things. The overstimulation will melt away, and your brain will work fine again in a matter of a few moments. It is amazing how quickly you get control back.
6. Whenever you get overstimulated, nothing is more important than reducing the stimulation. Your brain is not going to work properly until you do. It makes no sense to try to "tough it out" because it's not a matter of toughness. You cannot do or say things properly until you get rid of the overstimulation, so don't waste time with anything else.
7. Sometimes people get overstimulated during a conversation, and have trouble chilling out while talking to the person who got them upset. Excuse yourself to go to the bathroom. You will probably be chilled out even before you get to the john, but take as long as you need.
8. Once you fix a head-injured moment caused by overstimulation, it is important to ask yourself how you can prevent it from even getting started the next time. People tend to get overloaded in certain situations. Avoid situations that have too much stimulation in them. And prepare yourself for situations that make you emotional. Help yourself to handle them calmly instead.
9. One of the most predictable overload situations is an argument with someone who is important to you. These arguments tend to be upsetting, and once you get upset, your brain shuts halfway down and you tend to blurt out whatever crosses your mind. These arguments can be very hurtful, and you get cheated out of

the chance to make your point. The best answer I have found to this problem is to advise families that they need to have their arguments in writing, not out loud. If the issues are written down, it gives you time to chill out before you come back with your response. That lets you use your full intelligence, and avoid saying things you'll regret.

10. Each survivor tends to get overloaded by certain, specific emotions. Some people have trouble with anger. Others have trouble with anxiety and fear. Most people don't expect to have any trouble with positive emotions like enthusiasm and excitement, which is probably why they tend to cause more head-injured moments than the negative emotions. By studying your head-injured moments, you will soon learn which emotions are most harmful to your mind, which is the first step to taking control of them.

11. If you had problems controlling your feelings before your injury, or if your injury has made your feelings very intense, you may want to get help from a psychologist in learning to control them fully. We psychologists have a bag of advanced tricks for emotional control that would take too long to explain here. Don't hesitate to get professional help—not if it can improve your recovery!

12. If you work hard on correcting overstimulation, you should be able to shut off most episodes in a matter of moments, and you should be able to prevent many moments from happening by good preparation. Overstimulation can be fixed, and once you learn to use the techniques that fix it, you should have many fewer head-injured moments.

This topic is discussed in some detail in Prigatano's and Goldstein's books. Similar principles are used to control panic attacks, and you can find a great deal about them on the internet.

## CHAPTER FIFTEEN: Step Four: Increasing Mental Effort

1. The second major source of head-injured moments is actions that are not backed up by enough mental effort. This is a “stealth” problem that is particularly likely to be hidden from the survivor. Normally, the survivor feels like the amount of mental effort was appropriate, although after looking at the moment carefully, it is possible to see that it was actually insufficient.
2. The problem of insufficient mental effort shows itself in many ways. In a few instances, there is an actual lack of physical effort—not enough “oomph” when tossing a possession onto a dresser top, a soiled piece of clothing into the hamper, throwing keys to a partner, and so on.
3. In other situations, effort peters out before a task is finished. You can see this when a person leaves the front door or the car trunk open after unloading groceries, or leaves the stove on after cooking, or leaves the refrigerator door open after getting food, or forgets to flush the toilet. Tasks with more steps are even more likely to be left incomplete. Thus survivors commonly forget to turn the computer off after using it, to gas up the car after packing for a trip, or to put the newly arrived mail away after looking through it.
4. When a survivor regrets doing or saying something, it almost always means that when that action was planned, it was not thought through. “If I had only thought about it a little harder, I wouldn’t have done it, or I would have done it in a different way.” is a classic effort-related head-injured moment.
5. Whenever a survivor goes into a situation unprepared, having left needed supplies behind, or having failed to make necessary decisions, or having failed to prepare for all reasonable possibilities, this lack of advance planning indicates the effort problem.
6. Any time something is done a little carelessly, or a bit sloppily, it indicates a lack of effort to get it right.
7. Many so-called memory errors are actually problems caused by a lack of effort. A patient once told me that he did his laundry but “forgot” to put the detergent in. On thinking about it, he realized that he had tossed the clothes in casually, and then started the washer without even trying to think about what he was doing. If you don’t think, you’re not going to remember.
8. Survivors often do or say things that offend other people, or give them the wrong impression. These are actions that could have been avoided if they had been planned with careful effort.
9. Situations that are new or risky can sometimes be handled carelessly. In hindsight, the survivor often admits that he or she should have been more careful.
10. Many problems come from rushing. Rushing is simply a kind of carelessness. For example, many survivors with a little trouble pronouncing words talk way too quickly to be understood.
11. This is the easiest problem to solve: Make more effort. Stop and think. Figure out what you’re are going to do before you start to do it. Treat it like it’s really important to get it right. Double check your plan. Act slowly and carefully. Do it this way and there is no head-injured moment.
12. What makes this instruction hard to use is that you simply can’t do EVERYTHING this way. If you were super-careful about everything, things would take far too long and you would be exhausted from cranking up your powers of concentration. The trick is to know WHEN you need to make the extra effort. The question of when will be covered a few chapters later.
13. Whenever you have a head-injured moment, if it’s possible, try to do the task again, only this time do it the right way, and then pay close attention to the difference. How much more effort does it take to make

your brain work properly? Keep asking yourself, how can I get myself to start getting these things right the first time?

This topic gets discussed at length in the Rodger Wood, Kurt Goldstein, M. Mesulam, and Stuss and Benson books, and in the papers from our group called “Adaptive Effort and Traumatic Brain Injury” and “Exceptional Effort in Adaptive Recovery from Traumatic Brain Injury—A Case Series.” There are also a number of good papers that give examples of this problem written by Harvey Jacobs and Muriel Lezak.

## **CHAPTER SIXTEEN: Step Five: Better Living Habits to Help My Brain Work Better**

1. You can get away with treating your brain pretty badly and it still works okay, as long as you don't have a head injury. That rule changes dramatically after a head injury. The brain malfunctions under any kind of unfavorable operating conditions.
2. For example, if you skip breakfast and eat fast food for lunch, expect your brain to get sluggish. Having a healthy breakfast, including some kind of meat or other protein, is strongly recommended.
3. You should not subject your brain to any kind of nutritional deficiency. That means drinking plenty of water, and avoiding starving yourself.
4. There are many theories about nutritional effects on brain function that recommend avoiding sugar, white flour, or both. These are major ingredients in fast food. Although science has not reached agreement that eating a diet which is heavy in fruits and vegetables, whole grain bread, and healthy sources of protein (fish and chicken) helps your brain to work better, enough nutritionists suggest this kind of diet to make it worth considering.
5. Lack of sleep is a major source of reduced brain ability, especially in people who have had head injuries. To the extent that you can do so, you should make sure to get enough sleep. If you have difficulty in sleeping, this topic will be discussed in an advanced chapter.
6. If your injury makes you prone to getting tired, there are "energy management" techniques that allow you to make best use of the capacity you have.
7. Try to do your most difficult and important work early in the day.
8. Try to avoid working under tension as much as possible, as that burns extra energy.
9. Try not to do one kind of activity for long periods of time. Switch off from one activity to a completely different kind. For example, after reading something difficult for half an hour, switch to doing dishes or gardening. When you do this, you stop draining the last chemicals out of the reading systems of your brain and start using other, different systems. Switching activities like this can allow you to get a great deal done without getting completely exhausted.
10. If there are stresses where you live or spend time, work on reducing those stresses. For example, after living or hanging out in a messy room for a long time, some people find that it actually reduces stress to straighten it up. If your living area is infested with bugs, and that bothers you, take steps to get rid of them. Any reduction in stress is likely to make everything work better.
11. Getting some physical exercise every day seems to help the brain to work better.

## CHAPTER SEVENTEEN: Booze, Dope, Nicotine, Caffeine and Other Drugs

1. One effect of head injury that most people notice is feeling low in energy, kind of like a person feels when getting over a cold or the flu. Many drugs make the survivor feel more energetic or more normal, and this makes them very attractive. However, there are specific problems that come from the use of these drugs.
2. The drug most often used by most people is caffeine. Caffeine is in coffee, tea, cola and most other soft drinks, and chocolate. It is a stimulant which produces a rush of body energy that makes many survivors feel normal for an hour or two. However, caffeine causes the body to quickly unload its energy reserves for the day. After a brief period of energy, caffeine leaves the person more exhausted for most of the day than they would feel if they did not drink any at all. If the person keeps drinking it to fight off the fatigue, it prevents sleep. Many survivors find that they cannot sleep properly if they have any caffeine after lunch or any later in the day. Survivors who stop using caffeine altogether usually report that they function better without it. However, if you have a long habit of drinking a lot of caffeine, don't stop suddenly. Taper off gradually. Stopping suddenly can produce extreme headaches.
3. Nicotine in cigarettes, cigars, and chewing tobacco has a similar effect. The tobacco also stresses the body.
4. Survivors often feel like they have lost some of the hobbies and activities they enjoy most, and they appreciate having a drink, a glass of wine, or a beer to relax. Others like to get completely trashed. Alcohol produces three problems. First, by numbing the brain, it increases the risk of falling or otherwise hurting yourself. Second, it kills brain cells. Third, survivors are more prone to becoming addicted, so what was moderate drinking before the injury can easily turn into alcoholism. Most cognitive rehabilitation specialists advise people to stop drinking altogether.
5. Marijuana is another source of pleasure some people are reluctant to give up. But it slows the reflexes and weakens memory for information for about 24 hours after smoking it. So if someone smokes one blunt every day, their brain is always impaired by the temporary effects of smoking.
6. Stimulants such as meth are even more tempting, because they provide a jolt of energy and enjoyment. But they also produce impulsive, out-of-control behavior and are extremely addictive. Cocaine is even more pleasurable, and more addictive. It also destroys brain cells.
7. Ecstasy appears to be a particularly harmful drug, as it seems to cause a lasting disruption of brain chemistry.
8. Pharmaceutical drugs that help you to go to sleep or narcotics prescribed for severe pain also dull the mind. Since these drugs are habit forming, and they gradually lose their effectiveness, requiring the user to take more and more, they are not a good answer to long-lasting sleep and pain problems. Your brain has already gone through enough. Give it a break!
9. If you are taking prescription drugs, don't reduce your dosage or stop taking them without first discussing your desire with the physician who prescribed them. It can be dangerous, and in some cases, even fatal, to stop taking prescription drugs suddenly without a physician's guidance.

## CHAPTER EIGHTEEN: Dealing With Sleep Problems

1. Many survivors have sleep problems because they are inactive and living a new lifestyle.
2. Survivors who take a nap because they have nothing to do may be unable to sleep through the night. Other survivors may need to take a nap because they become so exhausted during the day.
3. Some survivors have chronic sleep problems because they injured the sleep-wake control center in the brainstem. If you have an injury of this kind, one of the symptoms that is easy to notice is waking up very slowly in the morning. If you sit around half-awake for half an hour or more before getting going, you probably have this problem. Damage to this system produces permanent changes in the sleeping and waking, so you may not be able to restore your pre-injury patterns.
4. If you are having problems going to sleep, make sure you limit or cut out your intake of stimulants like caffeine and nicotine in the pm hours of the day.
5. Getting vigorous physical exercise as part of your daily routine can help you to sleep better.
6. Many sleeping pills actually interfere with the quality of sleep, as does alcohol.
7. If you give yourself the opportunity to do entertaining things at night while you are waiting to go to sleep, that may strengthen the pattern of staying up late. It is a good idea to do boring, repetitive things at the end of the evening.
8. If you do exciting things late at night just before you get in bed, that is likely to make it harder to get to sleep. Watching murder mysteries or action shows or comedy just before turning in is not a good idea. Watching documentaries about making paper or the history of salt will help you to go to sleep.
9. Some people tend to lie awake and think about things, and this keeps them up. If you notice this problem, there are two ways to handle it. First, give yourself an hour to sit in a room by yourself with no TV and no computer and no music, just thinking about things, before you go to bed. That way you can get your thinking done then. Second, if you get some idea that worries you when you are in bed, write it down on a tablet so that you can deal with it tomorrow, and then you can forget it for the night.
10. Some survivors wake up in the middle of the night because of apnea, a problem with breathing while asleep. One sign of apnea is loud, uneven snoring. If you suspect apnea, ask your family doctor to refer you to a sleep lab where you can be tested for apnea.

## CHAPTER NINETEEN. Step Six: Full Analysis of Your Head-Injured Moments

### 17. “Every Analysis Form I write takes me one step closer to my recovery goals.”

1. This is the point at which you graduate up from keeping a simple list of your head-injured moments into doing full-fledged self-therapy by analyzing them.
2. To analyze a head-injured moment, you have to identify which kind of error you made, determine what kind of situation brought it on, and work out how to prevent it from happening again. You do this using the Analysis Form printed on the next page.
3. First, number the forms you do in the order in which you do them. Then explain what went wrong in the section called “my mistake.” Make sure that you are only talking about one particular head injured moment that happened at a specific time, not a KIND of head-injured moment.
4. Then identify when the mistake *started*. Most mistakes don’t start when things begin to go wrong. Most of them start when you failed to prepare or to organize what you were doing. For example, if you brought up a difficult topic with an important friend on the spur of the moment, then the mistake probably began the night before, when you should have planned to have the conversation and put it on your daily schedule. That would have given you a chance to work out what you wanted to say. If you bought a last-minute gift for a powerful person that was poorly chosen and not appreciated, then the problem didn’t begin when they opened the gift, but instead when you should have gone shopping well ahead of time to give yourself enough time to pick a proper gift. If your car blew up because it ran out of oil, the problem didn’t begin when the car began to make funny noises, but rather when your car was scheduled to have its last oil change. Another way to think of it: If you could get into a time machine and go back and fix the whole problem, what is the first thing you would need to change? That’s when the problem began.
5. Now you want to figure out what got you to choose the wrong course of action. Was it your state of mind (your attitude, your emotions, or your physical condition)? Was it a case of overload? Did you make enough effort for the kind of task you were doing? Carefully analyze your state of mind when the mistake began, and circle as many of the descriptions as apply. Write down everyone you were with, as it often turns out that being around certain people brings out head-injured moments when you are doing certain tasks.
6. When you analyze the task, check off the category “Was I trying to do something new?” if you were trying a new or unfamiliar task, or trying to use a new strategy or technique, or trying to use new equipment or new partners, or working in a new situation. This category does not apply only to tasks in which every aspect is familiar.
7. The category “Was I trying to do something hard?” asks you to make a judgment. Is this a task which is not easy for you to do? Is it a task that is not easy for most people to do? Is it a task where the results are judged by high standards? Mark it off if any of those conditions applies. This category does not apply on to task which are easy for you to do well.
8. Process factors: Survivors almost never have head-injured moments if they have just warned themselves that “I think I’m about to have a head-injured moment.” When you sound that warning to yourself, it is natural to raise your level of effort, think hard about what you are going to do, make sure you are not overloaded, get mentally prepared, and act carefully. The warning basically cures the problem. So when you DO have a head-injured moment, it almost always occurs BECAUSE you didn’t warn yourself. Be careful not to overlook this extremely important category, as it plays an important role in all aspects of self-therapy.
9. If this head-injured moment is a repeat of one you have already written up on an Analysis Form, that requires some extra thinking. I already made a plan to fix this problem—why didn’t it work? Did I forget to

do something I intended to do? If so, I need to set a better trigger to remind myself of what I need to do. Or did I do everything I planned to do, and it still didn't work? In that case, my plan was not effective, and I need a stronger solution. It is important to become MORE aggressive in your self-therapy any time an analysis fails, because you are trying to prove that you can overcome all of your head-injured moments.

10. The category "I was trying to do something the way I did it before my injury." is another major source of head-injured moments. Most important tasks have to be re-programmed to work well after a head injury. Doing things the old way is inviting head-injured moments. It is important to never forget that you are working with a new brain, and that your old ways of doing things are not appropriate for this new brain.

11. If you are not planning to do a task, then you are not able to prepare properly for it. The element of surprise also disorganizes your brain. So if the task was not on your daily planner, it is important to recognize that fact. That is something you want to fix for next time if possible.

12. The last two process factors have to do with mental effort. They are keys to fixing yourself.

13. What is the main cause? This is probably the most difficult question on the form. If you could fix only one thing, which fix would be most likely to prevent the head-injured moment? Be sure to ask your self-therapy helper (family member or friend) if they agree with your choice.

14. Make a plan that will prevent the head-injured moment from becoming a problem the next time you are in that situation. First, you need to figure out how to get yourself to break your pattern and start using a fix-it routine. How can you "trigger" yourself to put a new plan into effect? "I'll just remember" is not good enough. What will trigger you to remember? Will you put up a sign to remind yourself? Will you have someone remind you? Will you put a note in your daily schedule to remind yourself? Will you work hard enough to focus your mind on a danger sign to force yourself to remember? If your trigger isn't effective, your plan will fail, and you'll repeat your mistake.

15. When the trigger goes off, what are you going to say to yourself to warn yourself that you are about to create a head-injured moment? How you talk to yourself will determine how much effort you make and how much control you get. "I'm about to screw up!" or "Danger!" or "Head Injury Zone!" or whatever gets you to stop and think HARD, that is what you want to say to yourself.

16. Do you need to adjust your state of mind? Was your state of mind part of the problem last time? Do you need to relax, or to give yourself a message of confidence, or to warn yourself not to get ticked off or to get too excited? Figure out what you must do to get your mind right, because nothing will work out unless your mind is right.

17. Do you plan to tell yourself to "stop and think?" That will help to get you mentally prepared.

18. Will it help to summon up concentration and mental effort? When you do cognitive exercises (see Chapter 21) you will discover how important that is for your brain to function at its best.

19. Write out the rest of your plan. Be sure you've given it careful thought. This plan is how you are making self-therapy happen—so don't do a half-baked job of it!

20. The last checklist item is about double-checking to make sure you follow your plan. That is the final step in being careful—the last kind of mental effort that ensures success. Then give it to your therapy partner for his or her feedback, and make sure that he or she also gives it careful thought.

**ANALYSIS FORM FOR A HEAD-INJURED MOMENT 3.1:** Analysis # \_\_\_\_\_

My mistake (be specific): \_\_\_\_\_  
\_\_\_\_\_

Where it started: \_\_\_\_\_ On what day? \_\_\_\_\_ At what time? \_\_\_\_\_

Who suggested writing up this head-injured moment? \_\_\_\_\_

**State of mind.** (Circle all that apply) excited optimistic enthusiastic confident motivated  
impatient annoyed frustrated irritated angry furious jealous overstimulated  
confused anxious worried tense pressured afraid hungry thirsty overheated chilled  
upset sad depressed discouraged self-doubting pessimistic guilty drunk stoned  
calm relaxed bored tired rushing disinterested other \_\_\_\_\_

**Who was I with** when I started to make the mistake? \_\_\_\_\_

**Task factors:** What was the task? \_\_\_\_\_

\_\_\_ I was trying to do something new. What was new? \_\_\_\_\_

\_\_\_ I was trying to do something hard. What was hard? \_\_\_\_\_

\_\_\_ It required planning and organizing, careful timing, or mid-course corrections.

\_\_\_ It required getting cooperation, agreement, or assistance from someone else.

**Process factors:** How I went about doing it.

\_\_\_ I should have warned myself. It happened in a situation where I have head-injured moments.

\_\_\_ I wrote up this mistake before, but I didn't use my fix-it plan this time. Why? \_\_\_\_\_

\_\_\_ I wrote up this mistake before and used my fix-it plan but it failed. Why? \_\_\_\_\_

\_\_\_ I was trying to do something the way I would have done it before I had my injury.

\_\_\_ I wasn't expecting to do it at all—it wasn't on my daily planner. Why not? \_\_\_\_\_

\_\_\_ Something unexpected happened while I was doing it. What? \_\_\_\_\_

\_\_\_ I didn't take enough time to plan out what I was going to do.

\_\_\_ I wasn't concentrating and being careful enough when I did it.

What are the main things I need to fix? \_\_\_\_\_

**Fix-It Plan** for the next time I am in that situation:

\_\_\_ Put the activity on my daily planner and make a plan for success the night before.

\_\_\_ Trigger myself to sound a warning by \_\_\_\_\_

\_\_\_ Warn myself about a head-injured moment by saying \_\_\_\_\_

\_\_\_ Adjust my state of mind by \_\_\_\_\_

\_\_\_ Before I act, stop and think through what I need to do.

\_\_\_ Get focused and summon up the mental effort to be ready to act.

What else I will do: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_ Watch how I perform carefully to make sure my plan is working.

**Feedback from my Therapy Partner:** I think the main things that need fixing are \_\_\_\_\_

I think my Partner's Fix-It Plan \_\_\_ probably will work \_\_\_ probably won't work.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## CHAPTER TWENTY: Summary of How You Fix Your Brain

1. Know that you have a new brain, one that can work well once it is reprogrammed. It needs to be reprogrammed because your old programs don't run quite right on your new brain. Help yourself to keep this fact in mind as you go through your day.
2. Since your old habits don't quite work well enough, you need to TAKE CONTROL of your brain and get it to think through the things you are going to do. Your BRAIN no longer does its job well enough on automatic pilot. Now, your MIND has to make sure it does its job properly, whenever you do anything in which the results are important. Any time you need your actions or your words to have quality, your mind has to make sure that your brain produces quality at every step. It's as if your mind now has to be the boss. You need to be MINDFUL so that you can be an effective boss.
3. Don't depend on your brain's weak systems for organizing and memory to manage your time and your activities. Get your brain to use your full intelligence to plan your day thoughtfully, a day ahead of time, when you can think everything through well. Write that plan down on a schedule form so that you take no chances of forgetting what you need to do. Develop the habit of writing plans and following them, and soon you will be in total control of your time and your productivity.
4. Learn how your new brain works by studying your head-injured moments. If you study them carefully, they will teach you a great deal about your new brain. The more you become an expert on your new brain, the better you will be able to make it do what you want it to do.
5. By analyzing your head injured moments, you will realize that you make most of your mistakes when you are not mentally prepared. By writing a good daily plan, and by warning yourself whenever you are about to get into a situation in which you tend to make mistakes, you will help yourself to become well prepared for almost everything. As you do this, you will have fewer head-injured moments.
6. Your analysis will teach you how often you get overloaded, what overloads you, and how overload affects your thinking and your ability to do things. Once you know what overloads you, you will be in a position to plan to prevent it from happening. This will make a big difference in reducing head-injured moments.
7. Every time you discover another head-injured moment, that is another step toward recovery. Celebrate the discovery, just like finding a twenty-dollar bill in the street. Develop a great attitude about recognizing when your brain malfunctions, because that is what makes a great self-therapist.
8. On the other hand, if you analyze a head-injured moment, it shouldn't happen again. If it does happen again, you should be ticked off at yourself. What did I miss? How could I let this happen to me? I'm supposed to be in charge of these head-injured moments, and this one snuck right past me! Figure out exactly what went wrong with your plan, and be determined to never let it happen again.
9. Be sure to understand that fixing your brain is not like fixing your car. This is an ongoing fix-it process. Whenever something important in your life changes, the change creates a flurry of head-injured moments that need to be fixed. Whenever something stresses you out or makes you ill, you have more head-injured moments. As you do self-therapy, you will also discover new, unexpected and quirky head-injured moments, even after years of self-therapy. So self-therapy is not a task. It's a way of living. If you live this way, you control your head injury and keep head-injured moments from interfering with your life, but if you slack off, the head-injured moments will be back. So help yourself to welcome self-therapy as something good you do for yourself, and avoid thinking of it as a chore. That will help you to make it a part of your life.

## CHAPTER TWENTY-ONE: Home Therapies for Basic Cognitive Control

1. Self-therapy works very slowly unless you use therapy exercises to speed it up. The survivors who got the quickest results did exercises eight hours a day, seven days a week. Try to create a self-therapy schedule that is realistic for you—don't make promises you aren't going to keep! You may want to start with one hour a day, and increase it only if it is working well for you.
2. The basic purpose of exercises is to learn how to take total control of your brain whenever you need to do it, for as long as you have to have it. This means becoming like a gunslinger of brain control. Good exercises work because they require you get focused, get prepared, concentrate hard, and do it quickly. The second purpose of exercises is that they teach you more about your head-injured moments than ordinary life does. Exercises expose your brain's weaknesses, so you want to carefully study HOW you perform. As you get better, try to figure out what it is you are doing better, so that you can push it even farther ahead.
3. Get a therapy partner. These exercises work much better for two than for one. Many of them are difficult to do without a partner. But a partner can also watch how you do things through objective eyes—which is something you can't do. Pick a partner who can be totally honest with you, and make sure to let them know that you want them to be totally honest about how you are doing on the exercises.
4. Always keep your scores. Make a section of your therapy notebook called "Exercises." Use a separate sheet of paper for each kind of exercise you do. Always record the date on the left side of the page, and create columns for your scores on the right side of the page. Always write down every score you get, even if you don't like it. By writing down your scores, you make a promise to yourself to learn from this therapy, and you give yourself a target for self-improvement.
5. After an exercise, always tell your partner anything you noticed yourself doing wrong, and then ask him or her to tell you anything they noticed. Always ask for suggestions of things you could do to improve.
6. If you happen to have a head-injured moment during an exercise, be sure to put it on your list. Exercises that cause head-injured moments are especially valuable—you get to learn something extra about yourself in addition to practicing brain control.
7. Schedule sessions of self-therapy exercise practice to be no longer than one hour. Some people who tire easily may do better with half-hour sessions. If you feel committed to work hard on self-therapy, you can schedule a morning session and an afternoon session of a particular exercise, but don't ever try to do the same exercise for two hours back to back.
8. Any time you finish an hour of self-therapy exercises, make it a point to congratulate yourself for taking another step toward recovery. It means a lot to be a self-starter who does self-therapy without some therapist pushing you to do it. Everyone doesn't have that kind of dedication, and it's dedication that always leads to recovery. So give yourself the respect you earned before you go on to do something else.

## NEWSPAPER SEARCH

1. Get a newspaper, a pen or pencil and a timer (a watch or clock with a second hand is fine).
2. Pick a common letter of the alphabet and write it at the top of the page.
3. Write down your start time.
4. Mark out that letter every place it occurs on the whole page.
5. When you are finished, mark out your finish time.
6. Now hand the newspaper to your partner, and give that person a red pen or pencil. Their job is to mark out every one you missed.
7. In the section of your therapy notebook called “Exercises” put this title: “Newspaper Search—Basic” on a blank sheet of paper.
8. Count the letters you marked out, and the ones your partner marked out, and add them together. Divide the number you found by the total number. That is your Percent Accuracy. To calculate your time score, convert the minutes to seconds. Divide the total number of seconds by the number of targets YOU found. That is your Search Speed. In your notebook, write today’s date, and then write the two numbers, your Percentage Accuracy and your Search Speed.
9. Ask your partner for any suggestions that you can use to improve your performance.
10. Take a 5-minute break, then turn to another page and try again, but try to make more effort to improve your accuracy. Don’t worry about the time score until your accuracy is 100%. Always write down your scores, even if you don’t like them. Keep going until you have been working at it until your scheduled time for this session is over.
11. Tips: make sure to divide the page up into sections and to search each one separately. That works better than searching helter-skelter. If it helps you, you can put a ruler underneath the line you are searching to make sure you go line by line. Control your pace. The most common problem is moving your eyes across the page faster than your brain can process. Also watch out for missing letters on the far left side of the column, as some people tend to jump over them.
12. When your accuracy is 100%, shift to raising your speed. Once you have doubled your speed, you can start doing more than one page at a time (title your notebook page “Newspaper Search—Advanced”). At this point, you can also search through an entire section looking for a common word (the, he, she, it, of, is, are, on, in, when, and, etcetera).
13. Remember, the point of this exercise has nothing to do with searching through newspapers. The point is to improve your control of your brain, by teaching it to be more careful and focused.

## NUMBER SEARCH

1. Another great exercise for teaching yourself to bring up more mental effort, first for accuracy and then for speed, is the number search.
2. Make some copies of the practice form on the next page.
3. Get a pencil.
4. Get yourself mentally ready to focus on the task. This is actually the most important step.
5. Choose a one-digit number to search for. Record your start time and then begin searching.
6. Start at the top of the page, and run your index finger under the line of numbers to mark your place as you look at them. When you find a digit you are searching for, put a line through it and keep going. When you reach the bottom of the page, stop and record your time. As you are doing this, you are not allowed to “backtrack.” In other words, if you see a number you have already gone beyond that you missed, it is not allowed to go backward and mark it. If you backtrack, your partner should mark that down as an “impulsive error” to go on your head-injured moments list.
7. Now give the page and red pen or pencil to your partner, who will mark out all of the ones you missed. Your score, as in the previous exercise, is the number of digits you marked divided by the total number of target digits. The score is your Percent Accuracy. Also record your Search Speed score just as on the Newspaper Search exercise (average # of seconds per target).
8. When you score 100% accuracy 3 times in a row, you can start trying to improve Speed.
9. When you have cut your time in half, advance to searching for pairs of digits, such as 4-6 (you can use every possible pair). Your partner can select the target pair and write the two digits down on the top of a blank copy of the practice page. This time, you will be looking for two digits that are side-by-side, but it can be left to right (4-6) or right to left (6-4) in our example. They can also be next to each other running up or running down the page, like this: 4 or 6  
  
They can even be next to each other on the diagonal, like this:  $\begin{array}{ccc} & 6 & \\ \underline{4} & 1 & 5 \\ & 2 & \underline{6} & 7 \end{array}$  or this  $\begin{array}{ccc} & & 4 \\ 1 & \underline{6} & 9 \\ & \underline{4} & 2 & 6 \end{array}$   
  
The same number can even be part of more than one pair, like this:  $\begin{array}{ccc} & \underline{4} & \underline{6} & 8 \\ & \underline{6} & 1 & 2 \end{array}$
10. As you master accuracy and speed at each level, move up to searching for 3, 4, 5, 6, and finally 7 digits. You and your partner can make up new practice pages with the numbers arranged in a different order so you don't become too familiar with the order.

NUMBER SEARCH PRACTICE PAGE A

8	3	4	7	1	1	6	5	9	2	6	7	3	4
2	4	1	6	6	4	0	8	5	9	2	1	2	4
0	2	2	7	5	8	4	6	7	1	3	5	2	0
9	6	3	7	9	1	3	5	8	0	4	2	8	4
7	5	9	2	4	1	3	2	6	9	0	8	6	3
5	3	8	7	5	0	9	7	2	6	4	7	3	6
9	6	5	2	7	5	0	6	1	4	2	7	9	3
8	6	3	0	9	7	4	8	6	2	3	8	6	1
9	8	4	7	6	1	4	3	9	7	5	0	5	3
5	3	9	7	4	0	9	6	2	5	8	0	1	6
0	7	3	5	9	7	4	1	4	8	6	3	0	2
9	6	2	4	6	0	8	6	4	3	1	6	4	1
0	8	6	4	2	1	4	7	1	0	3	8	4	6
4	2	8	7	3	0	7	9	4	2	5	8	5	5
3	9	7	2	1	4	5	3	9	6	0	3	8	6
2	6	4	9	7	0	6	2	8	1	9	3	7	4
7	3	9	1	6	7	3	4	0	7	5	9	3	5
2	9	6	4	0	1	6	3	9	8	3	7	5	9
1	6	4	9	7	2	0	5	8	3	7	2	6	3

## ADVANCED NUMBER SEARCH

1. For the advanced version, you search the same number page, but this time you have a large set of five-digit numbers to find. The target numbers for your first search (Search A) are on the next page.
2. Get a pencil.
3. Record your start time.
4. Begin searching for the first number at the top of the page. If you reach the bottom of the page and have not found it, put an “x” on the bottom of the page, and then resume searching for it at the top of the page. Each time you reach the bottom of the page without finding the number you are looking for, put another “x” at the bottom. Those x’s are evidence that your eyes are moving faster than your brain can follow. Your first goal in doing advanced search is to learn how to pace your searches so that you don’t get any x’s at all. Only then can you speed up. When you have found all of the numbers on the key, record your finish time. If your search time reaches 60 minutes, stop, and record the number of targets you found. You will record two scores. Your Overlook score is the number of x’s at the bottom of the sheet. Your Search Speed score is calculated the usual way—divide the number of targets you found by the number of seconds you took. If a person is doing good self-therapy, they should be able to triple or quadruple their score with practice. For people whose visual perception is good enough to be an asset for driving safety, a score of at least .07 (about one target every 60 seconds or 10 targets in 10 minutes) is expected.
5. After you have used the search key on the next page three times, you should not re-use it for at least a week. Otherwise you will be finding some of the targets from memory rather than from searching. Ask your therapy partner to make you up a new search key. They need to be sure to use numbers going in all directions (forward, backward, upward, downward, and on all diagonals).
6. After you have used a number field three times for each of three search keys, your partner needs to make up the next key off of a number field that you create.
7. Depending on the kind of injury, some cognitive rehabilitation patients have spent up to 200 to 300 hours working on advanced number searches. Others who have less severe injuries may be able to master this task after only 25 to 30 hours of work.

## KEY TO ADVANCED NUMBER SEARCH A

___ 0-1-4-9-4	___ 3-9-1-6-7	___ 7-0-4-3-7
___ 0-1-6-9-8	___ 3-9-5-7-0	___ 7-1-0-7-0
___ 0-2-7-4-6	___ 3-9-7-6-1	___ 7-2-8-4-6
___ 0-4-0-1-0	___ 4-1-4-7-9	___ 7-3-7-2-1
___ 0-4-3-6-3	___ 4-2-5-4-9	___ 7-3-9-1-6
___ 0-4-6-1-2	___ 4-2-9-6-1	___ 7-4-8-4-9
___ 0-4-6-6-1	___ 4-7-1-1-6	___ 7-5-0-5-3
___ 0-4-7-2-4	___ 4-8-8-3-3	___ 7-6-7-3-6
___ 1-2-7-2-3	___ 4-9-3-2-6	___ 7-8-7-4-6
___ 1-2-9-5-8	___ 5-0-2-7-9	___ 7-9-4-6-1
___ 1-6-0-2-2	___ 5-0-4-1-9	___ 7-9-7-9-5
___ 1-7-3-1-5	___ 5-0-6-1-4	___ 8-0-1-0-3
___ 1-7-4-3-8	___ 5-3-4-2-3	___ 8-1-2-7-3
___ 1-9-7-0-0	___ 5-3-9-7-4	___ 8-1-3-2-4
___ 2-0-1-4-9	___ 5-7-9-3-4	___ 8-4-1-5-5
___ 2-2-5-8-3	___ 6-1-7-4-7	___ 8-7-4-7-3
___ 2-4-8-5-6	___ 6-3-0-9-7	___ 8-9-5-7-9
___ 2-6-5-3-6	___ 6-4-8-9-2	___ 9-0-7-6-3
___ 2-8-7-3-0	___ 6-5-7-4-1	___ 9-5-0-6-4
___ 2-9-5-9-7	___ 6-7-1-0-3	___ 9-6-4-7-9
___ 3-1-3-6-2	___ 6-8-2-9-8	___ 9-7-5-4-6
___ 3-1-8-1-2	___ 6-8-3-2-6	___ 9-8-9-5-0

## WORD SEARCHES

1. There are two kinds of word search exercises that are quite different in form, but work in the same way to improve your ability to call on mental power.
2. Type One is done with a program or movie that is on DVD or video tape, or one you can record. You identify a common word, and then your job is keep track of how many times it gets said and who said it. Each time the word is said, you write down on a piece of paper who said it, and what was the sentence they said it in. Then you have your therapy partner watch the same segment, and with a red pen or pencil mark in the sentences you missed. You score it in the usual way, by dividing the total number of target words into the number of words you found.
3. It is probably a good idea to work your way up gradually from small amounts of time. You might want to start with five minutes, using extremely common words like I, you, it, are, is, and, on, and in.. When you can get 100% of the words correct, you can upgrade to ten minutes, then fifteen, then half an hour, and finally a full hour. Once you are doing half-hour or longer segments, you can switch to less common words like the names of the major characters, or the names of things that relate to the story. A good word search should have at least 20-25 target words.
4. You will find this task to be difficult. It will be important to get very calm and very focused before you start. It is also important to avoid being interrupted, by arranging for someone else to answer the door or the phone, and by turning off your cell phone. Also make sure you attend to your bathroom needs before you start. If you get interrupted, you will have to start a new search—it doesn't count if you stop and then start up again.
5. If you have no partner and have to score it yourself, you should play back the recording one sentence at a time so you can check each one carefully to find the ones you missed.
6. Type Two word search is done with a book. You get a pencil, choose a chapter, record your starting time, and then hunt for every example of a particular, common word in that chapter. Mark your finish time also. Then hand the book to your therapy partner and have him or her mark out all of the ones you missed in red. Score it in the usual way, with a Percent Accuracy score and a Search Speed score.
7. When you have achieved full accuracy, work on doubling your search speed. Then you can work on a two-chapter-long segment, in the same way.
8. When you are 100% accurate on two-chapter sections, start searching for two different words at the same time, following the same format.
9. When you are 100% accurate on a set of two words, your new search target becomes two letters side by side, in either direction. If you choose the letters “d” and “o”, then you are looking for every word that contains “do” or “od.”
10. The last step is to look for combinations of two words that might occur one after the other, in either order, throughout the entire book. This kind of searching is very difficult, as it requires you to sustain effort for the length of the book. You will find that this greatly increases your mind power.

## MIND CONTROL JIGSAW EXERCISE

1. Ordinary jigsaw puzzles can be reasonably good therapy for survivors of extremely severe injuries. They may need to begin with relatively small, children's puzzles before attempting the 500 to 1,000 piece adult puzzles.
2. Large, adult jigsaw puzzles can be used for a much more difficult exercise that builds mind control very effectively. This jigsaw puzzle is done exactly like an ordinary jigsaw puzzle, except that you mark down your starting and stopping times. There is also one extra rule. You are forbidden to touch two pieces together unless you have already made sure they fit together by looking at them carefully.
3. Remind yourself each time that this therapy is about learning to harness your power to control your brain—mind power. Take time before you start to pump up your concentration and to get determined not to make impulsive mistakes. When you are first learning to do this exercise, you will probably find it to be helpful to talk to yourself out loud, reminding yourself often to avoid touching the pieces together until you are sure that they fit.
4. Every time you put together two pieces that fit together and belong together, you receive one correct point. Every time you even touch two pieces that don't belong together for a tiny fraction of a second, you get an impulse point. If you touch the same two pieces together more than once, you get an impulse point every time you touch them. When you are done with a session (30 or 60 minutes depending on your schedule and how quickly you get tired), add the correct points and the impulse points together to get the total points. Your Percent Accuracy score is the number of correct points divided by the total points.
5. When you begin doing this exercise, your Percent Accuracy score may be 10% or even less. It is possible to achieve 99% accuracy. One survivor who had a World-Class recovery finished his first puzzle with 99% accuracy, after a head injury that produced 18 days of coma! He said that doing this was one of the hardest things he had ever done. When he finished, which took him a couple of weeks, he had developed rock-hard mind control.
6. We also use the board game Labyrinth and mazes taken from published puzzle books to develop this kind of control. These are excellent self-therapy activities. Maze books of many different levels of difficulty are available at the biggest bookstores or from Internet auctioneers. These should all be done the same way—with the time scores recorded on paper.

## THERAPEUTIC VIDEO GAMES

1. Video games can provide excellent therapy exercises because they can be done without a partner, and they are self-scoring. However, they provide no therapeutic benefit unless you write down all of your scores, and press yourself to improve those scores as you practice.
2. All video games are not helpful. For example, games that allow you to stop the action whenever you feel like it, like most “shooter” games, have very little value. Games that require constant, fast action, like martial arts combat games, are also of very little value unless you have a mild injury. The games that work best are those that require many moves at a regular, but not too fast, pace. If you have ever played Tetris, the range of speed required by different levels of that game is just about right for people with all but the most severe head injuries.
3. Video games provide better training if the game requires you to do one thing and NOT do something else. This can take the form of having to do two things at the same time, or having to decide between doing one thing and doing something entirely different. For example, the game Pac Man involves chasing down rows of targets that you eat to get points, but at the same time avoiding ghosts that can destroy you. In another classic game, Space Invaders, you have to worry about getting bombs dropped on you at the same time as you are trying to shoot the bomb-dropping flying saucers.
4. Here is the bad news: The games you played before your injury are not of value. Your brain is already programmed to play those games. When you play them, all you are doing is running your old program. That’s not very useful, and often not any use at all. You need new challenges.
5. It is always important to remind yourself that the purpose of these games is not fun, nor is it to rack up points, but instead to call up maximum mind control and learn how to keep your mind control going even when something surprises or distracts you.
6. Once you have chosen a game, and learned the rules of game play, make sure to record every score, even on the games when you do terrible. Most of the games have more difficult, advanced versions you can tackle once you have mastered the simple version.
7. It is always helpful to find out how well you are doing by comparing your scores with those of other people. If you can get your therapy partner or others to play the games you are working on, and to do it with maximum effort, then you can record their scores and compare them to your own. You can also compare scores with other survivors, by posting your scores on a web site for survivors or comparing notes in a chat room.
8. The list of games we recommend is mostly old, copyrighted classic games from the Atari company. These older games are generally set for a slower speed than present-day games, closer to the speed we want to use for therapy. (We also learned to use these games for therapy because the Atari company donated them.) These games can be played on a home computer—the software is relatively inexpensive if you get it from an Internet auction house. This list begins with the games we have used most often.

Breakout (not Super Breakout or some other unauthorized version), Tetris (original version), Missile Command, Space Invaders, Zaxxon, Donkey Kong, Pac Man, Centipede.

## SLAPJACK

1. This mind-control exercise is one of the most powerful ones we have used. It begins as a very easy game which has been played by children for many generations. However, our therapeutic version is quite difficult to play, and can be adjusted to make it gradually more difficult still. Thus it is another technique for developing rock-hard mind control.

2. Slapjack is played with a pen or pencil, a sheet of paper, and two decks of cards (with Jokers). It is a two-person game, so get your therapy partner. By the way, keep in mind that Slapjack is actually harder for your partner than it is for you, so be kind to them if they mess up.

3. Your partner deals out the cards so that they land in front of you, face up, making a messy pile. In the easy form of the game, your job is to slap your hand on each one of the jacks before the next card lands. Do this slowly until you are 100% accurate. Then gradually increase the speed at which the cards are being dealt. Increase step by step each time you reach 100% accuracy, until you are getting every jack as fast as your partner can deal them out.

4. Now change the target from jacks to another face card, and add a second target that is not a face card. It could be kings and sixes, queens and twos, and so on. For each new game, your partner picks two new target cards. Your partner should slow it down until you reach 100% accuracy, and then, again, speed back up step by step until you are getting them all as fast as he or she can deal.

5. Now it begins to get more difficult mentally. Now your partner chooses two targets and designates one of them red and the other one black. It could be red aces and black jacks, or red queens and black fours, and so on. Now, you probably should write down the targets to make sure you don't forget or confuse them. Your score is the total number of correct targets you hit in time, divided by the total number of targets plus the number of false hits you made. Say the targets are red kings and black tens. There are four of them in each deck, so there are eight in the two decks put together. Suppose you hit all four red kings, missed all four black tens, and also hit all four black kings. Your score would be 4 correct divided by 8 targets plus 4 false hits, or  $4/12$ , or .33.

6. If your score drops below .1, the dealer is going too fast and should slow down. You will find this to be quite difficult at first, but your score will improve as you call on more mind power.

7. When you are scoring at least .7, the dealer should add a special hand task that you do whenever a Joker comes up. It could be to snap your fingers, to point at something, to tap the table twice instead of once, to cross your fingers, to tap your chin, or whatever comes to mind. Now, if you do that task when each joker comes up, you earn four more correct points. But if you slap the card (once) for a Joker, that is an error. And if you perform the Joker task when a target card comes up instead of slapping the card, that is an error. This is very hard. The dealer will need to slow way down, and gradually build up speed. When you can get at least .7 at  $\frac{3}{4}$  speed, you are doing great!

Some of our superstars have been able to get to .9 at full speed, developing fabulous mind control.

## TWENTY QUESTIONS

1. This is a thinking game that does not depend on speed, but it does require mind control. This game has been played at parties for many years—that's where I learned the basic version of it.
2. This game must be played with a partner, and works better in a group than a pair.
3. Each player needs a tablet and a pen or pencil. One person who serves as the MC does not play.
4. The MC thinks of one *specific* item—a person, a place, or a particular thing. The players' job is to ask questions to try to figure out what that item is. The MC only tells them that it is a person, a place or a thing. In the original game, the players have only 20 questions total to figure it out.
5. As a therapy, this is about summoning the mind power that you need to follow the rules. The rules are very specific and simple:

**--YOU ARE FORBIDDEN TO ASK A QUESTION UNLESS YOU INTRODUCE IT BY SAYING "MY QUESTION IS."**

**--YOU CAN ONLY ASK QUESTIONS THAT CAN BE ANSWERED BY "YES" OR "NO."**

**--YOU ARE FORBIDDEN TO ASK A QUESTION YOU DON'T NEED TO ASK. FOR EVERY QUESTION, THERE SHOULD BE AT LEAST ONE POSSIBLE "YES" ANSWER AND ONE POSSIBLE "NO" ANSWER.**

Any time a rule is broken, you receive an impulse point for that turn. This means that during the game, any question (even "Do you want some chips and dip? Or "Where did I put my pencil?" must be preceded by "my question is." It means that if the person asks (about a person) "Is this a man or a woman?" that an impulse point is awarded because that question cannot be answered with a "yes" or a "no." A proper question would be "Is it a man?" or "Is it a woman." The third rule is the easiest one to break. Often the person asks a question when there is no answer they can think of that could be answered one way. We ask the players to give us an example of a possible "yes" and a possible "no" answer just to be sure that it is a necessary question. Sometimes, it is obvious that it isn't a necessary question, based on the answers to earlier questions. For example, if it has already been determined that it is a male person who was an actor during the Civil War, and the next question is, "Is this person still alive?" that question is not necessary, because everyone who lived during the Civil War is dead. You will find that you have to think carefully to come up with proper questions.

6. The Percent Accuracy score in a game of 20 questions is the total number of questions that followed all three rules divided by the total of the correct questions plus the impulse points. An experienced player should be able to consistently score .9 by being appropriately careful and using full concentration.

## THERAPEUTIC TABOO

1. Taboo is a popular copyrighted game sold in department and toy stores. It is meant to be played in groups. The therapeutic version of Taboo is of course more challenging and requires summoning up more mind power.
2. In the original game, a player draws a card that has a target word printed on top of it. The task is to give clues to the other players so that they will guess the target word. However, there are also five Taboo words printed on the card, and if any of these words is used in a clue, the clue-giver loses the point. In original Taboo, a one-minute timer is used, and the clue-giver keeps drawing new cards and giving new clues until time runs out. In the therapeutic game, the player has the full minute for a single word, and a turn consists of four one-minute rounds. Thus the MC loads four cards into the game's card holder at the start of each turn. In therapeutic Taboo, the clues have to follow these rules:

**--YOU ARE FORBIDDEN TO SAY THE TARGET WORD OR ANY PART OF IT**  
**--YOU ARE FORBIDDEN TO SAY THE TABOO WORDS OR ANY PART OF THEM**  
**--YOU ARE FORBIDDEN TO MAKE ANY GESTURES**  
**--WHEN YOUR TURN IS OVER, YOU ARE FORBIDDEN TO TOUCH THE NEXT  
CARD UNTIL THE MC GIVES YOU THE OKAY.**

**If any of these rules is broken, it scores one impulse point and the turn is over. In addition, the MC chooses a very common word to serve as the "poison word" for the day. Every time a clue-giver says the poison word, that earns one additional impulse point.**

3. The MC sits behind each clue giver so that he or she can see each card and be watching for the forbidden use of the target and taboo words.
4. The Percent Accuracy score is the total number of words correctly guessed divided by total correct plus the total impulse points, including all of the poison words. A score of .4 to .5 is quite good, but a player who is using maximum mind control can earn .8 to .9.

## **ROOM SEARCH**

1. Room search is another therapy activity that can be done in two ways.
2. Type One room search involves putting a number of identical objects (usually ten) that do not normally belong in a room somewhere in the room. The objects should be relatively small, about the size of a dime or an aspirin. They should be put where they can be seen without having to move anything, but in places that make them less than totally obvious.
3. Type Two room search must be done in a very familiar room, i.e., a room in the player's home. In this search, the therapy partner moves a certain number of objects (usually ten) from the places they are normally found to some other part of the room.
4. Record the start time and the finish time when all of the target objects have been found.
5. To get comparison scores, it may be useful to have other family members also do this exercise.

## **THERAPEUTIC JACKSTRAWS AND JENGA**

1. These are popular games that require careful planning. Jackstraws is a game which has been played for hundreds of years, and which can be purchased at most toy stores. Jenga is a relatively new, copyrighted game that uses the same principle but larger playing pieces. Some survivors who have lost some of the control of their hands cannot play jackstraws but they can play Jenga, although it is difficult for them. The idea in both games is to choose a playing piece that you can take off of the pile without disturbing the other pieces.

2. These games are scored with the usual Percent Accuracy score. Because it is usually easy to score points in the early parts of each game, a score of .95 should be considered the level of an expert.

## MEMORY CHALLENGES

1. Memory challenges are therapy exercises that are used to explore or demonstrate the memory problem produced by the injury. Doing these more than once is not recommended, as repeated practice in memorizing information has not proven to fix the effects of head injury.
2. Only the therapy partner writes down the memory challenges. The player tries to manage the information mentally. Various tasks can be used.
3. Challenge One: Web Site Access. The players sit in the car where it is normally parked. The partner shows the player a card on which a web site address is written. The player's job is to exit the car, go into the house, turn on the home computer, wait for it to load up, and then access the web site. The addresses on the cards get longer and more complicated as the exercise continues. There are two scores: for reliable memory and for maximum memory. The reliable memory score is the largest number of information items successfully input before the first mistake was made. An information item is a familiar word, a digit, a common name, or the letters of a novel word or a name with a strange spelling. The maximum memory score is the largest number of information items recalled overall.
4. Challenge Two: Recalling the Events of a Trip. The therapy helper gets out a full-size map of the United States, and makes up an imaginary trip which has at least 25 pieces of information on it, including the city where the trip started, the highways traveled, the cities in which the travelers stopped for a meal, any side-trips for sight-seeing, locations in which the driver received a traffic ticket or where the car broke down. After completing the story, the helper gives the player a math test that is at least five minutes long, and then they watch a 30-minute television show. 24 hours later, the map is retrieved and the player is asked to tell the whole story. The score is the percentage of the pieces of information that are correctly recalled.
5. Challenge Three: Recalling Assembly Instructions. Purchase or borrow a medium-sized Lego set, a copyrighted child's assembly toy. Find one whose instructions have at least 25 steps. The player can study the instructions, taking as much time as he or she wants in one sitting. Then give five minutes of math problems and watch another half-hour of TV. 24 hours later, the player attempts to put the Legos together. The score represents the number of instructions that are completed in order.
6. Challenge Four: Learning the Lines From a Play: Go to the library and check out a play. Make sure it is one the player has never read and never seen performed. If you are having difficulty choosing, use "Our Town" by Thornton Wilder or "The Man Who Came to Dinner" by George Kaufman and Moss Hart. At home, the player can take as much time as he or she wants to learn as many lines as possible in one sitting, beginning with the start of Act Two. When the player is done, he or she should read a newspaper article out loud, and then watch another 30-minute TV program. 24 hours later, he or she attempts to remember as many lines as possible. The score is the number of sentences correctly recalled word for word.
7. Since these challenges are unusual, the scores only means something if the task is also attempted by other people who do not have head injuries, but who make a maximum effort.
8. The results of this test should be seen as indicating how much information can be handled through memory, at least under ideal conditions, and at what point it becomes necessary to write information down in order to keep it.

## CHAPTER TWENTY-TWO: Step Seven: My Treatment Plan

1. If you have read all of the preceding chapters, you now know everything you need to know to put together a basic program of brain training for yourself. Congratulations. It took a lot of work to read through that much material, and you must be serious about recovery if you did it.
2. However, good intentions are not enough to achieve a good recovery. All professional rehabilitation therapy is based on Treatment Plans. A Treatment Plan is written, it is detailed, and it represents a commitment to accomplish certain goals. Real therapy cannot be done properly without one. And self-therapy done without a Treatment Plan doesn't make it.
3. Effective therapy has to be done on a regular basis. One of the reasons people almost never recover well at home is that they don't have the self-discipline or structure to work on therapy activities on a regular basis. Do you?
4. Effective therapy makes everyone accountable. The therapists promise to deliver all of the necessary therapies, and they spell out how many hours per week they promise to deliver them. The patients are told that they have to come in for the therapy sessions, and that they have to give good effort, or they will be discharged without receiving all of the therapy. They are accountable to do the work and to give it the necessary effort. Are you?
5. The Treatment Plan spells out the accountability. And the treatment team meets once a week, or once a month, to take stock of what has been done and to make sure that everyone stays accountable to do what is needed. Are you willing to have meetings like that, and to make yourself accountable for how much work you are doing toward recovery?
6. I can assure you that good intentions and half-baked effort will not produce much recovery. In fact, even in the best programs, only about half of the patients have good recoveries. In almost every case, they are the ones who put in the most work. If you make and use a Treatment Plan for yourself, you have a chance to be one of those people.
7. On the next page is a sample Treatment Plan form containing everything recommended for starting a basic program that leads to a good recovery. If it makes sense to you, use it as your first-month Treatment Plan, and add new recovery goals to it in later months. If it's not the self-therapy program you want, write out your own Treatment Plan following that format.

**TREATMENT PLAN FOR THE MONTH OF \_\_\_\_\_**

**Goal 1: Learning about my injury**

Commitment: Write head injured moments in my notebook.

Progress: I had written \_\_\_\_ at the end of last month. I have written \_\_\_\_ as of today. That means that I wrote \_\_\_\_ this month.

**Goal 2: Keeping appointments, keeping an activity record, and planning my use of time**

Commitment: Keep a daily schedule planned one day in advance

Progress: This month, I wrote and followed a partial schedule on \_\_\_\_ days and a complete schedule, with every hour filled out, on \_\_\_\_ days out of \_\_\_\_ or \_\_\_\_%.

**Goal 3: Preventing Myself From Forgetting and Losing Information**

Commitment: Make notes or tape recordings as a permanent record of information I will need later

Progress: This month, I left \_\_\_\_ reminder notes and \_\_\_\_ of them worked.  
This month, I made \_\_\_\_ notes or tapes for my permanent files.

**Goal 4: Learning How to Prevent Head-Injured Moments**

Commitment: Do Analysis forms to learn when I am most prone to head-injured moments.

Progress: This month, I completely filled out \_\_\_\_ Analysis forms including partner feedback.  
What I Learned: I tend to have head-injured moments when: \_\_\_\_\_

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**Goal 5: Improving My Control of My Thoughts and Actions**

Commitment: Do regularly scheduled exercises to improve my brain power.

I am doing \_\_\_\_\_ therapy \_\_\_\_ times per week.

My score went from \_\_\_\_\_ to \_\_\_\_\_.

I am doing \_\_\_\_\_ therapy \_\_\_\_ times per week.

My score went from \_\_\_\_\_ to \_\_\_\_\_.

I am doing \_\_\_\_\_ therapy \_\_\_\_ times per week.

My score went from \_\_\_\_\_ to \_\_\_\_\_.

I am doing \_\_\_\_\_ therapy \_\_\_\_ times per week.

My score went from \_\_\_\_\_ to \_\_\_\_\_.

I am doing \_\_\_\_\_ therapy \_\_\_\_ times per week.

My score went from \_\_\_\_\_ to \_\_\_\_\_.

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Signature of Self-Therapist

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Signature of Therapy Helper

Date and Time of Next Treatment Planning Meeting: \_\_\_\_\_

## CHAPTER TWENTY-THREE: ORGANIZING MY SELF-THERAPY

1. A program of self-therapy depends on follow-through. You can't fix yourself by making a bunch of isolated, one-shot efforts.
2. You need to have self-therapy goals, and to follow them through. You need to make sure you are achieving your goals--that you haven't forgotten or abandoned them. If what you are doing isn't working, you need to try something else.
3. If you try to organize these efforts in your head, they will be scattered and half-baked.
4. Keep track of the therapy in a structured way--at a scheduled meeting. Every approved rehabilitation program in the country structures their treatment with a Treatment Plan. Don't think you can do decent self-therapy without one. Every treatment program has regular meetings of the treatment team to evaluate progress on the Treatment Plan, and to change the plan as needed. If you want pro quality results, you need to do the same thing.
5. Select your treatment team. If you're the team leader, who are your therapists? Anyone who is helping you with your therapy is on your team--your family members who are helping out should be at all team meetings. The same goes for any friends who are participating.
6. Decide how often should the team will meet. Rehab teams meet once a week at first. Later, they may shift to meeting once a month. It makes sense for you to follow those time frames.
7. Choose your self-therapy goals. The basic goals are already built into the sample Treatment Plan. Your personal self-therapy will also have goals you choose, taken from the advanced chapters and from things you want to accomplish. It is probably a good idea to start with only a small Treatment Plan. Then, as you become an experienced self-therapist, you can add more extensive goals until you are working on everything you need.
8. Plan out how to evaluate your progress. It is always a good idea to make goals measurable--the number of times, or the number of days on which you followed the process. If you meet your short-term goal, you can upgrade it to a higher level. Start with a moderate goal, and increase it by steps until you finally reach the level you really want. Then you can take that goal off of your Treatment Plan and place it on a list of therapy goals you have achieved.

## CHAPTER TWENTY-FOUR: MIND CONTROL AND THE PROBLEM OF CONSISTENCY

1. Because of head-injured moments, you are not as consistent in getting the most important things done as you used to, as you want to be, and as you need to be. You CAN do just about anything you need to do, but you DON'T do it every time you need to do it anymore.
2. Consistency problems are no big deal when it comes to some personal habits. I don't care if you always put the toothpaste top back on the tube when you finish using it (although your husband or wife might care quite a bit--one of the quirky things about a lot of marriages). But I do care if you leave your child in a safety seat sitting on top of your car and drive off (as in the movie Raising Arizona). Doing that just once in a million times is NOT okay. Cussing out a customer is NOT okay, even occasionally. Leaving the keys in your car is NOT okay, even once in a while. Many, many life tasks require consistency, and head-injured moments disable survivors by taking away that consistency.
3. You can teach yourself to be consistent, but doing that requires structure and work.
4. You make yourself consistent by warning yourself that a head-injured moment is about to happen, every time you enter a situation in which one happened before. Once you give yourself that warning, you naturally become careful, and you usually become careful enough to prevent the head-injured moment from happening again. Analysis forms give you the structure to make that happen. That is why filling them out is so important.
5. Fixing head-injured moments has to be done one situation at a time, and one behavior at a time. You can't say "I need to stop leaving my purse in public places." and expect that kind of self-instruction to prevent a head-injured moment. That kind of instruction provides you with no warning when you go into the situation where the problem happens. Do you plan to warn yourself about forgetting your purse EVERY time you go into a public place? Because you're going to be awfully busy making all of those warnings. And it's human nature to become hit-and-miss about it. On the other hand, if you left your purse in the library because you rushed out at closing time, it's easy to warn yourself the next time you're in THAT situation, since it happens rarely. And that warning will work.
6. That means that your self-therapy has to be done one behavior at a time. You can't just demand that you stop forgetting things, stop being impulsive, get organized, stop overloading, and so on. Those demands don't work. Your Treatment Plan needs to focus on very specific behaviors and situations if you are going to actually fix anything. The rest of this book discusses many different kinds of specific behaviors that create problems for some survivors. When you read a chapter that you feel applies to you, or one that your therapy partner advises you to work on, you can add it to your Treatment Plan.
7. In every case, you are trying to make yourself more consistent, using Analysis Forms to pin down when you have the head-injured moments that affect that specific area and then teaching yourself to sound warnings that another head-injured moment might happen when you get into the situation again. Use the rest of this book as a menu, picking out the parts of your life that need self-therapy, and applying the techniques you already learned to teach yourself consistency in each area of need.
8. Some of the chapters deal with complicated activities (such as holding a job or making friends) that involve a number of behaviors all of which need to be fixed. So when you have read a chapter you want to work on, you will need to try to analyze which behaviors need work, and if your list is not complete at first, add other problem behaviors as you work toward your goal.

## ADVANCED TECHNIQUES:

### CHAPTER TWENTY-FIVE: UNDERSTANDING MY FOCAL INJURIES

**Summary: A self-therapist begins to work an advanced program by learning the details of the injury. Many head injuries not only damage interconnecting wires, but also produce certain kinds of damage to specific brain systems. This second, “focal” injury affects your functioning in different ways that you need to understand.**

Head injuries cause two kinds of damage. The first kind is called diffuse injury. The damage to individual wires interconnecting the brain’s computing centers or work stations is the most important part of a head injury. It is related to the length of coma, the gap in memory around the accident, and the various kinds of disability that occur after the accident.

There is a second kind of injury called focal injury. This happens when one spot in the brain gets so badly damaged that the whole system that works in that area stops functioning properly. Focal injuries often produce permanent defects in how the brain works. It is for this reason that there are certain specific symptoms that are not shared by everyone who has a head injury. For example, some people permanently lose the ability to smell because their injury has torn apart the nerve that carries the sense of smell. Others have permanent problems with going to sleep and waking up because of damage to the brain stem or the connections to it. Others become oversensitive to noises because of damage to the sides of the brain. While these symptoms are often not disabling, they nevertheless can produce some fairly serious problems, and so they need to be understood. Because these symptoms tend to be permanent, recovery depends on working around these damaged systems.

When the head gets hit in one place, which is called head trauma, brain cells underneath the point of impact are torn apart and die. Tiny blood vessels under the point of impact explode, killing more brain cells nearby. When the blow is strong enough, like two cars in a parking lot or residential street hitting head on or a moving car striking a wall at 35 mph, a tidal wave of pressure travels through the pudding-like brain, tearing brain cells in half as it goes. The wave finally crashes against the inside of the skull opposite of the point of impact, killing more brain cells there. Each time a brain cell is killed, the brain chemicals spill out and kill the cells around them. If the blow is even harder, for example, falling from ten feet onto a hard floor head first, so many cells are killed that the brain swells up with fluid. Since there is no extra room inside the skull, this extra fluid squashes the remaining brain cells, killing more of them. The brain then tries to wall off the damaged area and rip out the dead cells, but it kills even more cells when it does that. Sometimes the impact tears open a big blood vessel, and it bleeds into the brain, adding still more pressure that kills more cells. Each cell that dies is not re-grown or replaced. That is why head injury produces permanent brain damage.

How much focal injury you got is easy to determine. A CT scan taken on the third day gives a very good picture of focal injuries. An MRI scan taken about a week after the injury gives an even better picture of some focal spots. Your medical record contains detailed reports of the areas of damage. If you only had a scan taken on the first day, it won’t be very useful, since only the biggest focal injuries show up that soon on scans. If you did not get your scans until later on, they will almost certainly hide part or all of your focal injuries. The reason for this is that focal injuries punch holes in the brain, and after a couple of weeks, the mushy brain pushes into those holes and fills them. So if you had a 3-day CT scan or 1-week MRI, they tell the precise story of the focal injuries you will have for the rest of your life. If you get another scan later on and it looks “normal,” it does not mean that the brain injury has “healed”—only that the focal injuries have been hidden as the brain changes shape to fill the holes.

In order to investigate focal injury, you need your medical records. You have a right to them, and

they can be obtained from the hospital where you were treated. The documents you are looking for are the reports of CT scans and MRI scans, the History and Physical Exam, and the Clinical Resume or physician's Discharge Summary. When you look at these documents, you are looking for any of the following terms: penetrating wound, depressed skull fracture, hematoma or hemorrhage (blood clot), contusion (bruising tear), edema (swelling), encephalomalacia (softening), sulcal effacement (squashed outer layer), lucency (bright spot), or focal abnormality. Any of these is likely to indicate a focal injury. You want to make a note of where each of these things is found. If possible you should go over the reports with your doctor, asking him or her to help you to identify the areas of focal damage. Remember, you want to concentrate on the CT scan from around the 3<sup>rd</sup> day and the MRI scan from around the end of the first week or the second week.

What the focal injury did to you depends entirely on where it was. Here are some of the locations the reports may mention, and the effects of a focal injury in that location:

Frontal lobes: This area contains the system that controls impulses, plans, organizes actions, initiates, follows through, and watches the results to make sure things were done properly. This part of the brain plays a big role in concentration. It also serves to stop you from doing things you shouldn't do, like making rude remarks, jumping the gun or rushing into something without knowing what is involved. It stops you from going on saying or doing something when you are finished, or when you are getting nowhere and there is no point in continuing. The left frontal lobe plays a special role in organizing what you say and write and in whipping up enthusiasm to get things done. The right frontal lobe plays a special role in planning out your social behavior, and in managing your safety. Focal injury in the frontal lobes, if small, weakens these functions. If it is large, it can knock them out entirely.

Because of the way the skull is built, some focal damage to the frontal lobes is usually done by any high-speed injury. Symptoms of focal injury are therefore likely to be present in people who have had car, motorcycle and airplane accidents. A blow to the back of the brain does most of its damage through the rebound effect on the frontal lobes, so someone struck in the back of the head in a fall or a fight will also have mainly frontal lobe focal symptoms.

Basal ganglia: similar effects to frontal lobe injuries, very important in automatic or habitual acts.

Left temporal lobe, hippocampus and amygdala: hearing and interpreting speech, and controls to turn down loud noises; naming objects and people; positive emotions like joy and enthusiasm; memory for words, ideas, conversation and reading.

Right temporal lobe, hippocampus and amygdala: hearing and interpreting emotions in voice tone, and controls to turn down loud noises; retrieving background information on people, objects and situations; negative emotions like fear, anger, and concern; memory for visual images, locations, and the behavior of self and others; learning new skills.

Temporal lobe symptoms are also common after a high-speed injury, like a motorcycle or car accident. The single problem reported most often by closed head injury patients is forgetfulness.

Left parietal lobe: paying attention to reading and speech input; decoding the meaning of reading and speech input; connecting current events with stored information from past experience; noticing things in the right field of vision; feeling body sensations on the right side of the body; making fine judgments in perception that guide the coordination of skilled hand movements (for example, for writing, sewing, using tools and machinery, cooking, etc.).

Right parietal lobe: paying attention to the world around you and to your own body; noticing dangers and hazards; judging distances and directions; aim, including navigation of walking and driving; reading body language and decoding the meaning of gestures; self-awareness; learning to make fine judgments in

perception that guide the coordination of new skills; building visual images to anticipate the results of your actions, the actions of others, and other predictable events.

Left occipital lobe: Basic vision for the right visual field. Recognizing familiar objects, letters and words.

Right occipital lobe: basic vision for the left visual field; seeing the features of unfamiliar objects.

Corpus callosum: coordinating the two sides of the body, and information from the two sides of space, and positive versus negative viewpoints and emotions.

Hypothalamus: drives you to satisfy your basic physical needs for food, water, temperature control, sex, and to protect safety via angry or fearful reactions.

Thalamus: relaying information from one part of the brain to another, to process information from your senses and to organize your actions

Cerebellum: your sense of balance, and smoothing out and organizing your movements.

Brain stem (pons, medulla): puts you to sleep, helps to wake you up, helps to focus your attention, and provides energy to make thinking and action possible.

Focal injury mainly to the left side of the brain usually results in loss of confidence, goal-directedness, developed skills, memory for new information, and particularly communication skills. These injuries are hard on the person, because he or she is often aware of being impaired and feels frustrated or discouraged. The effects of this kind of injury tend to be obvious to other people right away, and become less obvious during the first year to two years.

Focal injury mainly to the right side of the brain results in overconfidence, extreme refusal to recognize symptoms, tunnel vision, acting without awareness of the consequences, socially unacceptable behavior, and indifference about risks and problems. The problems from this kind of injury tend to get worse with each passing year, and may not become obvious to others for several years or to self for an even longer period. However, the problem behaviors produced by the injury tend to be extremely upsetting to spouses, bosses, and friends. They blame these behaviors on the person's character, not realizing that they are caused by the brain injury. Injuries to the back half of the right brain often result in divorce, isolation, and loss of career.

Now that you know how to make sense of the information, you need to get your medical file and write down what your focal injuries are, and how they can be expected to affect you. This information will tell you about some of the things you need to fix. As you identify your focal injuries, you will be able to search for information about them on the internet, or in the books that are listed in Appendix A.

## CHAPTER TWENTY-SIX: SETTING MY PRIORITIES

**Summary: Good decisions are made in accord with your personal priorities. The decisions you regret making are the ones that conflict with your priorities. The head injury makes it easy to overlook them. By bringing your priority list up to date and using it actively to guide your decisions, you can take better control of your life and make sure that the decisions are guided by your needs.**

The Issue: Planning depends on having a clear sense of what's important to you. You can't make decisions about what you are going to do, or how you are going to spend your money, or which opportunities you are going to take and which you are going to let go, unless you know what your priorities are. Knowing priorities is something an adult normally does automatically, but it doesn't work automatically after a head injury. After a head injury, too many decisions are impulsive. They are made to pursue something that is interesting at the time, but without thinking about how the higher priorities will be impacted. For example, survivors get mad at the boss and blow him off, losing the job. Only later do they realize how important the job was to them. If they had only thought about their priorities at the time, they might still have that job.

Which injuries cause this symptom: Focal frontal and parietal injuries and severe injuries.

What you can do: You need to *set* your priorities. Schedule an hour to get this done, and when you do it, think carefully and make your list in writing. You can then refer to that list whenever you need to make plans or important decisions. Revise your priorities on a regular basis. You might want to review them every month. In between reviews, you may also want to revise them if you have a sudden discovery about yourself or about life. By setting your priorities and recording them in writing, you strongly take control of your life.

Setting priorities mentally, the way most people do it before a head injury, relies on a whole collection of mental skills, including memory, judgment, problem-solving, and anticipation. Most people believe that they KNOW what their priorities are at all times, after just a second of thought. They are kidding themselves. To truly know your priorities is something that takes deep thought.

But after an injury, the process of prioritizing functions very poorly. In most cases, people simply call up the priority list they have in their mind, which happens to be the list from before their injury. Since your life has changed quite a bit, those old priorities don't apply very well. You need to revise them. But most people don't take the time or put in the effort to do that.

If you do give it some deep thought, you may find that your priorities have changed quite a bit. Before, your priorities may have been placed on wealth, or major purchases, or popularity, or family. Now, health and safety are probably more important than they used to be. Many survivors also place a higher priority on spiritual matters, and on making their life mean something.

Perhaps your first priority should be recovery. The way your lifestyle has gone since your injury, it may not be possible to achieve any of your other priorities without recovery. For example, when you are overloaded, your first priority should always be to get yourself out of overload. Until you do that, nothing you do or say is going to work out well. Survivors who achieve truly great recoveries always put recovery at the top of their priority list, either in first place, or second only to religious devotion.

As you adjust your system of priorities, you will probably find that many of your old priorities need to change because they are no longer realistic. For example, one patient had as one of his top priorities buying a second home as income property. However, he lost his career, so it was no longer possible to buy a second home. In fact, he lost his first home. Many people hang onto priorities for career advancement even after they have lost their job, and (if they are totally honest with themselves) their career. Consequently, they don't want to get the kind of job that they could actually hold, because the lower pay is a step

backward, and their priority is to take a step ahead. They can recover vocationally only if they change their priorities, replacing the goal of getting ahead with the goal of holding ANY job.

The whole process of thinking about priorities has to be different after a head injury. Before, you probably automatically threw out unrealistic goals. Now you automatically accept unrealistic goals, and you can be realistic only by carefully looking at each goal and judging whether it will work or not. For example, a patient who was highly successful in going to college, getting top grades, and planning a career, was totally unsuccessful in setting goals for romantic relationships. He wanted a really hot, young woman, while he was now middle-aged, physically disabled, and relatively poor. He had gone without a date for 12 years because the women he met who matched up with his priorities would not date him, and the ones who would date him did not match his priorities.

If your priorities are unrealistic (especially if they are based on what your old self could do), then your life will be an exercise in frustration and failure. The only way to lead a successful life is to make sure that you ask yourself to do only those things you are really capable of doing. I cannot begin to properly explain how hard this is to do. It takes even the best recovered people years to reset their priorities so that they are truly realistic. To get there, you need to think about it often, and work on it regularly. But the reward for getting your priorities straight is sweet: Your life begins to make sense again.

Even after you have adjusted your priorities, it doesn't guarantee that you will use them. Every time you make an important decision, your priorities control your decision process only after you make yourself stop and think about them. Any time you make a decision without thinking about your priorities, and end up regretting what you decided, writing out an Analysis Form is appropriate. If you have filled out several Analysis Forms and still continue to make decisions without checking on your priorities, you may want to add this problem to your Treatment Plan.

## CHAPTER TWENTY-SEVEN: REMEMBERING TELEPHONE MESSAGES

The Issue: Brain injury usually affects the ability to make new memories. As a result, people tend to forget appointments, arrangements and messages. For example, almost every survivor has gone shopping only to forget to buy some of all of the things they needed. Almost everyone switches to making a shopping list for every shopping trip. By using a list, nothing is forgotten.

Phone calls are even more difficult to remember. They can come at any time. That means no preparation. Phone calls are often emotional. That means overload. People often get off the phone and forget some or all of the important information that they received during the call. It is not a good idea to try to remember phone messages mentally.

Which injuries cause this symptom: Left temporal focal injury and severe diffuse injuries.

What you can do: Put a tablet and a pen by every telephone in your house. That way, when a call comes in, you can make a note. If there is something you need to follow up on, you can make as many reminder notes as there are tasks, and put them in your Daily Schedule or your things-to-do list.

Don't take chances on forgetting a phone message that needs follow up. It's embarrassing, and it takes away people's confidence that you can handle things. If you write it down, and then file the reminder notes, you'll have the information later.

There are two reasons to write up an Analysis Form on this goal. First, if you fail to write notes on an important call, you should write up a form each time. Second, if you quit writing in the middle of the call, or write down notes that are too hard to read or to make sense of later, you should, again, write up a Form each time. If you write several Forms, it indicates that you need to add this goal to your Treatment Plan.

## CHAPTER TWENTY-EIGHT: REMEMBERING INFORMATION

The Issue: People with head injuries forget a lot of the new information they get. Recall tends to be uneven, with the most interesting material being most likely to be remembered. The more information learned at one time, and the less familiar the information is, the less gets remembered.

Which injuries cause this symptom: Focal frontal and temporal lobe injuries, severe diffuse injury.

What you can do: There are four strategies for coping with memory problems. You can have someone else do the remembering for you, but that makes you dependent on them. You can try to use memory tricks--there are paperback books filled with memory tricks. Unfortunately, these tricks only work to limited extent after a head injury, and it takes so much work to memorize the kind of information we have to learn in ordinary life that the tricks really don't work. The third strategy is to write down what you need to remember. This always works. But it doesn't do you any good unless you have a filing system. What good is taking notes if you can't find them when you need them?

The fourth strategy is memorization. To memorize information you have to focus your mind on it hard. The longer and harder you think about it, the less likely you are to forget it. Also, the more ways you think about it, the better you will remember it--this is called "deep processing." How did you first learn about it--who told you? What good is this information--when are you going to use it again? What does it have to do with things you already know? The more connections you make, the more you will remember. This is the first step in studying information in school. Take the time, find a quiet place to work, clear your mind, and think hard about the information.

None of these strategies is what people really want. What they want is to have their brain make memories automatically, without any special effort, like it used to. That's not going to happen. You will always be forgetful, or you will always be a person who uses these strategies--you choose which one.

In case you are in school, or plan to take some kind of training course where you have to learn a lot of information, you should know about the rest of the techniques used for studying. The techniques are based on the idea of studying only what you need to study. First, you take the material (notes or reading material) and underline the points you need to learn, leaving out filler words, side comments, unimportant examples, duplicate references, and connector words. Then you turn that information into questions and answers written on flash cards and test yourself. When you can remember the answer to a question, you put it in the discard pile. That way, each time you finish testing yourself you have less to study. The less you need to study, the quicker you can learn it. Pretty soon, you're done. This technique works well to print information into the minds of people who have even fairly serious memory problems.

What do you do if the information is being spoken, and the speaker is going so fast that you can't take complete notes? A similar problem comes when the information is given out in a setting full of distractions. The answer is to tape record the information, and when you get home, make notes off of the tape. Play the tape back one sentence at a time, then write it down. It takes most people about twice as long as the lecture to take complete notes from a tape recording. It's a lot of work, but many students have been able to go back to college only because they could tape record their lectures.

What kind of information do you need to take notes on? You should plan this out ahead of time. Some kinds are obvious: instructions, directions, and explanations of matters that you will have to deal with (for example, recommendations from your doctor, lawyer or accountant). If you have to go to court, you need to write down what the judge instructs you to do. At work, if your boss is unhappy with your work, you need to write down his or her concerns word for word, and make sure you have a written record of everything he or she wants you to do differently. It's easy to forget to take notes--because you now need to take them in lots of situations in which you didn't take notes before. When I explain the results of brain

testing, about one patient in twenty takes notes without being instructed. You need to be careful to be vigilant about, and anticipate, the situations in which note taking is going to be important. Note-taking is necessary whenever you are about to get a lot of information that you will need to keep or use in the future.

## CHAPTER TWENTY-NINE: REMEMBERING TO DO THINGS AT A CERTAIN TIME

**Summary: Most people with head injuries fail to keep appointments and do other actions needed at a certain time because they lose track of the time. If they remember to do the thing, they remember too late. An alarm watch or clock can completely eliminate this problem if you learn to set it every time you need it.**

The Issue: Of all the memory problems faced by people with head injuries, the most serious one for most people is remembering to do something needs to be done at a certain time. The part of the brain that keeps track of the time of day is very fragile, and it usually gets damaged in a head injury. So when you tell yourself to remember to do something--call someone, or buy something, or do some task--at a certain time, there is a good chance that you won't remember that you need to do it until too late.

Which injuries cause this symptom: Focal frontal and temporal lobe injuries and severe diffuse injury.

What you can do: The answer to this problem is extremely simple. You need to set an alarm clock (if you are at home) or an alarm watch to go off at the time when you need to do the task. That is the only way to be totally sure that you will remember it at exactly the time you want to do it. If you are pretty forgetful, when the clock or watch goes off you may not remember what it is that you are supposed to do. To fix that problem, you can leave yourself a note. Always put the note in the same place. If you have pockets, you can always put it in a certain pocket. If you have a purse, you can always put it in a particular place in your purse. If you don't consistently have either one, you can fold it up and tape it around your watchband. You just need to know exactly where to look when the alarm goes off.

If you need to do the task during a particular hour, and you are consistent and careful about following your daily schedule, you can make sure to follow through on something by putting it in your day planner in the proper time slot.

## CHAPTER THIRTY: REMEMBERING DIRECTIONS AND LOCATIONS

**Summary: If you have visual memory problems, you should not try to recall directions and locations mentally. Instead, you should make maps and use them, or use more advanced technology like a GPS system.**

The Issue: Some people with brain injuries have no trouble remembering locations and directions. Others have a great deal of trouble with visual memory. If you go to a new place and have no trouble remembering what the place and people looked like, and can remember exactly how to get there from your home, you probably don't have any trouble with this skill and can move on to the next chapter.

Which injuries cause this symptom: Focal right frontal, temporal and parietal lobe injuries, severe diffuse injury.

What you can do: Learning how to find your way to a new place begins with making a map, or when it comes to driving directions, marking your route on a printed map with a highlighter. Remember to be very careful when you mark out your route, and to double check to be sure your map is accurate. A good map not only has the route marked on it, it also has landmarks. For example, a hand-made driving map works much better if you make a note about some eye-catching landmark that can be seen as you approach the turn. When I give directions to get to my house, there is a huge water tower I tell people to watch for as they get near my street. Big, unusual signs, trees or buildings often make good landmarks for a driver.

When you want to remember how to get somewhere on foot, in a mall or on a campus or other grounds, it is also a good idea to include landmarks. The landmarks should be easy to see and they should be unique or unusual.

Do you put things down and then forget where you put them? Do you temporarily lose a lot of things that way? There is a simple answer to this problem. Have a proper place where everything is supposed to be put. Most people have a place for most of their things, but there are a few things that haven't been given one. Assign a proper place for them, too. Then develop the habit of putting things back when you are finished working with them. Stop just putting them down somewhere. Put them away. The best way to get this habit is to plan your projects with your day planner. When the hour comes to work on the project, get out what you need to use. When the project time runs out, do a "clean up" and put everything you took out away. Soon you will know exactly where everything is. To keep this system working well, you will need to get in the habit of finding places for new things you have just bought and brought into your home. This strategy makes visual memory unnecessary.

If you do a spring cleaning and reorganize your drawers or closets, tape an index card with the new contents on each changed cabinet and drawer. If you box up things for storage, be sure to write a list of the items you put in the box on the outside of it. If you don't, someday you will have to open many of your boxes to find something you stored away.

If you move to a new house or apartment, it can be very stressful learning where everything is located. You should make extensive maps--of your neighborhood, the shopping areas, and the major driving routes. But it is also important to deal with the problem of remembering where your goods have been put. There are several strategies that are particularly helpful. One of them is to tape up lists of the contents of each cupboard, drawer and cabinet to help you to quickly see what is inside. Another is to make an inventory list as you move in, indicating the room you are putting each of your belongings into and where in the room you put it. Making the list may be extra work, but it sure is worth it when you are looking for something!

If you switch to a new market or they redecorate the market you shop at, you will probably find that

the new layout is driving you crazy. When you are shopping at a familiar market, you can write your shopping list out to match the layout of the products--veggies first, then canned goods, then dairy, then meat, and so on. But if the store is new, your shopping list won't match the layout of the store, and you'll be going back and forth trying to find everything you need. So when you start using a new market, take a few minutes and draw a complete map of it. Then you can put that map in your kitchen, and use it as a guide to make up your shopping lists. It will make shopping much easier.

This process of making maps is also a good idea when you take a vacation in an unfamiliar place. You can make a map of the hotel, and a map of the area around the hotel, as well as being sure to get a city map and to mark in the things you are planning to visit. Nothing ruins a vacation quicker than getting lost in a strange city.

One more tip about visual memory: when you meet someone new, make a note in a special section of your notebook that includes the person's name, where and when you met them, any facts about them you might want to remember, and a description of what they look like. Try to include anything about them that is unusual. If they have green hair, write that down. If they look like Madonna but with green hair, write that down. The more detailed your description is, the easier it will be to recognize them. The next time you are going to a place where they will be, take out your notebook and refresh your memory on the description and the facts about them. That way, you will know as much about them as a person who has no head injury, and you'll make a good impression. In fact, when you find out more about them, keep adding to your notes. If their wife gets sick, make a note. Then the next time you see them, you can ask after the wife. That kind of polite attention almost never comes from people with head injuries because they usually forget these bits of news about people. If (and only if) you take notes, you will come across as interested and considerate.

By the way, if you are driving with a map for guidance, a few procedures are recommended. First, when you need to look at your map, pull over. Don't try to drive and read the map at the same time--with a head injury, that is a formula for disaster. Second, if you can't find your current location on the map, drive to an intersection where you can read the cross-streets, and you will be able to look them up on the map's index. Third, don't try to memorize the whole route unless your memory is reliable enough to do that. Instead, focus on one or two steps, or write all of the steps down on your pocket tablet.

Mapquest or another Internet map-making service has been a godsend for many survivors. Some do best with a picture-type map, but more do best with the list-of-instructions type of map. A GPS may be even more helpful if you can afford one.

## CHAPTER THIRTY-ONE: GENERAL TIPS ABOUT RECORD KEEPING

**Summary: Most survivors tend to make messy and incomplete notes that are hard or impossible to use later on. Develop the habit of writing down the whole message, the date, and who gave you the information, being careful to file it away in a notebook under a specific tab after you write it.**

Always use lined paper. Straight lines of writing are always easier to read. Always use paper that is three-hole punched. That way you can put it in a notebook at any time if that turns out to be the best place for it.

Always date your notes to yourself. If you don't, later you will have no idea of when you wrote the note. If you have trouble remembering today's date, wear a digital watch.

When the note contains information somebody told you, always write down who told it to you. Often you need to know that fact later on, and if it isn't written down, you won't remember.

Never write sketchy notes that have abbreviations or only a few words. You probably won't remember what the abbreviation stood for, and you may not remember what a sketchy note is referring to. Those kind of notes will drive you crazy. You will know it was something important because you wrote it down, but you won't be able to figure out what it was. Remember, your old brain could remember information well enough to use sketchy notes, but your new one can't. Write all of your notes as if you are writing them for someone else to read. Make them complete sentences. Put all of the information into the note. Don't assume that you'll be able to figure anything out later if it's not written down.

Don't ever write about two different subjects on the same page. If you do that, you won't be able to file it without tearing the page. Once you tear it, you can't put it in a notebook. Put only one topic on a page. Don't write little notes in the margins of the page, or writing things that slant off in different directions. A page filled with notes like that is almost impossible to read. Start at the top of the page, and write your notes on the lines.

Make a space in your bookcase or file cabinet for your record-keeping notebooks. Put a label on the spine of the notebook indicating which notebook it is. It is a good idea to have separate notebooks for the major subjects on which you keep information: a notebook for your used day planners, a notebook for your self-therapy notes, a notebook of information about friends and family, a notebook for financial information, a notebook for each of your major hobbies or careers, and a notebook for miscellaneous information. It is a good idea to subdivide your notebook by types of information--medical, family, friends, hobbies, head injury facts, and so on. The sections should be set off by tabs that have the topic written on them.

These methods all provide structure. This structure allows you to be able to find any note you might need as quickly as possible.

## CHAPTER THIRTY-TWO: PUTTING ORGANIZATION INTO YOUR LEARNING

**Summary: Brain injuries make it hard to learn new information not only by weakening memory but also by reducing organization. You can structure your learning of new information by active listening--by asking yourself questions about the material--and by organizing it into an outline format.**

The Issue: Organization is weakened by brain injury. How can you fight back? The best way is with structure. When you are reading or listening, you can be passive or active. A passive reader or listener just lets their mind soak up the information. An active reader or listener stops taking it in periodically and thinks about the information.

Which injuries cause this symptom: Focal left frontal, temporal and parietal lobe injuries, severe diffuse injury.

What you can do: The first step in active reading is to *preview* the material. Look at the title. Read the introduction. Read the section headings. Scan the first sentence of each paragraph. Read the conclusion. Then ask yourself, what is this article or chapter about? What are the main issues? What is going to be the biggest topic? What am I going to learn? What might be hard to understand? Now you are *well prepared* to read.

The next step is to read the entire material. As you read it, use a highlighter or a pencil to underline the most important points. When you are done, ask yourself to think about what you have just learned. Question yourself. Who wrote this information, and what makes them an expert? Why are they discussing it? What is the information good for? How will learning it help me in the future? How does it relate to things I already know? How does it agree or disagree with things I know already? What is interesting about it? What do I agree with, and what do I disagree with?

Ask yourself if there was any part of it that you didn't understand completely. If the answer is yes, try to say what it is that you had trouble understanding. Then re-read that section slowly. After each sentence, make sure you understood it; if not, read it again and then think about it, making sure to concentrate on it and nothing else. Re-read the whole section again, slowly and carefully, if you didn't get it the second time. If the third re-reading doesn't work, you need to find someone to help you with it.

Once you have finished reading and understand all of the information, make a set of written notes. Go back to the start. Write down the title, the author, and the main topic. Re-read your underlining and put each one into your notes if it still seems important to you. When you are done, write a one paragraph summary. Then go back and re-read your notes. See if they make sense. If you left something out, fill in what you left out. Now that you are done, you can be sure that you understand the material better because you read it actively. You will also be able to remember more of it.

I know this sounds like a technique that a person would use for a school assignment, but it can also be very useful if you have trouble reading and understanding other things--newspaper or magazine articles or books you read for pleasure. It may seem strange to underline and take notes on a book you are reading for fun, but by doing that you can get back the ability to read long novels that have a lot of characters and events in them. You just have to get into the habit of doing that whenever you read.

It is harder to do active listening when the material you are getting is from a lecture or a television program. But if you tape the lecture, you can use this technique. And if you videotape or TIVO the program, you can use the technique almost as well (except that you can't underline). If you have a family member that you read or watch TV with, you can do it together. The family member can ask you to summarize what was

on the show during the commercials, and also after the show ends. If you do just that much, you will remember the whole show better, and it will make more sense to you.

If the material is very complicated, very new and strange, or just hard to understand, you will probably want to add more structure. The best way to do that is to take notes on it in outline form. Outline form means to divide the material into levels, and to use numbers or letters to identify each piece of material and the level it comes from. A typical outline looks like this:

- I. (The title or main idea of a major section)
  - A. The main idea of the first paragraph
    - 1. The first detail from the first paragraph
    - 2. The second detail
    - 3. The third detail, and so on...
  - B. The main idea of the second paragraph
    - 1. The first detail from the second paragraph
    - 2. The second detail and so on...
- II. (The title or main idea of the next major section)
  - A. The main idea of the first paragraph of this section, and so on...

Outlined notes are easier to understand and easier to learn from. If you have never done any outlining, or if you weren't good at it before your injury, or if you have a left temporal or parietal focal injury or a very severe diffuse injury, you will probably want to have a family member, a friend or a tutor help you to learn outlining. Some people who have extra difficulty in learning to outline can benefit from taking a class on it, or from getting speech therapy that focuses on it.

## CHAPTER THIRTY-THREE: PUTTING ORGANIZATION INTO YOUR ACTIONS AND YOUR SPEECH

**Summary: Just as you always followed instructions when first learning how to do something, so now you should use written instructions to organize things you have trouble doing correctly. The most organized way to structure an action is with a checklist, which tells you what each step is and which one you need to do next. Just as a list of things to do organizes your actions and prevents errors, so making up a topic list organizes your speech and makes sure that you will cover every point you need to make.**

The Issue: Disorganization causes you to take action in a confused way, start with the wrong step or at the wrong time, or before you are completely ready. You might do the steps of the action in the wrong order, or leave out some steps. The problem is greatest for skills which are newly learned or only partially learned. When you have a conversation, you often say things you have never said before, so you have to organize a completely new set of ideas. If you listen closely to your speech (for example, by making a tape recording of yourself having a conversation), you will be able to hear that you sometimes start a sentence in the middle of a set of ideas, and have to go back and pick up the beginning points at the end of the sentence. This makes speech sound awkward, and it is somewhat confusing to the listener. When you give a long explanation, you may get the ideas out of order or even leave some of the important points out. These problems are easy to fix by writing out the order of the things you need to do or say, and using your list to guide your actions or speech.

Which injuries cause this symptom: Focal frontal lobe injuries and very severe diffuse injury.

What you can do: The best way to fix a problem of disorganized actions is by getting more structure. Actions are structured by planning. The best way to increase structure is to take more time, plan more carefully, and write down the steps of your plan. You can then use the written plan as a guide for your actions.

What kinds of actions should you be writing out? Certainly anything that is new or unfamiliar, complex, or important. Any action where a mistake is fairly likely to happen, or where a mistake would be costly. That would include important tasks at work, major purchases, relationship issues, conflict situations, unfamiliar repair tasks, and so on.

People who have a high level of disorganization should structure their activities with checklists. Even routine activities, like the morning routine, shopping trips, vacations, spring cleaning, social events, and visits to the doctor or lawyer should be written up as checklists. When writing up the list, be careful to include every step--don't assume that you'll think of any of the steps. And when you do the actions, be sure to actually check off each step with a pencil or pen. People often want to skip this step, but it is a very good practice, because it tells you at a glance what you have done and what you need to do next. When you are first learning to make and use checklists, it might be a good idea to have a partner who can keep an eye on what you are doing, and if you skip something they can suggest that you include it. Checklists are gold--they remove your memory problems and your organization problems, and help you to get things done accurately and efficiently.

Often it is a good idea to use a checklist and an alarm clock or watch to take care of a chore that has to be done at a certain time. For example, if someone is coming over, and you need to get something from them, tell them something, and give them something to take with them, you can set the alarm clock for the time they are expected to be at your house, and put the checklist of things you need to do on the clock. When it goes off, you pick up the checklist and get your jobs done. It's a no-brainer!

You can also make lists that organize your preparations for a vacation, a party, a job search, or any other multi-step activity. The more steps that have to be performed, the greater the payoff to using a list.

Just as you can put organization into your actions with a written plan, so you can do the same thing for your speech. Whether you have to give a toast, make a lengthy request, explain a difficult situation, or teach, you will be clearer and sound better if you make a list of the points you need to make, and use it to organize your speech.

When you need to make a long presentation, and especially when the presentation is something important where making a good impression has a payoff, your best bet is to use an outline to organize your presentation. When you give the presentation, you should use your left index finger to keep track of the line that you are on, so that you don't get lost in your own outline.

Some people who have extensive focal injuries to the left brain have great difficulty speaking even from lengthy notes. If that is the case, it may be best to print out the whole presentation word for word, and then read it when the time comes to give the presentation.

When writing a speech or an important explanation that you are going to give, it is always a good idea to practice it ahead of time. Try to get a test audience--a friend or family member who you can count on to tell you if something needs to be changed.

## CHAPTER THIRTY-FOUR: HAVING FAIR AND EFFECTIVE ARGUMENTS

**Summary: Survivors often lose the ability to argue effectively, because they become emotional, overloaded and disorganized or aggressive so easily. The only way to make arguing fair is to do it so slowly and carefully that there is time to calm down and get organized before each comeback. This means having the argument in writing.**

The Issue: Arguments are a real problem for most head injury survivors, for several reasons. First, it is very easy to lose your temper, say insulting things you regret saying later, look like a fool, and lose respect from yourself and from the person you were arguing with. Getting frustrated or angry produces overload, which makes you less able to come up with points and to explain them. It's easy for someone else to out-talk you if you get emotional. Moreover, arguments that are loud automatically drive up the level of emotion. Worse still, many people argue fast. When that happens, the survivor can be left behind--trying to express the first point while the other person just keeps coming up with more points. So when an argument is fast, loud, or emotional, you can have no chance to win it no matter how good your ideas might be--it's not a fair competition! Once you start to get out-talked, flustered and overloaded, the natural reaction is to blow your top. In the end, you look bad, and nothing is accomplished.

Which injuries cause this symptom: Focal frontal and temporal lobe injuries and severe diffuse injuries.

What you can do: An argument is fair only if it can be done very slowly. The other person can make a point, then they need to stop talking and let you work out how you are going to respond. If they keep talking, they are cheating you out of the chance to make your point. If it takes you five minutes to work up an answer, they need to wait five minutes. If you start to get frustrated and need five minutes to calm down, they need to wait for that, too. Some couples and families can learn how to argue fairly, and some can't. Some spouses and parents get loud and quick, and won't let you get a word in, no matter how often you tell them how unfair it is. If you live with one of them, you have to stop arguing. Period. You have to switch things around so that arguments stop being done through speech.

An argument without speech? Yes. Get out a tablet, and write down your point. Hand the tablet to the other person so that he or she can write an answer. If he/she writes more than one point, choose one point to discuss and circle it. Respond only to one point at a time. Pass the tablet back and forth, with no talking. That allows you the time to get calm and think through your side of the argument. If you refuse to argue any other way, you can teach your family to argue fairly.

## CHAPTER THIRTY-FIVE: SENSITIVITY TO LOUD NOISES AND BRIGHT LIGHTS

The Issue: Some people develop a terrible sensitivity to noises and lights. Loud sounds and bright lights can actually be painful and overwhelming. The problem can be crippling. If you have it, you need to take special steps.

Which injuries cause this symptom: Focal temporal lobe injuries.

What you can do: First, you need to use techniques to control the light and/or noise. Dark glasses can help with the lights. Earplugs can help with the noise. If you get earplugs, you want to try to find some that will quiet down the noises that hurt your ears without making you totally deaf. Some people find that foam earplugs, like the kind they sell in some bookstores and drug stores, work just fine for them. Others who have a severe sensitivity may have to go to solid earplugs or over-the-ear noise-deadening headsets. Some people even have to use industrial earplugs for airport workers or machine operators.

The second step is to try to arrange your life so that you are not required to spend too much time in places where the lights and noises bother you. For example, if you are sensitive to lights and noises, you should probably stay away from rave clubs. In fact, let's make that, you should definitely stay away from rave clubs.

If your friends turn your dormitory room into a rave club to celebrate the end of finals week, you need to ask them to move the party to somebody else's room. If they decide to go to a real rave club, your best move is not to go.

## CHAPTER THIRTY-SIX: DOING CALCULATIONS

**Summary: Calculation errors can be made whether doing math by hand or with a calculator, by rushing, skipping steps, or plugging in numbers from the wrong part of the problem. You need total brain control to make it work.**

The Issue: Calculating by hand, or with a calculator, can be an opportunity to make mistakes, if you work as quickly and as casually as your brain wants to work. Or it can be an occasion for self-control and proof of your ability to get things done.

Which injuries cause this symptom: Focal frontal and parietal lobe injuries and severe diffuse injuries.

What you can do: Rely on thinking hard, staying calm, and being slow and careful. To be accurate, calculation must be done step by step. You cannot afford to skip steps. You cannot afford to do some of the calculations in your head--you need to write everything down--even the numbers you carry or borrow.

When you are ready to do a calculation problem, the first thing you need to do is to prepare. Look carefully at the problem before you start to work on it. What kind of problem is it? Which operation do you need to perform? Where could you make a mistake? How are you going to be sure to avoid that mistake?

Now start to work on it. If the problem requires columns of numbers, particularly in multiple column addition, subtraction or division problems, draw a grid over the numbers that keeps the columns lined up. That way, you won't accidentally add a number into the wrong column.

When you have finished doing the calculation, double-check it. You'll be surprised at how often you got it wrong the first time. This is especially important for updating your check register, paying bills, calculating your income taxes, and similar tasks of personal business.

If you have a very severe injury, you should set up a checklist which spells out every step of the solution, and check it off as you do it. A checklist will be especially important for using a calculator. If you have trouble with multiplication or division, you may want to keep a sheet with the times tables on it.

If you are out of school, don't think that you are free from doing calculations. You need to do them when checking to see if you got the correct change from a purchase, when updating your checkbook, when figuring out how long it will take to do a series of tasks, when budgeting several purchases on a shopping trip, and so on. Calculation is a part of life.

## CHAPTER THIRTY-SEVEN: MAKING A PLAN

**Summary: The undamaged brain makes a plan through a cycle of thought, which begins by coming up with a first-try plan, then looks for problems with it, then adjusts it to work better, looks for more problems, makes more adjustments, and so on until a plan is perfected. You can make your injured brain do the same thing just as effectively, but you have to force yourself to go step by step.**

The Issue: There are two problems with planning after a head injury. The first one is not bothering to make a plan when you need one. In ordinary life, we only make plans for tasks we expect to be hard to do, for skills we are just learning, and for situations where the cost of failure is very high. The rest of our actions--about 99% of them--are done on “automatic pilot,” that is, without thinking about the plan. But after a head injury, the automatic pilot is not able to handle many of the tasks it could handle before. This is where many head-injured moments come from. Whenever doing something even medium important it is smart to stop and think, and make a plan.

The second problem is that when planning, the survivor often quits thinking before the plan is completed. A plan that is not completely thought through still has some flaws in it. Maybe it assumes smooth sailing when there are actually some obstacles in the situation. Maybe it assumes that the task will be easy to do when in fact it won't. Maybe it doesn't consider all of the side-effects of the plan, like how other people who are affected by the actions will react. Your brain is far too ready to accept a half-baked plan as a good one. Your old brain would automatically examine and revise your plans as many as ten times in a second. Your new brain might revise a plan only once unless you force it to think it through. No wonder the plans so often have flaws in them!

Which injuries cause this symptom: Focal frontal lobe injuries and severe diffuse injuries.

What you can do: The answer is to plan carefully, thoughtfully and on paper. There is a specific strategy that was devised to make strong plans. First, you need to write your goal. Then write out the plan that comes to mind. The stop and carefully criticize it. Does it ask you to do something you're not especially good at? Does it depend on the cooperation of other people? How could it fail? Is the situation unfavorable for the plan in some way? Even if it looks like the plan will work to achieve the goal, what will happen afterward? Will there be any problems based on what you did? Will anyone disapprove? What will the costs of the plan be? If any of these questions come back with a positive answer, write it out. Then come up with a new plan that fixes this problem. Next, turn to criticizing the new plan, and write out the problems you anticipate. Keep going, first offering up a plan, then finding the flaws in it, until you have done it enough times (usually at least five for a plan that is fairly complex) that you can't find any problems with it.

Here is an example of a step-by-step plan:

Goal: Take care of my past-due bill from the Billy Joel Grand Piano Company.

Plan: Don't pay them until I get my next Social Security check.

Anticipate: I will get a bad credit report if I make them wait.

Plan: Ignore the bad credit report.

Anticipate: It could stop me from being able to buy a house or a car someday.

Plan: Return the piano.

Anticipate: Since I spilled a chocolate shake into the piano, they probably won't take it back.

Plan: Pay for the piano

Anticipate: I can't make the payment without spending my money for food and rent this month.

Plan: Borrow the money from my mother

Anticipate: She said she would never loan me any more money since I buy things I don't need

Plan: Rob somebody at an ATM

Anticipate: I'm too slow and clumsy to be able to pull off a robbery and get away.

Plan: Use my credit card to make the piano payment

Anticipate: The credit card payments will get to be more than I can pay off next month

Plan: Call one of those attorneys I heard on the radio who says they make your debts go away

Anticipate: They might be a scam

Plan: Check them out. If that doesn't work, get the money from the Credit Card and make a budget for next month and every month until I pay off the piano

Anticipate: I may not make enough income to pay off the debts.

Plan: Get a job playing the piano

Anticipate: I may not be able to learn to play it by next month

Plan: Get any job I can find to make some extra income.

Anticipate: I don't know how to find a job.

Plan: Call the Head Injury Association and get some suggestions about where to look for a job

Anticipate: I don't see a problem with that plan.

Double check: I still don't see a problem--the plan sounds like it would work, meet the goal, and wouldn't have any bad side-effects.

Goal met.

Creating a therapy to work on planning is often a good idea. Pick a planning problem from the list on the next page. Take a moment to prepare, reminding yourself to go slowly, be careful, and make your best effort to think it through. Then work out your plan on a sheet of paper using the same format I just demonstrated. Get your therapy helper to tackle the same problem. Then compare answers. Look for places where you failed to think your plan through.

In your life, use the same technique to plan out your major decisions, like a big purchase or an opportunity to move to a new town or the breakup of a relationship. You don't need to use this technique to plan things that follow a familiar routine, like doing the food shopping, but it is a good idea to use it to plan things that are not routine, like a major purchase. You don't need it to make a decision that has minor consequences, like choosing the person with whom you go to the movies, but it would be a good idea to use it for a decision with major consequences, like whom to choose to be your roommate or spouse. Use this technique for any decision where getting it right, and not getting it wrong, is important.

## SAMPLE EXERCISES FOR SELF-THERAPY ON PLANNING

Imagine that you are in each of these situations, and have to figure out the best way to handle it.

1. Your neighbor asks you to keep her daughter's pet rabbit while the family goes away on a vacation. The rabbit gets sick and falls to the bottom of the cage, breathing raggedly. It looks like it is going to die.
2. A huge (force 5) tornado touches down five miles from your home and heads directly toward you while you are home alone.
3. While preparing lunch, you accidentally cut off your finger up to the first knuckle. You are home alone.
4. A fire starts in your kitchen while you are on the other side of the house. By the time you find it, the cabinets are in flames, and the flames are reaching the ceiling.
5. You fly to a distant town to visit an uncle, who picks you up at the airport. While he is driving you home, when you are stopped at a traffic light, he has a seizure.
6. Your new wife reveals to you on your honeymoon that she is a citizen of Qatar who married you only for the purpose of becoming an American citizen.
7. You fall asleep on an airplane and wake up in a strange city, farther away than the destination you bought your ticket for. The plane has flown you to Tokyo.
8. You are at home alone when you notice a snake slithering into your house through a hole in a screen door. By the time you can get there, the snake is out of sight. You did not get a very good look at it, but you did see that part of it was red colored.
9. When you travel to visit an elderly relative, you find that 25 people are living in her house, spending her money, and she is too mentally impaired to explain what they are doing there.
10. A strange dog walks into your front yard and curls up on your porch.
11. Two men knock on your door late at night and ask to use your phone. They say that they have just been in a car crash in the neighborhood, and a third friend of theirs is trapped in the car.
12. A man driving a foreign car cuts your car off in traffic. He gets out of his car, grabs your (wife/mother), pulls her into his car and drives off before you can react.
13. You discover that a guest in your home has smallpox.
14. While partially sedated for a tooth extraction, you feel the dentist groping your private parts.
15. A chat room contact on the internet offers you a high-paying job if you can pass an in-person interview to be held in a downtown warehouse.
16. The letter carrier leaves a package on your doorstep by mistake. You open it and discover that it contains a few pounds of cocaine.
17. A homeless man comes to your door and announces that he is your long, lost illegitimate brother.
18. You come home from an all-day shopping trip to discover the front door of your house standing open. Nobody was left at home or expected to come home.
19. A neighbor throws some beer bottles and items of food trash over his fence into your back yard.
20. A helicopter crashes in the street outside your front door when you are home alone. From what you can see, it looks as if at least one of the men inside is still alive.

## CHAPTER THIRTY-EIGHT: VISUAL SEARCH STRATEGIES

**Summary: Head injury causes the eyes and the brain to become de-synchronized. Effective visual search requires learning how to pace and control eye movements and how to organize your search field.**

The Issue: Where did I put my shoes? Where are my house keys? What happened to that remote control for the TV? Where did I leave the sports section? Where did we park the car in the mall? We use visual search skills all the time. If you want to avoid struggling, there are certain tricks you should be using.

Which injuries cause this symptom: Focal right temporal and parietal lobe injuries and very severe diffuse injuries.

What you can do: First, as discussed earlier, if you have made a place for everything and only put it down in its place, you won't even have to look for it. I have a lamp table in my living room with a space for all my remote controls. As long as I am careful to put them there, I can always find them easily. If I'm away from home, or if I have something that doesn't have a proper place, I can improve my chances of being able to find it by thinking hard about where I put it before going on with what I am doing. Even that strategy doesn't always work to find the car in the mall parking lot, so it's a good idea to draw a map that shows where the car is parked every time. Make sure to put some landmark on the map (like the name of the street or a particular building on the edge of the parking lot) that will help you to tell the part of the parking lot you used apart from the rest of it. If you parked near some store, you can use that as your landmark.

When you have to find something that you can't locate by memory, the first trick is to search slowly. The second trick is to have a system--don't search here and there at random, but follow some kind of a plan or structure. If you are looking for something that somebody put in your bedroom, look first on your dresser, then on your bed, and so on, searching each piece of furniture. Then divide up the rest of the room into sections and search each one before going onto the next one. The third trick is to search slowly. It is very easy to run your eyes across an area faster than your brain can make sense of it, which is how you overlook things. The fourth trick is to search with your eyes following straight lines, looking over a search area with one sweep after another until you have covered the whole area, like the motion you use to eat all the corn off of a cob. This way you can be sure to look at every part of a search area. Because the eyes tend to wander, an added trick is to use your finger as a guide, sweeping your finger along the top of a cabinet one line at a time, and following your finger with your gaze. This is the same search technique you should use when looking for an unfamiliar city on a map.

Suppose you have to find something in a crowded closet or garage. These tricks are perfect for that task. Divide your search area up into zones and search each one at a time. Follow your finger to search each area one slice at a time. When you get done searching an area, you can be sure it isn't there. Using this method prevents overlooking.

## CHAPTER THIRTY-NINE: WHAT TO DO ABOUT VISUAL NEGLECT

**Summary: Certain survivors can't see or feel things on the left. Worse still, they lose the awareness that the left side even exists. The left side is simply ignored. Turning the head to the left and scanning back slowly solves this problem, but it is a hard habit to learn.**

The Issue: Do you see everything you are looking at, or only the right side of things? Some survivors, particularly those who have a right-sided focal injury, have this problem. They almost never realize that they have the problem at first. After a few months back in their home and community, they realize that they have a lot of trouble finding things, and know they have become clumsy, bumping into things and tripping over them. What they don't realize is that the things they can't find, the things they trip over, and the things they bump are all on the left side. When they go through a doorway, it's the left side that they bump into. All of the cuts and bruises on their body are on the left side, and when they shave, they tend to leave unshaven spots on the left side. Left neglect is a real practical problem, and not a minor safety problem. If you don't notice the left side of the world, you are open to half a world of danger from holes, obstacles, and other hazards.

Which injuries cause this symptom: Focal right parietal lobe injuries, and sometimes right frontal.

What you can do: The trick for control of visual neglect is incredibly simple. When looking ahead, turn your head toward the left so that the path ahead of you is on the right side of your field of vision. When searching for something, look to the far left side, and search back to the right from there. As long as you depend on the right side of your field of vision, you will see everything.

As important and as easy as it is, this is one of the hardest habits to create. Survivors take a long time to realize that they even have neglect, and then they keep forgetting about it. To properly do self-therapy on this problem, you have to include it in your Treatment Plan, and devote maximum effort to it (filling out many Analysis Forms and/or recruiting someone close to you to help you).

## CHAPTER FORTY: PROBLEMS WITH HANDWRITING

**Summary: Sloppy handwriting can be the result of impaired control of the hands or impaired visual perception. The simplest fix is to write more slowly and carefully. Special paper and pens may also help. If the problem is severe, you may want to seek occupational therapy.**

The Issue: Can you read everything you have written? Can other people read your writing? If not, do something about it. Who needs an extra communication problem?

Which injuries cause this symptom: Focal frontal lobe and brain stem injuries.

What you can do: The quality of your handwriting is a function of how fast you write. Write slower if you want your writing to be clearer. When you make notes for yourself, remind yourself that you're going to need to read them later. Develop the habit of writing slowly enough to have readable handwriting.

Writing quality is improved by using lined paper. Don't use unlined paper. Writing quality is also improved by sitting up straight and by using a completely flat surface. Some people write better if they have several sheets of paper underneath the one they are writing on. Try it.

Many people can write better if they use a pen with a thick body. Experiment--try a thick bodied pen. Try pens with bodies of different shapes (triangular versus round). Try bodies made of different materials (rubber versus plastic or metal). Try pens that write easily, like felt tipped pens or roller balls. Try pens you have to push on harder, like ball point pens or pencils. Find the kind that gives the best results.

Some focal injuries affect how much control you have over your fingers, particularly frontal lobe and frontoparietal injuries. Some affect the smoothness of your movements, particularly those affecting the basal ganglia and the cerebellum. Some focal injuries affect your ability to make and recognize shapes, particularly right temporal, parietal and occipital injuries. Injuries of this kind are treated by occupational therapists, and if you have enough difficulty with these symptoms you may want to seek the services of an occupational therapist. Some focal injuries to the left parietal and occipital lobes affect your ability to form and read letters. Injuries of this kind are treated by speech therapists, and if you have enough trouble of this kind you may want to seek the services of a speech therapist.

If you have trouble with writing, don't hesitate to switch to typing whenever possible. Even making notes when you are in the community can be done without writing: If you have a tape recorder in your pocket, you can always dictate a note to yourself. They also make key chains and pens that contain tiny recording devices to allow you to make memos for yourself.

## CHAPTER FORTY-ONE: PASSIVITY AND REACTIVITY

**Summary: Extreme tendencies to be passive or to over-react reduce a person's fitness to interact socially. The solution is to prepare for interactions, and to plan responses which are not passive or reactive, and to use the Analysis Form to identify new situations in which this special preparation is needed.**

The Issue: Some survivors are very passive--they don't take any initiative, don't start anything. They also tend to under-react to things that happen to them. You can pour a whole barrel full of Gatorade on some people and they'll just sit there. A tornado can come plowing into their back yard and they just watch it come for them. This is too passive. This is being a bump on a log.

Other survivors are over-reactive. They jump the gun. They shoot off their mouths. They rush in "where angels fear to go" and get in over their heads. And they are often suckers for any come-on. Do you want to sell them an encyclopedia? They'll buy a set from 1899 for top dollar. Wanna sell that swamp land? They'll buy it. If you are homeless and wandering around Lake Eola, ask them to bring you home to dinner, and they'll take you in, feed you, let you sleep in their bed if you insist, and maybe even give you some cash and leave you alone in their place. If an argument or a fight is happening near where they are walking, they somehow manage to get sucked into it. They are drawn into activity like a moth to a flame.

Which injuries cause this symptom: Focal frontal lobe injuries and severe diffuse injuries.

What you can do: Some people tend to be too passive in general. Some tend to be over-active in general. And others tend to be middle-of-the-road most of the time, but have trouble in certain situations in which they become too passive or over-active. You need to evaluate yourself. Analysis Forms and feedback from others may be helpful, especially if the injury has changed you in this respect.

If you tend to either of these extremes, you need to make adjustments to become more moderate. If you are too passive, you need to plan and prepare to respond actively to the situations that call for a response. The classic situation is the brain-injured child whose lunch money the school bully takes every day. The problem is predictable. The solution is to prepare a plan of action, and to follow it the next time the bully comes up. Do you let people cut in ahead of you when standing in a long line? That is a kind of passivity. What could you do? Practice ways to respond to it in your home until you find one that sounds good. That becomes your plan.

A former patient, a retired gynecologist, kept letting clerks short-change him. He thought they might be doing it, but he didn't bother to count his change until he got home. He needed to make a plan to count his change in the store. That was the only way he would become active and deal with the problem.

Passivity affects your level of preparation for everything. Passive people wait until they run out of clothes before they wash more, which means that there is always one day when they wear smelly clothes while doing the laundry. They don't go food shopping until they've run out of food and gotten hungry. They let their lawn turn into a jungle, and let their car and their house run down, until they have a big problem, rather than doing ordinary maintenance to prevent problems. Their pets die before they notice that the pet has been sick. Passive people who are lonely wait for someone to ask them to be friends or to ask them out, which means waiting forever. They just let things happen, and only deal with the extreme results that force them into action. If you tend to be too passive, and miss out on opportunities, or create unnecessary problems for yourself, each passive mistake calls for an Analysis Form. The form will help you to make a plan to prevent the problem from occurring again.

If you are one of the people who over-reacts, you probably drive people away and keep them at a distance unintentionally. Survivors who over-react tend to monopolize conversations, not letting anyone else

get a word in much of the time. That behavior is seen as obnoxious and makes people avoid inviting you into discussions. In a group, you have to be careful let everybody have equal air time. To do that after a head injury, you must keep track of how much air time you've used and how much the others have had. You can do this if you make a plan ahead of time. And you can teach yourself to make a plan ahead of time by filling out an Analysis Form every time you wind up monopolizing the conversation.

Many people who over-react also tend to become overly emotional. Once they begin to get excited, or upset, or angry, or afraid, it goes too far. This tendency can affect the quality of your behavior. People who emotionally over-react look to others like they are psychologically disturbed, which causes others to avoid them and to ignore their opinions. There are several strategies you can use to stop over-reacting. First, calm down. Take a deep breath, relax, look away at something pleasant and think about it, and let the emotions drain out of you. Forget about the things that were on your mind before and just chill out. This is often the quickest and best way to pull over-emotional reactions back into line. If this doesn't work, try warning yourself that you are about to make a bad impression, and that you need to show that you are a more easy-going person. Tell yourself that this situation is not a catastrophe, it isn't such a big deal, and it is something you can cope with later on. Pull away from thinking that this is a life-or-death situation that has to be settled right now.

You may over-react emotionally sometimes because you get yourself all worked up ahead of time. You can prevent that from happening. Remind yourself that your new brain struggles when you build up strong emotions, so avoid getting yourself worked up before doing something..

As you can see, it is not a good idea to be either too passive or too active. What works best is to be proactive, to prepare yourself for action or self-control, depending on your own problem areas.

## CHAPTER FORTY-TWO: ACHIEVING INSIGHT INTO HEAD-INJURED MOMENTS

**Summary: You can't fix a head-injured moment if you don't think you've have it. If you have a head injury, you have this problem. How can you learn about your head-injured moments if your intuition keeps telling you that you don't have them? You can force yourself to trust the feedback others give you, work hard to learn the facts and study your behavior, and ask a family member to mark the chapters in this book that apply to you. Learning the truth about your injury will be a struggle.**

The Issue: Can you become aware of everything the injury has done to you? Can you learn about the many ways that your thinking has been affected? Can you come to understand how serious your problems are? Can you learn to predict when your symptoms will affect you? While this might sound easy to you, it is certainly the most difficult task of recovery, one at which very few survivors are fully successful. We have already covered this issue in several of the chapters that describe the basic program. If you have been doing the basic program, you have obviously made progress in dealing with this problem. However, the problem is so serious that even a person who is making a good start at learning about his or her injury needs to do advanced work to have a great recovery. Even the people making the best recoveries on record are still studying themselves and still learning new things about the injury fifteen years after they started doing self-therapy.

Even survivors who know that the injury has affected them in many ways tend to overlook some of their symptoms. One of the easiest ways to hide a symptom from yourself is to make excuses for it. Another is to keep it in the background. You may notice that you make certain minor errors, but never decide to focus on them or do something about them. The only way to push the symptoms out of your life is to keep chasing after them, keep trying to find more, and keep trying to prevent them completely. Is that perfectionism? You bet it is! Perfectionism makes for great recoveries!

Which injuries cause this symptom: All injuries cause this problem, but if you have a right frontal or right parietal focal injury, you can expect your brain to flat-out lie to you about your symptoms for the rest of your life.

What you can do: If you don't write down every head-injured moment that you notice, you are asking for a slower recovery. Every time you talk yourself out of writing one down, you take a step backward. If you don't do an Analysis Form on each one, you are taking a big chance on not fixing it. Your commitment to recovery can be measured by the number of Analysis Forms you fill out.

Because your brain always will want to make excuses for your head-injury symptoms, it is a good idea to look at every thing that goes wrong in your life as something that might have involved your symptoms. Ask yourself, "How could my injury have contributed to this problem?" If someone else was totally unfair in dealing with you, ask yourself how you allowed your relationship with that person to deteriorate to the point where they would do that. If you didn't expect them to be so unfair, ask yourself how you managed to misjudge them. If you are the victim of bad luck, ask yourself if there were things you should have done to prepare for it. For example, people often have unexpected financial emergencies due to bad luck. While these emergencies are often so unexpected that they could not be prevented, the wise person has put away an extra reserve of funds to deal with unexpected emergencies. That may be one kind of preparation you did not make. The point is, you should always presume that your injury had something to do with the things that go wrong in your life, and only decide that it didn't after carefully examining the facts and the possibilities. That is the best way to make sure you don't hide the truth from yourself.

My most successful patients have all quit writing out Analysis Forms within a few years after graduating from intensive rehab. They all claim that they do the analysis in their heads. But some of them, who have come back to work with GiveBack, have come to realize that they should still be writing them

down. I believe that nobody ever gets to the point where they can recover as well by a mental analysis as they can by writing one out.

If you are truly committed to recovery, you should make the effort to videotape and audiotape yourself every year or two. Just set up the recorder in a social situation, like when you are having guests come to your home, and let it run for a couple of hours. Then study the tape carefully. It doesn't matter how well you might be doing--that tape will show you symptoms you thought you had gotten rid of, and others you have never seen before. When you look closely at it, you will see a head-injured person. The head-injured moments will jump out at you. And each time you do it, you will vividly understand that your work is not done.

There is one other advanced technique that can be extremely useful. If you have a "buddy" who really understands head-injured moments well, and is willing to be brutally honest with you, you can arrange for a feedback session once every few months or once a year. Take notes. If you have the chance to buddy up with a fellow survivor who is also working a program of recovery, no one else can be more helpful. It works best if you put the last two suggestions together. Tape record yourself, then analyze your own tape, and then have your buddy analyze it for you. If you do this, it will be just like getting a booster shot of high-intensity therapy. Then you can return the favor for your buddy.

One of the great things about recovery is that even years after you begin doing self-therapy, you get better at being your own self-therapist. Take advantage of it.

## CHAPTER FORTY-THREE: ENERGY MANAGEMENT

**Summary: Running out of mental energy is a common problem. It is helpful to get the best sleep you can, and you may have to use a set of special techniques to improve your sleep. Even with good sleep, you may still run out of energy when you overwork your brain. If you budget your energy carefully, you can limit how much trouble this symptom gives you.**

The Issue: An injured brain has less chemicals to run on. That means it gets tired faster. The bigger the injury, the bigger this effect is. This new energy gap has a particularly strong effect on social relationships.

People need more sleep after a head injury, as we discussed in a previous chapter. If six hours was enough before, now you may need eight. If you had a severe injury, you may need twelve. If you get less, your brain will slow down, lose sharpness, and get distracted and overloaded easily. You will have more head-injured moments. You will make more mistakes. You shouldn't fool around with shortchanging yourself on sleep. Tired people are the ones most likely to have another injury. Unfortunately, you may also have more trouble sleeping and waking up after an injury.

Which injuries cause this symptom: Severe diffuse injuries cause this problem, and the more severe the injury the worse the symptoms. Focal brain stem injury produces the worst symptoms.

What to do: To improve your sleep: (1) Go to bed at the same time every night. Your body will get used to it. (2) Once you get in bed, stay there. Don't get up and down, or your body will get used to waking up after you have been lying in bed for awhile. (3) Keep the lights turned down low for the last one to two hours before you go to bed. Bright lights wake the body up. (4) Avoid doing anything exciting, interesting or stimulating during the last hour before you get in bed. Read a dull book, or listen to calm music, or watch a REALLY dull TV show--watch an educational show about lizards or aluminum. In fact, you can make a videotape of exceptionally dull and boring shows and put it on as you are about to start get ready for bed. (5) Some people sleep better when there is a steady, quiet, calming noise like the sounds of the seashore or a woods. CDs and cassettes with these sound tracks on them can be purchased. The sound of an air filter has a similar affect on some people. (6) Consider your sleeping arrangement. If you sleep in the same bed or room with someone else, do their sounds and movements wake you up? (7) People who wake in the middle of the night to use the bathroom should slowly, gently get up, slowly walk to the bathroom, turn on only the lowest possible lights, just enough light to keep from tripping over something, and go right back to bed. (8) If ideas come to you when you are lying in bed, and they are bad ideas, put them out of your mind and think of a beautiful scene. If they are good ideas, keep a pad by your bed. Write down the idea so you can think about it the next day, then stop thinking about it and go to sleep. (9) If you snore a lot, you may have apnea, a breathing problem which can wake you up and can rob your sleep of restfulness. You can try using those nose strips that hold your nostrils wide open at night (sold in drug stores) but you may have to see a sleep doctor. (10) Avoid sleeping pills. Your body gets used to them, and most sleeping pills block fully restful sleep anyway. The strongest ones can impair memory or produce addiction. (11) Make sure that you get some physical exercise during the day. Couch potatoes don't sleep well. If it gets to be evening and you have not exercised, at least do a workout of home exercises. Finish the exercises no later than two hours before you go to sleep.

One problem with sleep is so important and common that it gets its own paragraph. Many of us are caffeine addicts--we drink coffee or tea, drink soda that is filled with added caffeine, and even get a caffeine fix from chocolate. If you have been having sleep problems due to your injury, that increases your temptation to try to use caffeine to wake yourself up when you are short of restful sleep. But caffeine just uses up your daily store of energy quickly and leaves you more tired than ever for most of the rest of the day--hardly a good answer. Also, many people get into a vicious cycle--not sleeping well, then drinking a lot of caffeine, which keeps them up at night, so they get less sleep and drink more caffeine the next day.

The only logical way to manage your store of energy across the full day is to avoid using caffeine. Experiment with cutting back on your caffeine and see how it affects your sleep. Warning--if you decide to quit caffeine altogether, do it gradually. Quitting suddenly produces terrible headaches.

Nutrition has a big effect on brain energy. If you skip breakfast or lunch and eat junk food, you probably run out of energy sooner. Eating at least three meals, or as many as five or six small meals, and making it a healthy, balanced diet, can improve energy levels quite a bit. Some people also report that they do better if they avoid certain foods, such as red meat (which is filled with synthetic animal hormones) and white sugar and white flour (which produce insulin rushes). The trick seems to be to eat a balanced diet and try to stick to the healthiest kinds of food.

Your brain has a whole new set of energy needs and limits. If you understand and respect them, you will do your best. If you push those limits, you will lose ability, behavioral self-control, and effectiveness. That means don't stay up too late. It probably means doing the things that require the sharpest thinking early in the day when your brain is at its best. It means don't keep doing something once you begin to get tired--take a break. It means planning your activities so that you don't do one thing for hours at a time--break it up into several sessions if possible, and you won't wear out as badly. It also means trying to stay relaxed as you work, because working under tension drains out your energy very quickly.

You don't have the same energy capacities that your friends have. They can stay up later than you can--you need to be the first one to go to bed. They can drive longer than you can (if you are a driver)--you need to have shorter shifts, and maybe taking several short shifts instead of one long one. You need to be very careful about procrastination. People who put off finishing their chores and projects and then have to stay up late to finish at the last minute can no longer get away with that style after a head injury. You just can't get things done at the last minute. You have to start sooner and have them more planned out.

## CHAPTER FORTY-FOUR: IMPULSIVE AND INAPPROPRIATE BEHAVIOR

**Summary: Nothing produces more interpersonal problems than impulsive behavior. It is the behavioral trademark of head injury. Impulsive behavior can be controlled much of the time if you anticipate doing it and prepare for it. Strategies can be very effective if they are planned out ahead of time. You can get even more control by role playing the situation ahead of time.**

The Issue: Survivors tend to do things that are embarrassing, disturbing, or annoying, breaking the rules of proper conduct, either not knowing that they're breaking a rule, or thinking that it's no big deal. But when it happens all the time, people run out of patience and avoid you. This is usually the biggest problem teachers have with head-injured students. This is usually the biggest problem employers have with head-injured workers. This is usually the biggest problem for friends and spouses. That makes it the biggest problem for your self-therapy.

Impulsive behaviors are behaviors that are acted on before they have been thought about. If the person thought the behavior through, it would become clear that the thing he wanted to do was either the wrong action, or it was done at the wrong time, or in the wrong place. The issue is explained in the chapter on planning (Chapter 36). Here are some examples. A young man is introduced to a distant cousin. He points to her belly before he even gives his name. "You're pregnant! Do you know who the father is?" He is the one with the head injury, as you can probably tell. I was introduced to a new patient who again, before saying his own name, pointed to my King Henry VIII-size belly and said "Too many pies and cakes!" Asked to bring the main course for a pot luck dinner, an older man said he got confused about the arrangements and showed up with no food, but ate the food brought by everyone else. Arguing with a therapist about whether an answer was an error or not, a man pounded his fist on her desk, threw one of her books against the wall, and screamed at her. A patient came to my office for the first time with chewing tobacco in place and holding a spit cup. His hand trembled, but he spit with the cup held at his waist, which covered my floor with the tobacco juice. Perhaps a hundred patients have left their empty cups and other trash in my office, and when asked to take it with them, made no apology. A young lady made her own lunch in the program's kitchen and ate in the lunchroom. Every day, she spilled either her drink, her food, or both, and waited for someone else to clean it up. Other survivors pull out food and eat it during meetings where no one else has food, without realizing that the behavior is considered rude. The use of vulgar language in talking to one's mother, or wife, or minister, is another example.

Which injuries cause this symptom: All injuries produce this problem, but the worst symptoms result from focal frontal lobe injuries.

What you can do: (1) Expect to act impulsive. No survivor has ever been able to just stop doing it by an act of will. It takes a lot of work and a long time to learn to hold down impulsivity, and you can't expect it to go away completely even if you do everything you can. (2) Think about what triggers your impulsivity. Things that are motivating for you tend to make you impulsive--things you want, enjoy or love, and just as much, things you dislike, avoid, or hate. You are more impulsive in front of someone who is attractive to you, or someone you want to impress, or convince. You are more impulsive in front of someone who irritates or frustrates you. You are more impulsive when you get excited, because you anticipate something good, or because you are doing something that stirs you up, or because you are around people who are noisy and active. Sound a warning to yourself when you are going to go into a situation like that. That way you can make a plan to keep up good impulse control. (3) Use your Analysis Forms to keep track of other situations in which you have become impulsive, so that you can sound the warning in those situations also. (4) When you go into a new situation, remind yourself of the rules of conduct for that situation. Ask yourself how you want to come off to the other people who are there. Get prepared to act the way you want to be seen. (5) Before you say something on the spur of emotion, stop and think. Ask yourself how it will make the other person feel. Then decide if you want to say it. (6) Before you do something on the spur of emotion, stop and

think. Make a plan. Look at reasons not to do it, as well as reasons to do it. Then decide if it's something you want to do. (7) Know your weaknesses, and be prepared to control yourself better when you are dealing with them. Some people are weak when it comes to eating carbs or sweets, others when it comes to spending too much money when shopping, others when it comes to running their mouths when they get angry, others when it comes to feeling sexual attraction. What are yours? Be most careful when it comes to them. You can borrow a trick from Alcoholics Anonymous. They assign members a sponsor you can call if you feel tempted to drink. Get yourself a "sponsor" you can call when you feel tempted to act on impulse. (9) If you're still having trouble controlling your impulses after trying these things, bring it up in your team meetings. Get some ideas from your team members.

A good Treatment Plan should have some impulse control goals on it. However, it is best to be specific. Write goals to control impulsive head-injured moments that occur in specific situations or activities.

If you want to do some advanced work, practice impulse control by role playing situations with your therapy helpers playing other characters in the situation. Replay situations that brought out impulsive behavior in you, but this time use control instead. Act through the kinds of situations that are hardest for you to maintain good control.

Learning to stop acting impulsive with important people is like stopping war--you can try, you should try, but you can't get rid of all of it. It's unfortunate that head-injury survivors have to be constantly on the lookout for doing and saying things that show poor judgment or offend people, but the winners in the World of Head Injury stay aware of that flaw and always try to control it.

## CHAPTER FORTY-FIVE: GETTING STUCK ON A THOUGHT OR AN ACTION

**Summary: Head injuries produce a mild tendency to get stuck on a thought or action, and many frontal-lobe injuries produce a strong tendency to do this.**

**If you have this tendency, it is important to know about it, to watch for it, and to help yourself to break out of it whenever it takes control of you.**

The Issue: Head injuries create a tendency to get stuck on an idea or an action. Survivors tend to tell the same stories over and over again. They tend to bring up issues, wishes or complaints again and again, to the point that it wears out the patience of the people around them. They get preoccupied with something and won't let it go. The ten-dollar name for this symptom is perseveration.

Perseveration happens when the brain's brakes are weakened. You use your brakes to get yourself to stop doing something because you are done with it, or to stop because there is no point in trying to do it again, or to stop because it would be rude to keep on saying or doing it. For example, if you get a sunburn (a big problem for head-injury survivors who have not learned to make a good plan to use sun block), at some point your skin may itch and peel. You know that you should not peel off the dead skin in public, but many survivors do so, over and over again, in classes, doctors' appointments, testing sessions, at the lunch or dinner table, and so on. It is very difficult to get them to stop, and they don't try to stop themselves.

Sometimes the getting stuck can take the form of being obsessed. Some of my patients have become stalkers who got reported to the police because they wouldn't let go of chasing after someone they had a crush on. Sometimes it takes the form of teasing a brother or sister, but when it never stops it has gone too far. One patient became obsessed with getting the employer who fired him busted. He spent all day, every day, camped out by the workplace counting trucks and making lists of what they were carrying. This went on for nearly a year. During that year, he had no life. Quite a few of my patients have ruined their lives by getting stuck on being furiously angry with the person who caused their injury. They knew the anger was ruining their lives, but they didn't even try to quit.

The thing that is stuck can be a pet peeve. One patient who had trouble remembering where things were got furious with his wife whenever she moved anything of his without telling him first. Whenever this happened, he would launch into a furious attack, which used exactly the same words and took a couple of minutes to complete. The wife was very clear about the fact that she was not going to stop moving things in her home, so he kept doing this for no good purpose.

Sometimes the person gets stuck on a catch phrase. A patient had the incredibly annoying habit of saying "Whatever and whoever are both cop-outs." every time anyone used the word "whatever." People began to avoid conversations with him because they were sick of hearing it.

Sometimes perseveration takes the form of extreme nagging. The person simply does not take "no" for an answer, and keeps bringing up the denied request again and again, all day, every day. For example, some patients in the hospital can ask if they can go home hundreds of times a day, day after day, for weeks.

Which injuries cause this symptom: All injuries, but particularly focal frontal lobe injuries.

What you can do: (1) Recognize that you have this problem. (2) Watch for it to happen. (3) If you notice yourself getting stuck, or if someone else tells you that you're stuck, back off. Stop doing whatever you're doing. Chill out and regain control. Only then should you go on. (4) If you keep telling yourself that you need to keep doing or talking about it, remind yourself that acting stuck looks weird and accomplishes nothing. Remind yourself that it's time to stop.

If you are working on this goal, but find it hard to realize that you are stuck, you should enlist the

help of your therapy partner or others that you spend time with on a regular basis. Once you explain to them that you are working on learning not to get stuck on a thought, and ask them to let you when they notice you doing it, they will help out.

If you are working on this goal but still find it hard to get the stuck thing out of your mind, you can try some tricks. One of them is to think of something completely different that you truly love or greatly enjoy. Some patients have a favorite actor or actress that they think is especially hot. They think of that person, and the perseveration goes away. Another trick is to wear a rubber band around your wrist, and snap yourself with it until you stop thinking of the thing you are stuck on.

## **REAL WORLD ISSUES: SOCIAL GOALS**

The biggest long-term problem area for head-injury survivors is unquestionably social and interpersonal functioning. This is based on the report of researchers, family members, and of survivors themselves. It is more common than not for survivors to become socially isolated. In other words, they wind up with no friends, and no socializing at parties and other peer-to-peer functions. Their social lives revolve entirely around their families. It is not impossible to have a social life after a head injury, but it is quite difficult as there are a number of things that need to be fixed. The people who succeed put a great deal of effort into it. The areas that need the most attention are discussed in the next chapters.

### **CHAPTER FORTY-SIX: AM I THE SAME OR DIFFERENT?**

Are you the same person you used to be? Almost every head injury survivor would say yes. I feel like the same person--exactly the same. And when you first get out of the hospital, everyone is impressed with how much you have recovered back to your old self, and they talk about it just like that. But a year or two later, most husbands and wives say, "This is not the person I married." Most friends say, "He/she is not the same person." To them you are a different person because your behavior is not the same. To most of them, you seem quite different.

This is one of the strange things you need to learn about head injury. You are the same on the inside, and you are different, perhaps very different, on the outside. You'll have to deal with this.

Your friends may feel awkward around you, not knowing how to treat you or what to say to you. You talk and react differently. Sometimes the new you gets upset, when the old you would not have gotten upset. This confuses them, and to avoid the confusion they avoid you.

Once survivors realize that this is how things are, they often try extra hard to act like their old selves. It doesn't work. You can't come across like the person you used to be. That's the bottom line. You always will act different and seem different to people who knew you before.

One way to handle the problem that works well sometimes is to explain all this to your friends. Tell them that you are still exactly the same on the inside, but that you are going to seem different. Tell them you don't want them to treat you any different than they ever did, although you understand that the whole thing is going to take some getting used to for everyone. This approach sometimes prevents friends from getting weirded out, and it can save a friendship. Other friends never accept the change in you, and they leave your life no matter what you do. Most people lose most of their friends. It would take a huge amount of work as well as incredible luck if you don't.

Some people, frustrated by their inability to be who they were before, think that the answer is to move--to a new school, a new town. That way they can start fresh. Nobody will know they've changed. It's an interesting idea, but it has a down side that we'll talk about in a coming chapter.

## CHAPTER FORTY-SEVEN: EGOCENTRICITY

A very common complaint about head-injury survivors is their egocentric behavior. Egocentric means that they act as if all they care about is themselves. They talk about themselves, and don't ask about other people. Everything that matters to them comes back to their own needs. They rarely go out of their way to do things for others. It is easy for them to ignore others when the others are in need.

Although their behavior seems selfish, a head injury does not make people selfish, not at all. But it does have two other effects. First, it affects their ability to notice things. They tend to have tunnel vision. They don't pay much attention to other peoples' emotions, reactions, situations or needs. They don't seem to care, even though they still do care. Second, because their lives are pretty much ruined, their own problems are intense and there are many of them. So they have lots of problems on their minds, and that is what they tend to talk about. Unfortunately, it is the same thing every time friends see them, and the friends soon get sick of hearing about the same problems over and over again.

The first step in fixing egocentric behavior is simply to realize that you are prone to act this way. The second step is to decide to fix your behavior. The third step is to make a plan. In this case, the plan involves anticipating the problem any time you are about to socialize. Before you go into the situation, focus on the person or people you are going to be with. What has been going on with them? Is there anything stressing them out? Is there anything you might want to follow up with them about? Plan some things to talk about that don't have to do with you and your situation. Try not to talk too much about yourself. If they ask (which they probably will--it's polite, especially when a friend is having some problems) give them a good answer, but try to keep it short. If you talk for more than a minute after they've asked you a question, you've probably gone over the line. If they keep asking more questions, you should feel free to answer, briefly, each time. But when their questions stop, move on to something else. We'll talk about that in the next chapter.

Another key to getting rid of egocentricity is to use good empathy skills. I will focus on that in the chapter after next.

## CHAPTER FORTY-EIGHT: SOCIAL LIFE AND ACTIVITY LIMITS

The typical friend is somebody you do things with--shared interests, hobbies, and recreational activities. If you are a suburban housewife, your friends may be people who go to the gym with you, who sign up for Jenny Craig weight loss groups with you, who go shopping where you shop so you two can shop together. She may even become pregnant at about the same time you do, and go through the experiences of childbirth and parenthood at about the same times. These shared activities not only bring people closer, but form the actual contents of the friendship.

If you are a high-school student, your friends are probably people whose chosen activities are a lot like yours. If you are a nerd, they're probably nerds, too. If you are a jock, they are too. If you are a car freak, so are they. If you are gay, they probably are gays and lesbians. If you are a drunk or a loadie (drug user), so are they. You tend to spend time at one another's homes, but as you get older, more of that time is spent hanging out, or dating, or doing activities.

No matter what your age and lifestyle is, a head injury pulls you away from your friends. First you have to spend time in the hospital. Then when you get home, there are all kinds of things you can't do. If you can't drive, you can't go where your friends go unless you can get one of them to bring you. And that's a double problem, because you probably get tired a lot more quickly than they do and need to go home earlier than they want to. The injury also prevents or forbids you from doing many things you might have wanted to do with them. High-risk and contact sports are out for many people, so there goes football, basketball, soccer, rugby, fight-club sparring, bike stunting, motorcycling, high-speed driving, rock climbing, hang gliding, sky diving, even distance running and late-night activities (because of fatigue). All of these that you did before have become interests that you can no longer share with your friends. If you have decided to stop using alcohol or drugs and your friends all continue to use them, it can put a big barrier between you and them.

This is a real source of broken friendships. Peoples' lives move apart after a head injury. Not only are there activities that can no longer be shared, but many survivors who made friends at work or school are no longer in the workplace or on the campus, and there is much less to talk about now. Many students who have just completed high school have to say good bye to friends who go off to college while the survivor stays near his or her parents to receive continued help or supervision.

Whenever friendships face a splitting of the peoples' lifestyles, you can try to bridge the new gap through phone calls and letters. You can try to find new common interests. However, you also need to be prepared for the possibility that the friendship won't last, because many are lost this way.

## CHAPTER FORTY-NINE: THINKING OF THINGS TO TALK ABOUT

Do you have trouble thinking of things to talk about to strangers, or even to your friends, other than to talk about yourself? This problem is fairly common among survivors. When you meet someone, or wind up chatting with someone at a party, you can't think of anything to bring up, and you wind up just sitting there being quiet. If you have this problem, it is extra-hard to think up something to talk about when you are put on the spot, so you can do something about it by preparing ahead of time.

What kinds of things did you chat with people about before your injury? Sports? Gossip? The news? People you both know? Things about your conversation partner? Those things probably just came into your mind with no effort before. They don't do that anymore.

While you are at home, you can make up a set of things to talk to people about. That way you will always be ready with some topics to discuss. That strategy works fine with total strangers, but it's not well suited for people you see again. You can't keep bringing up the same topic over and over again. Pretty soon, that person gets tired of talking with you. A former patient would chat about nothing but the local pro basketball team. It was okay at first, but soon it became annoying. If you are going to be a good chat-maker, you have to keep updating your files of topics to chat about.

Two common problems of the head-injury lifestyle make it more difficult to keep refreshing your file of chat topics. The first is that people who don't have jobs tend to have very little in their daily lives to chat about. Their lives are too routine and too similar from one day to another to provide a source of new topics. The second is forgetfulness. Even if you come across some good information to chat about, it does you no good if you forget it.

How much you want to do about this problem depends on how sociable you want to be, and how normal you want to seem. If you want normal chatting skills, it's probably a good idea to read a newspaper or watch the news, and to jot down a few chat topics on a note pad each day. If you are forgetful, you may need to think about those topics, or even have a "pretend chat" to stamp them into your memory.

Remember, the more topics you have to chat about, the more you can choose a topic that seems to fit the person you are talking with. If she looks and acts like Britney Spears, you probably don't want to discuss nuclear disarmament or global warming, but if you have something to say about the new spring fashions, she's your girl. If she looks and acts like your grandmother, it's probably best not to bring up Nine Inch Nails, but if you want to talk about how much they're charging for live Christmas trees, she'll probably respond to that.

You could say that the strategy is to be well informed about current information--to get an informational life--and to make a plan so that you will be ready to talk about parts of it. Like anything else, the small talk problem goes away if you have a plan and get well prepared.

## CHAPTER FIFTY: READING SOCIAL SIGNALS AND EMPATHY

People constantly send signals to one another, not just by their speech, but by their tone of voice, their facial expression, gestures, and body language. Even speech has direct messages but also indirect ones. We communicate by what we don't say, and by the way we say what we do say. A classic example is pictured in many commercials. The wife asks the husband if she looks fat in the dress she just put on. He changes the subject, and she gets mad. She reads an answer into what he doesn't say. Or suppose he does answer her, but says, "Anyone would look fat in that dress." That shouldn't be taken as an insult, but she gets mad because it implies that she looks fat and he is just trying not to accuse her of it. Our communications are so very complicated that our brains do most of the interpreting automatically. If someone gives you a straightforward, factual answer, you don't give it a second thought. But if they say it in a funny way, or act in a funny way when they answer, your mind warns you that something is up and then you do think about it. How accurately we read these tiny signals and make sense of them determines how accurately we understand the people in our world, how clearly we understand what they expect from us, and how cool and capable we appear to be in their eyes. A great deal has been written about this subject in the last generation, under the topic of "theory of mind." We know that other people have one thing in mind and say something else, and we know how to figure out what they really have in mind.

If you can't "read" someone's signals, they will soon develop a negative attitude toward you. For example, in love relationships, we expect our partner to understand and to be sensitive to their feelings. If we don't read their signals, they tend to get angry because they assume that we aren't trying, and don't care enough, to stay on their wavelength. The same thing is often true between close friends. If you really know someone inside and out, and read all of their signals accurately, you can finish their sentences for them.

One of the unspoken rules of our society is that ordinary people have a duty to work to read the signals of people in power positions. A police officer may hint that you should do something, and then if you don't get the idea and do it, threaten to arrest you. (That actually happened to me once.) In the white collar workplace, bosses usually make most of their requests by hinting rather than by giving orders. If you don't read their signals and do what they are hinting, they begin to look at you as a bad employee. People who work in service jobs are expected to read the hints of customers, and if they don't, they risk being fired.

People with head injuries are generally poor at reading these signals. It's not that they have forgotten what the signals mean, but rather than the injury tends to make survivors read incoming messages with tunnel vision. They tend to listen to the words someone is saying, and don't notice the other aspects of the communication. They are also prone to not paying enough attention to what they know about the other person's private world and personal meanings.

The magic word is "misunderstanding." People with head injuries get more misunderstood than anyone, even people from France. Survivors also misunderstand the people they are dealing with surprisingly often. More jobs are lost because of this problem than any other. More relationships break up because of this problem than any other. If only the survivor's partner would plainly say what he or she wanted, there would be no problem. But that's not how people function.

What can you do about it? First, you need to realize that you are as dense as a brick when it comes to reading these subtle "vibes" and that you have to concentrate hard on listening to peoples' tone of voice, watching their faces and body language, and thinking about how they say what they say. If at all possible, have your really important conversations in letters or e-mail exchanges, where all of the information is right there on the page so that you can study it and think about what the person really means by what they are saying. Another excellent trick involves summarizing what you think the person is saying and being sure to spell out what you think they are asking and expecting, and then asking them if you have understood them correctly. Here is an example: "I've been listening to you carefully, and it is my understanding that you feel it is not appropriate for a man who is engaged to do as much flirting with other women as I do. You expect

me not only to stop flirting, but also to stop giving other women those little, affectionate kisses I give them. And you also want me stop giving Christmas gifts of lingerie from Victoria's Secret. Is that accurate?"

Empathy is one step beyond reading signals. Empathy is understanding what the other person is feeling. People who have good empathy are liked and respected. Empathy allows a person who cares for you to help you, respect you, and support you without intruding into your privacy. Empathy allows a person to be sensitive to your feelings, and to know when you need to talk or when you need to be left alone. We expect a certain amount of empathy from our parents, and become disgusted as teenagers because our parents fail to have empathy when we expect them to. We look for empathy in a romantic partner and in a friend. And if a person lacks empathy, we are turned off.

Head injuries reduce empathy because they produce egocentricity and because they impair the ability to read social signals, especially severe diffuse injuries and right-brain focal injuries. Again, it isn't that the survivor has lost the ability to understand how another person is feeling, but that there are many head-injured moments in which that ability is not used because the person is concentrating on other things. In contrast, focal injuries of the right frontal and especially the right parietal area, can virtually destroy empathy by making the person unable to interpret the meaning of the signals. And, of course, these injuries also leave the person feeling quite certain that their empathy is just as good as it always was. This is a formula for social disaster.

When a person has no empathy for you, they give you the feeling that they don't care. Either they don't care about you (which gives you a negative attitude toward them) or they don't care about anybody (which takes away respect). When a friend or lover treats you without empathy it harms the relationship, and if it goes on, it can destroy the relationship. So if your head injury has robbed you of empathy, it is important to do something about it.

Empathy comes from a two-step process. First we zero in on the other person, thinking about what is going on in their situation. If your friend is a very religious teenage girl who has just found out that she is pregnant, you need to focus on that situation to start to make sense of it. The second step is to imagine how we would feel if we were in that situation. In our example, worry about the future, shame, embarrassment, confusion about what to do and whom to tell, regret, and probably a feeling of having messed up her future would all be likely to be hitting her hard, first one feeling and then another, pretty much an overwhelming experience. Was that hard for you to figure out? Probably not. So where does this problem with empathy come from?

The problem is this. In your old life, empathy was automatic. Now, like so many other automatic mental activities, it doesn't happen on its own. You can't feel empathy unless you decide to, and take steps to. Second, empathy is a background event. People don't stop their conversations to have a moment of empathy. It's something we experience in the context--the background--of dealing with somebody else. You realize that the person is acting all stressed out, and you ask yourself why that should be. Then you begin to figure out some of the things that are causing the stress. And then you get the feelings the person must be having. Now you understand what they are going through, and you are ready to be a sympathetic listener, or a sympathetic friend. But if you tend to think about only one thing at a time, then when you are having a conversation with somebody you don't have the brain-space to think about what they must be going through. So the empathy doesn't happen. You can't have empathy anymore unless you decide to take time for it. You need to stop everything, and focus hard on the other person. Then when you have pulled together a good picture of their situation, you need to take time to explore all of their feelings about it. Your first emotional reaction probably isn't enough. You need to explore for all the feelings that might be going on.

If having excellent empathy is important to you, you can't stop there. The next thing you do is to think about how that person is different from you. Because they aren't going to have exactly the same reactions you have. As you think about those differences, you begin to recognize the ways they are probably

reacting that are unlike your reactions. In the example of the pregnant girl, you might say to yourself, "Well, if I were her I'd just get an abortion." But if you think about her, and her strong religious beliefs, you can realize that she might not find that decision easy to make, or perhaps not even possible to make. She might want to get rid of the pregnancy but consider that to be a sinful act that she could not make herself do. As you think about what she is like as an individual, you get a deeper appreciation for her unique reaction to the situation. That is what is sometimes called "deep empathy."

If you don't get any automatic empathy, how often should you set aside time to do an empathy "take" on someone? That depends on how important the person is to you, how good you want to be to them, and what is going on in their life. The closer the person is to you, the more often you should take time to "catch up" on his or her feelings with an empathy take. Think about it in these terms: if your friend had the head injury, how often would you want him or her to understand what you were feeling? Would once a month be enough? Once a week? It all depends on how close you two are, and how good you want to be as a friend. If the relationship is a marriage, and you want it to work, you should probably set aside a few minutes for an empathy take every day. If the marriage (or the friendship) is in trouble, you probably need to work on empathy even harder.

Another thing that you can do to improve your empathy is to talk with the person about how they are feeling, and how their life is going for them. Do it more often than before your injury. It's a good way to double-check your empathy, and to improve your understanding of that person.

Even if you improve your empathy, it's one thing to be able to understand how an important person is feeling and another thing to show that you have that understanding. When you talk with someone you care about, or someone on whom you want to make a good impression, it is always a good practice to think about what you are going to say before you say it, asking yourself, "How will this person feel about what I'm planning to say?" That will give you a chance to stop yourself from saying things that give the impression of poor empathy.

Communicating about empathy problems is also important in a friendship or marriage. If you don't tell your friend or spouse that your injury has damaged your empathy, they will regard your shrunken empathy as a sign that you don't care anymore. Nothing can be more damaging to a relationship. At the same time, you need to realize that just telling them that you have a problem with empathy is not enough. Nobody is going to put up with you if you never have any empathy for them. You can ask the other person to understand that you are capable of unintentionally failing to notice and understand their feelings, as long as you also assure them that you are doing your best to correct the problem. You can also ask them to let you know if there is something going on with them that you don't seem to notice. This can be very helpful if they are willing to do it. But you must understand that many people are not willing to do it--they expect empathy. For example, you can tell your spouse that if they are feeling unappreciated they should let you know, and you will show them that you appreciate them. That doesn't work for many spouses. They feel like appreciation doesn't really count if they have to ask for it. Working out this problem is often difficult and can take years of special effort to fix. Sometimes it can't be fixed.

Empathy no longer just happens. You have to schedule it and work at it. It is something head-injury survivors have to do to invest in a relationship.

## CHAPTER FIFTY-ONE: OTHER CONVERSATIONAL SPEECH PROBLEMS

People with head injuries can be hard to talk to. Three problems are especially common. First, some survivors tend to talk too much. Second, some have garbled speech that is hard to understand. Third, some have trouble understanding another person's speech.

The rules of polite conversation say that you shouldn't monopolize a conversation. You should say one sentence, maybe two, and then let the other person have a say. It's called turn-taking. But people with head injuries get caught up in what they want to say, and forget to go by this rule. They start talking and they go on sentence after sentence. I have seen people talk steadily for three minutes. What happens? They lose conversation partners. Nobody wants to have a conversation with a person who monopolizes. You have to stop doing this. Warn yourself ahead of time to be careful about monopolizing. Make sure to say no more than 2-3 sentences at a time. Then stop and stay quiet until the other person has had a chance to talk. (This is also discussed in Chapter 41).

Some people with head injuries talk too fast. Some have a problem pronouncing words. Some have both. If you have a problem pronouncing words, you can be fully understood only if you slow down and work at pronouncing them extra-clearly (called "overarticulation."). This is a VERY hard habit to learn, but if you have the problem you need to learn it. After awhile, your family members will probably learn to understand your speech pretty well. They may not say anything about it, which would be too bad. You need a lot of feedback to train yourself to speak slowly and clearly, so that the rest of the world can understand you.

Some people have disorganized speech, or problems in putting their ideas into words. Their sentences come out sounding funny, and are hard to understand because of the strange way they are worded. Some people who have this problem realize it, and they are careful to think before they speak, and to talk slowly enough so that their brain can stay organized. Others don't realize that they have this problem. They jump in and start talking without planning out their sentences, and they go so fast that they have trouble staying organized.

If you have either of these problems, it is a good idea to watch your listeners' eyes when you speak to them. If you are talking too fast, or wording things too strangely, and they don't understand, their eyes will show that they are confused or concerned. Their eyes are always a good signal that you are or are not getting across. If their eyes show confusion, ask them if you've been clear. If they didn't get it, try explaining again, but this time more carefully. First *verify* that they understood, then, if you need to, *clarify* what you said.

If you have trouble understanding what other people say to you, ask them to say it again. Ask them to talk slower. When they are done, tell them back what you understand. Then wait and see if they correct you. That way you can be sure you got it right, or get it re-explained until you can understand it.

A special problem for survivors is when people suddenly start talking. They don't realize that you can't shift to paying attention to their words right away. By the time you are focusing on them, you may have missed a half or even a whole sentence. Ask them to start over. For people you spend a lot of time with, you should ask them to say your name, and then wait until you look at them before beginning to speak to you. That way, you will have had time to focus your attention on what they are going to say.

Many people who have focal injuries to the left brain, and particularly the left parietal or temporal lobes, have special difficulties in understanding speech. It may be hard to understand what people say to you, particularly if they are strangers talking about a strange subject (or even worse if they have a foreign accent), but the problem is so much worse if two people are talking at the same time. People who have this impairment may be unable to make conversation in a public place where everyone is talking at the same

time, for example, a party or at church after the ceremony ends. You need to get away from the crowd with just one person in order to be able to have a conversation. When people come to visit you, they need to know that you can't understand them if more than one of them is talking at the same time.

You may find that you can understand speech better if you watch the person's mouth while he or she is speaking. The lip-reading can help to recognize their words.

Remember, if you have a problem in this area, it gets worse as you keep trying to converse, because that part of your brain gets tired easily. You should take a break when your brain gets tired. After a few minutes, you should be able to converse again.

Some people also talk too loud or too soft. Brainstem injuries can produce this problem. You can correct the problem in the same way that talking too fast is fixed: once you realize you have the problem, warn yourself about it before you enter a situation, make a plan to adjust your loudness, and then work on following that plan.

If you want to try to improve your interaction skills but are not sure what problems need to be worked on, you might consider having a "circle of friends" meeting. This is a gathering which is emceed by a counselor, and attended by friends who are willing to help you with your recovery. The counselor helps the friends to understand how important it is for you to get honest feedback about your behavior and style. Friends then point out your interaction behaviors that create problems for them. They agree to help you to change your interaction behavior, by pointing the problems out when they occur, and also by letting you know when you have fixed the problems. This kind of feedback can be hard to take if you are a proud person, but a good counselor will also call for feedback from them on the things they admire and respect about you. These meetings have been very valuable in improving social behavior and in saving friendships.

## CHAPTER FIFTY-TWO: RELIABILITY

Why is it so easy to for a survivor to be unreliable? Well, for one thing, survivors often forget what they have promised to do, or they lose track of the time until it is too late. For another, they are sometimes so disorganized (if they don't use a Day Planner) that they don't get around to keeping their promises until they have done a bunch of other things they have on their minds. Perhaps most importantly, because of poor empathy and a lack of awareness of the social rules, it is very easy for a survivor to convince him or herself that it is okay not to follow through on something promised, or on a regular responsibility. Thus many, many survivors lose jobs because they are late to work, or because they miss too many days of work. They often have great excuses, but they don't realize that an employer is not going to accept a bunch of missed days in a short period of time no matter what the excuse is.

Here is an example. A survivor was flying home on a long trip, and asked a friend who was also head injured to pick her up at the airport. He wanted to become her boyfriend. She told him several times that she really needed his help, because she got lost easily in airports, and because she was afraid of having a seizure. He promised her that he would be there, but when the time came he had come up with something else to do. As she warned, she did get lost and had a seizure, and was all alone when it happened. His unreliability was never forgotten and never forgiven.

There are many instances of people who were fired after receiving a complaint from the boss. The boss tells the survivor something he wants done in the future, and stresses how important it is. When the time comes, the person doesn't do it. Maybe the person forgot, or maybe they remembered but just didn't consider it to be that important. That person gets fired for being irresponsible.

It is particularly easy for head injury survivors to do unreliable, irresponsible things because they have no sense of Track Record. Track record is another one of those automatic functions that happen in the back of your mind. Here are some examples of Track Record. You can blow off your mother-in-law's Christmas dinner invitation this year by claiming that you have the flu, but you can't pull off claiming to have the flu five years in a row--by the fifth year, you have developed a Track Record as a liar and a scumbag. In high school, you might have tried an excuse for cutting school that you had to go to your grandmother's funeral, but it doesn't work more than twice. The third time you try to use it, you get busted for a bad Track Record. If you get a new job, you may want to help your sick mother, but a new employee can't ask for days off without creating a Bad Track Record of poor work attendance. If you oversleep, and get to work late once, that might be okay. The second time is not okay. By the third time, your Bad Track Record will get you fired.

So what does a responsible person do about things that make him late to work? If a sudden traffic jam makes him late, he'll leave 1/2 hour early after that to make sure that he'll get there on time even if there's a traffic jam. If he oversleeps his alarm clock, he'll get a much louder one, put across the room so he has to get up to turn it off, and even arrange with a friend or relative to call him for the next week to make sure he isn't getting back into bed and going to sleep.

A non-injured does irresponsible things on occasion, but a head-injured one does irresponsible things TOO OFTEN without realizing that he or she is creating a Bad Track Record. In the old days, if you screwed something up, you would automatically make extra effort not to do it again. Now your mind ignores your Track Record, unless you force your mind to look at it. If you see that you already have a Bad Track Record, you can treat doing good work, being there on time, and not asking for special favors as a top priority. You make all of your decisions to be sure to turn your Bad Track Record into a Good one.

For example, assume that you want to go home early one day from work to get ready for a concert for which you have tickets. Before you ask, you should warn yourself that this kind of request is imposing on your boss, and that you should never do that without checking your Track Record. Then review how you

are doing on the job. How many days have you missed, come in late or gone home early? Have you had good performance reviews, or are you marked as a problem employee? If everything is okay, you can make your request. If something is wrong, don't ask. Don't turn yourself into a problem worker.

You have a Track Record as a friend. Every time you do a favor or do something helpful, you get a black mark. Every favor you ask for enters a red mark. When was the last time you made the dinner, or paid for it, versus the last time your friend did? A friend is someone you can count on to keep the track record even. A person who takes more than they give is taking advantage of the friendship. Nobody wants friends who do that. You could easily become one of those friends--not because of how you feel about your friend, but because you don't watch your Track Record.

You also have a Track Record as a spouse. Things you do for the marriage are good points. Things you do to be kind add more good points. But most head injury survivors don't have as much to contribute, because they don't have a job and have a limited income or none at all. Empathy gets you good points, but empathy failures can produce a bunch of bad points. You may be VERY difficult to live with--many spouses describe their head-injured husband or wife as being "very high maintenance." You are probably a whole lot less fun, less rewarding, less helpful than you were, and you probably cause a lot of frustration and disappointment. If you look closely, you'll see that you probably have a Bad Track Record in your marriage. Now what do people do if they have a Bad Track Record? For example, if a husband is caught cheating on his wife, and she doesn't throw him out, he is left with a Bad Track Record. If he wants to keep his marriage, he had better make being good to the wife into a top priority--he'd better do everything he can do to help her and come through for her. If he promises to do something for her, he had better be responsible for coming through. That is how you handle a Bad Track Record and keep a friendship or marriage--by making it a top priority to be responsible, reliable, caring, and kind.

In other words, it is not natural to be reliable after a head injury. Survivors who are reliable can pull it off because they stay very aware of their Track Record, and do everything they can to keep the number of good points outweighing the bad points. That makes it important to them to do everything they can to come through for the other person. And that is how a survivor can protect the respect, admiration, and trust of important others for being reliable. If improving your Track Record is important to you, or to those you deal with, you will want to include this goal in your Treatment Plan.

## CHAPTER FIFTY-THREE: GIVE AND TAKE

In relationships that are based on friendship or love, you assume that your partner wants to be good to you, and that you want to be good to them. In a healthy relationship, the friends or lovers both give and both take, in about equal measure. The give and take are fair. The ten-dollar term for this is reciprocity. It means that when one person does a big favor for the other person, the other person will make special efforts to pay it back, to keep the give-and-take about even.

The closer the relationship is, the more the give-and-take should be based on mutual trust. Because both partners are supposed to want things to be good for the other person, they shouldn't need to trade favors back and forth. They should be able to trust their partner to be good to them, so that in the long run both of them can expect to benefit about the same from the relationship. An unhealthy or bad relationship does not have equal give and take. One person does most of the giving and the other person does most of the taking. The first person is exploiting the second person, and the second person is being exploited. Sometimes we choose to get into relationships that are unequal because we place such a high value on the relationship. For example, I would be willing to do more giving and less taking in a relationship with Jessica Alba. But to be honest with myself, those kind of relationships seldom work out, because we cannot love people who exploit us.

People who grow up not respecting themselves sometimes enter into relationships in which they are exploited. But when they mature and begin to respect themselves, they become unwilling to continue being exploited. No relationship is ever secure unless the give and take are fairly even.

In order to keep a relationship fair and even, it is necessary for both partners to keep accurate track of the give and take. After a head injury, this is often a source of head-injured moments. The survivor often does not notice how much partners have been doing for him/her, and how much they have had to put up with from him/her. This happens for several reasons. First, egocentricity narrows perception--survivors tend to pay attention only to things that are important to them. As a consequence, they notice what they want more than they notice what partners want. They also tend to remember the times when they had to go out of their way to do something nice for the partner better than the times when the partner did something nice for them. So they see the Track Record inaccurately, as if they have been giving their share even when they haven't.

Second, they tend to feel cheated by the limited life they have now, and this tend to make people feel entitled to be taken care of and helped by friends and loved ones. They tend to feel that they deserve more because they have to put up with more. They also tend not to think about how much the other person has had to put up with because of their injury and their more difficult behavior. So the real Track Record is usually out of balance, with the spouse and the friends giving a lot more than they get, while the survivor usually feels that they don't owe anyone anything.

You probably don't realize how much you take and how much less you give. Survivors are big takers because they have so many needs. They need guidance, protection, advice, handling, organizing, help in straightening out misunderstandings, and in many cases, they need transportation, and they need money. Spouses or parents provide these things for them. Most parents don't mind doing it--giving to a child is a parent's job and can be a parent's joy. But spouses expect equity--equal give and take. And you need a lot more out of them now. You probably bring home less money, do fewer chores, and help out less with decisions and crises. Even if you are willing to be supportive and helpful, you probably don't notice when your partner needs support, and you probably spend too much time focusing on your needs and interests and too little on theirs. In most relationships, the give and take are way out of balance.

For most spouses of survivors, the injury and its after-effects have ruined that person's life. Most spouses are clinically depressed, anxious, or both. Most are deeply unhappy, for many reasons. They have

lost many of the things that used to make life worthwhile. They feel more like a parent than a spouse, and they miss feeling like a spouse. Life has become much harder. If you saw this when you looked at them, it would break your heart, and you would try to do anything you could to make it better for them. In fact, you may look at them this way occasionally. But if you are going to treat them fairly, you have look at them this way all of the time.

Third, survivors are more likely to ignore the matter of give and take when favors are asked. They are less likely to look at the Track Record, and more likely to refuse to do favors or to make special efforts for the other person because that is their honest feeling at the moment. If they looked at the Track Record, they might well feel different, realizing that they owe their partners a great deal for all of the help and patience and tolerance they have provided. But by not looking at the Track Record, they don't think about that. They just refuse to go out of their way.

This makes friends and spouses feel taken advantage of and exploited. It makes the survivor seem extremely selfish and childish. It causes angry and hurt feelings. And when it goes on and on, it causes the friends and spouse to lose their fondness and love and replace them with resentment. The friends end up leaving, and the spouse either leaves or stays but feels cheated and distant.

I have seen very few survivors fix this problem. Those who do have deep respect for their friends and lovers, and make extreme efforts to be good to them and to repay favors. Here is one way to think about it. If you feel like you are treating your friends and your spouse twice as good as you owe them, you're probably not doing enough. If you feel you are treating them five times as good as they deserve to be treated, the give and take may actually be fair. This is one of those issues in which you have to teach yourself not to go by how you feel, but rather guide your behavior by knowing that relationships only survive if you make exceptional efforts to keep them going.

If this problem is affecting your marriage or an important friendship, the only way you can find out whether the relationship needs to be fixed is by asking the other persons about it, with an open mind and a promise not to get mad about the response you get. If the other person is having a problem with your behavior, and you want to fix it, it should go directly into your Treatment Plan. Former friends are often unwilling to admit to your face that they no longer enjoy your company---they tend to make their visits shorter and less frequent and then just stop coming around. There is little you can do to fix a deteriorating friendship if your friend won't talk about the problem.

On the other hand, if the problem is affecting your marriage, your spouse probably will talk about the problem. Marital problems that begin during the first year after the injury are confusing to the spouse. There is usually a feeling of sympathy or pity mixed with resentment and dislike, a combination that is difficult to understand or explain. Beyond the first year, spouses usually begin to have clear-cut negative feelings toward the survivor. They often say that they feel more like a parent than a spouse. They are very aware of resenting the fact that they have to do most of the work, handle most of the family issues, and spend extra time dealing with the survivor's head-injured moments. The division of labor does not feel fair. The give and take does not feel fair.

If you want to work on this, your first step is to convince your partner that you are serious about it. Your Track Record of egocentric behavior may make that hard to believe. What you say won't be as convincing as what you do. If they are willing to work on it, invite them to help develop self-therapy goals for this problem. Find things you could do to make them feel appreciated, and things you could do to help out. If you've refused to help in the past, you may want to explain that you now realize how one-sided things had gotten, and make it clear that you are willing to work harder to do your part. Be sure that you realize how serious this problem is for your partner, and what a long-term project it is to rebuild trust and fix a relationship.

## CHAPTER FIFTY-FOUR: THE LOVE RELATIONSHIP AND SEX

Head injury has a profound effect on romantic relationships (boyfriend/girlfriend, spouse or life partner) just as it does on everything else complex and important. A great deal of research has been done by interviewing spouses ten to twenty years after the injury. Most of them tell a similar story. They say that the survivor is a changed person: He or she "is not the person I married." Most no longer feel close. Many no longer feel any love. They do not feel like the survivor is a life partner with whom they share feelings, ideas, and the tasks of maintaining a household, supporting a family, and building a future. Instead, they feel that this changed person is more like a child than an adult, forcing them to be more like a parent than a spouse. Finding the survivor to be egocentric, irresponsible, insensitive, exploitative, unreasonable, and hard to get along with, they either end the marriage or remain only because they feel obligated to help this person who is not entirely able to make it alone. Most of them are clinically depressed, anxious, or both. They live highly stressful lives, and often develop health problems because of the stress. They suffer the difficulties of reduced income, work to support the family, work to care for and manage the survivor, and (in some families) the burden of parenting children without getting equal help from the survivor. In many cases, they must deal with feelings of anger and resentment or worse. These reactions do not set in right away. In the first year, most spouses are still recovering from the trauma of the survivor almost dying, and hoping that things will go back to normal someday. By the second or third year, they begin to realize that things are not going to go back to normal, and the sense that the injury has ruined their life builds up.

This terrible situation does not always happen. Sometimes the spouse is willing to tolerate all of the changes that go with the injury and maintain a loving attitude toward the survivor, but this reaction is rare and seems to be limited to people who are remarkably tolerant, generous, or even saintly. Some spouses say that they know the survivor really is the person they married "deep inside" even though he or she no longer acts like that person. This happens more often with older couples. Younger people tend to judge one another based on their actions, and virtually every spouse says that there have been huge changes in the survivor's behavior because of the injury.

It is possible to fix a marriage that is broken because of the injury, but very few people try. Unfortunately, we live in a society that maintains some very specific and troublesome beliefs about marriages. Society teaches us that we need to find "the person who is right" for us, and when we do, we will want to be good to that person, and they will want to be good to us. Love is supposed to be shown by how a person chooses to act toward their partner. A partner should not have to ask for loving behavior. And if the partner complains about being unloved, improvements in how that person is being treated "don't really count." So if your spouse does not treat you "right" it is probably because they are not "right for you." In other words, they don't "really love you."

This set of beliefs produces terrible problems after a head injury. Head injuries don't make survivors love their spouses any less. In fact, the injury tends to "lock in" the survivor's feelings, so the survivor continues to feel exactly as loving as he or she felt before the injury. However, for reasons explained in earlier chapters, behavior no longer expresses love nearly as well as it used to. While the survivor still claims to love the spouse, actions speak louder than words, and there are far too many head injured moments in which the actions are not those expected of a loving husband or wife. After years of being treated in way that does not feel loving, most spouses stop feeling loved.

The problems only get worse from there. Survivors begin to develop bad feelings toward their spouses because the spouse has to function as a caregiver, and to do that responsibly, must tell the survivor what to do on many occasions and forbid the survivor from doing things he/she feels entitled to do. The spouse begins to seem more like the parent of a teenager than a spouse. It is the spouse who prevents the survivor from driving, the spouse who prevents drinking and drug use, the spouse who controls spending, and the spouse who forbids dangerous activities. These things all happen because the spouse still has normal judgment, while the survivor has head-injured moments in which unsafe or unwise actions look like good

ideas. Being ordered around, and being told what you can and cannot do seems wrong to the survivor, and it usually produces a ton of attitude. The spouse doesn't want to be a parent or a jailer, but every time he or she gives in and lets the survivor do something that seems foolish, the results are regrettable or even catastrophic. Over the years, the spouse gets a harder and harder attitude, and the survivor gets more and more resentful. This drives a deep wedge between the two people.

The only way to fix a problem of this kind is for the survivor to learn how to make more responsible decisions, by turning away from activities that are dangerous or risky or inappropriate. If the survivor and the spouse work together, putting each kind of irresponsible head-injured moment onto the problem list and working out a way for the survivor to control his or her own actions without supervision, it can relieve the spouse of this terrible burden and perhaps improve the relationship to some extent.

It is just as important to fix the problems of egocentricity and reduced empathy, because a person needs to be able to expect attention and understanding from a spouse. Again, this can be accomplished through hard work, gradual change achieved by putting these head-injured moments onto the Treatment Plan, and working on them together. The problem of give and take must be fixed by finding more ways for the survivor to give and by the survivor learning to ask for less.

It is only when the love relationship improves that the sexual relationship is also likely to improve. If husband and wife are rebuilding their marriage, and they want to improve their sexual relationship, it can also be fixed. Again, it requires being willing to work on it, to make it a goal of the self-therapy Treatment Plan, and to talk about sex in order to make adjustments in it.

Head injury can affect sex in a number of ways. The most common effect is impulsivity. The survivor either takes no interest in sex when it is possible, because his or her mind is caught up with other interests, or the survivor becomes sexually interested and aggressive at times when the partner is not interested. The partners no longer get "in the mood" at the same time. To fix this part of the problem, they have to plan for sex, and to help one another to build a mood of affection and paying attention to one another with the idea that it will lead to sex. We all know how to do this, because it is how we approached our sexual partners in the early stages of courtship. In fixing this problem, a couple has to return to that careful, sensitive, focused way of becoming intimate.

Impulsivity also tends to interfere with foreplay, which is an important part of sexuality and becomes much more important when trying to repair a broken sexual relationship. During courtship, foreplay was fun and gratifying, and it needs to be approached that way again to improve the sexual relationship. It is important for the survivor to focus on the foreplay, rather than treating it as a means to move on to sex, because the second approach always leads to rushing the foreplay.

In some cases, the breakdown of the sexual relationship has created an additional problem for the man, whether he is the survivor or the spouse. When sex becomes emotionally difficult, men can develop performance problems. This can be extremely disturbing to many men, and they may start avoiding sex altogether because of it. Performance problems are usually easy to fix, by checking out professional resources on erectile dysfunction or premature ejaculation on the Internet. It can also be helpful to see a psychologist specializing in sexual disorders for some quick education and guidance. Surprisingly, just using the technique of focusing all attention on foreplay is often enough to restore performance. It can be helpful to keep in mind that there are many kinds of sex, and all of them do not involve using a penis.

Sexuality can be more complicated for people who sustained physical injuries, or who have focal brain injuries that affect sexual function. If it has not been possible to become sexually aroused and gratified even by masturbation since the injury, it is recommended that you see a neurologist who can provide or refer you for a complete diagnosis of the problem. People with physical disabilities sometimes find it necessary to use special positions and equipment to make having sex possible. It can be difficult to find a

therapist who specializes in treating this kind of problem, but you can begin by getting a diagnosis from a physiatrist (a rehabilitation medicine physician).

Some people have diminished sexual feelings as a side effect of medication they are taking. You can check out your medication on the Internet or through the Physician's Desk Reference, which is the industry guide to prescription drugs. If you prefer, you can discuss this possibility with your physician.

Among other things, sex is a form of communication. Just as with spoken communication, it is difficult after a head injury to read all of the messages your partner is sending, to interpret them correctly, and to respond in a way that will be appreciated. But in the same way that you can fix problems in spoken communication, you can fix problems in sexual communication. It just takes self-therapy.

## CHAPTER FIFTY-FIVE: SEX FOR PEOPLE NOT IN RELATIONSHIPS

Most survivors who are single have a great deal of trouble finding and keeping sexual partners. It is one of the major dissatisfactions with the quality of life after a head injury. If you are having this problem, it belongs on your Treatment Plan.

The problem can be divided into three basic parts: picking the person to approach, making your wants known, and then planning and carrying off the sexual experience itself. The first two steps are usually the biggest problems by far.

The most dramatic and troublesome head-injured moments for many single survivors involve hitting on someone who is sexually attractive. Because of impulsivity, a survivor who sees someone who looks hot and acts sexy feels a strong urge to hit on that person, and does not get the messages of caution that the normal brain sounds to keep the behavior from being offensive. Many survivors are very direct, approaching an attractive stranger and talking about sexual matters without any delay. This approach simply does not work except with prostitutes or with people who are by nature very crude and base. So if you walk right up to a person and become obviously sexual in your comments and approach to them, they feel treated like a prostitute, a "slut" or a "piece of meat" and react very badly. In fact, to come right up to someone and become physically sexual is a behavior that is rarely seen except in crazy people and criminal sexual abusers. Society requires us to have non-sexual conversation with a person who attracts us, to suppress and hide our sexual feelings at first. This is difficult, although not impossible, for survivors of severe injuries, and particularly those who have frontal lobe injuries.

There is a social ritual for picking someone up. It involves showing a little friendly interest and then waiting to see if you get the same kind of friendly interest back. If you don't get it back, the social rules require you to give up on that person and move on. If you do get friendly interest, you can try to take the conversation deeper, by asking slightly more personal (but non-sexual) questions and by offering slightly more personal information. Again, you wait to see if the other person does the same. If they do, this gives you a green light to invite them to sit with you, or to go to another kind of club or restaurant with you, or to talk at greater length. If you get a green light, your smile, the look of interest on your face, and your posture (facing the other person directly) give them another green light, and if they do the same, they send one to you. As long as you keep getting positive reactions, you can gradually become more friendly and eventually even talk about feeling lonely, and looking for companionship. There is also a social level tradition for this ritual. High-class people tend to go forward from one level to the next much more slowly than lower-class people. The nicer, the more educated, the more successful the person is, the more they expect you to go slowly. As soon as you go too fast, the other person will pull back and give you a red light. Usually, they will do this only once. If you don't back off, they lose all interest in you. In order to have a chance with them, you have to watch their signals closely and respect those signals. The average survivor of a severe head injury pays little attention to the signals, pushes forward too hard, ignores the warning, and goes home alone every night.

There is also the question of whom to hit on. We learn how high up the ladder of desirability we can get when we are in school. Everyone wishes they could be successful with the most attractive and desirable types (sometimes called "alphas"), but to attract an alpha you have to be an alpha (physically attractive, healthy and in good shape, cool, relatively wealthy, well-dressed, well-groomed, poised, well-mannered, emotionally well-balanced, and arriving in a classy ride). If you try to hit on someone above your own level, you get rejected. Gradually, we work our way down to the level that corresponds to our own. That teaches us whom to hit on. Unfortunately, a head injury changes this level. Survivors tend to have less money, to be out of work, to be less smooth and cool, to be in less than perfect shape, to show rough edges in behavior and emotional control, and to have a limited budget to buy classy clothes and cars. This means that the people you could hit on before your injury are too high up the ladder to respond to you now. You have to move down the ladder until you find people who will be attracted to the new you the way you are now.

Those people are out there, but if you get stuck on your old standards, you will not find them, nor will you get any dates. I have known many survivors who fail to make this adjustment, and spend the rest of their lives alone.

If you pick the right person and get some interest, it's not time to become sexual. It's time to ask for a date. And the date should not include breakfast. The first date is often best done as the most innocent kind of get together--let's have coffee, lunch, dinner. If that goes well, which means you gently encourage talk about the other person more than about yourself, then you can try for a movie, a NASCAR Winston Cup event, a sports event, or some other traditional date. Survivors tend to rush toward sexuality at every stage including this one. The best general rule is to take your time.

Because your intuition, social perception and judgment have been dulled by your injury, it will be much harder to anticipate the character of your date. That means you will be much more vulnerable to someone who is trying to exploit you, or cheat you, or manipulate you. You may find after you have given her a ring that she is totally crazy and wildly destructive. That is a powerful argument for taking your time--not jumping into any commitments until you have spent a great deal of time with the person and know them quite well. By the same token, since your powers of prediction are dimmed, be sure to carry condoms even when you don't expect to need them. Knowing who is carrying an STD is not easy unless you are a gynecologist or a mind reader, but now it is even easier to wind up being with someone who is carrying a disease, and you need to take no chances.

If you have dated someone and want to progress to sexuality, you should again move slowly, emphasizing foreplay and being sure not to go forward until you have protection. Moving toward sexuality works just like picking someone up--you need to watch the other person's signals and adjust your behavior accordingly. It is also a good idea to make sure you have talked with this person about what it means to them to have sex with you before you take that step. Otherwise, you might find yourself in a situation that you cannot get out of. For example, some single people end up getting involved with married people without ever asking if the person is married. It can be hazardous to your health, physical and emotional, to get involved with someone who is already in a relationship, and you need to know that ahead of time.

Finally, it is important to keep in mind that other members of your family may have surprisingly strong feelings about your starting a sexual relationship. Family members often take a protective stand, out of fear that you may not have good judgment in such adult matters. You may be able to prevent, or at least limit, problems if you discuss with family your intentions to start a sexual relationship with someone you are dating before you actually do it. This step may seem silly and unnecessary for an adult, and more like something a teenager would have to do, but it isn't quite that simple. Imagine how you would feel if you were the uninjured family member and your head-injured son or daughter intended to start up a sexual relationship. Wouldn't you want to know ahead of time, if only to make sure that he or she had planned it out completely?

## CHAPTER FIFTY-SIX: COOLNESS AND MATURITY

Has your injury affected your coolness? The cooler you were before your injury, the bigger this problem is for you now. Coolness is about knowing the right things to say and do to make the best impression with the alpha crowd. Coolness is a culture which is spread through music and media and the styles of the people around you. What does it take to be cool? You have to be very aware, very perceptive, ready to learn new ways of talking and acting, and in great control of yourself. Every one of these things is a potential head-injury problem. So the injury puts your coolness at risk.

How cool can somebody be after a head injury? Some parts of coolness survive the injury. Your knowledge of styles, and your own style, are still there. But coolness is interactive. If you do something inappropriate, you blow your coolness entirely. So people who want to preserve their coolness after the injury are probably better off playing it low key than by allowing themselves to talk and act as they please.

People who are cool don't make a huge show of themselves, but they also are not too shy. They do things their own way with great confidence, but their way looks a lot like the way that other cool people do things. They tend to say and do the *right things*, and avoid saying or doing the *wrong things*. If you want to know how to act cool, you can get a very good idea from TV shows. Lots of TV shows have cool characters in them. In recent years, reality TV shows have been built around people who are extra cool. At the risk of being dated, in 2005, 2006, and 2007, we can watch TV shows that let us look in on Ozzy Osbourne or Paris Hilton or Anna Nicole Smith or Kathy Griffin. All of them were past being cool when they got their TV shows, but they showed what coolness had been like a few years before. Shows like L.A.Ink, and Pimp My Ride show the coolness of today's Hollywood scene. If you lived in Los Angeles, talking and acting like the people on those shows would gain coolness points with a young, hip crowd. If you watch how Donald Trump or Martha Stewart acts, imitating them would probably gain you some coolness points in an older, rich crowd. In each case, there are certain styles and manners and words that are seen as cool in some particular crowd. When you learned your coolness skills, you picked them up from the crowd you hung out with at that time. These examples also indicate that coolness, like fads, changes pretty quickly. Things that were cool ten years ago are sure to be lame now.

Does an injury lock a person's style in to a certain age level? This does seem to happen to some people. It is most obvious in survivors who were injured in their middle teens, and who seem to still have the style of a teenager ten or fifteen years later. Even this can be changed with effort. One of the coolest patients I ever had, a handsome young man who was a sports star and a fashion model, with many alpha girlfriends, got stuck being seventeen. Five years later, I challenged him, telling him that he would be seventeen forever if he let himself. He gritted his teeth and made a maximum effort to take on a more mature style. He stopped wearing caps turned backward, dressed up more, got a career in the construction business, and got a girlfriend several years older than he was. He managed to develop a much more mature style, but obviously, it was because he made a plan and carefully worked on following it through.

If you want to work on your coolness, put it on your Treatment Plan. You will need to find some people who are cool, and get them to give you feedback on videotapes of your behavior. Each time they identify something as un-cool, you can mark it by filling out an Analysis Form. Each time they teach you a cooler way to say something, be sure to write it down, dude. I mean, dogg. Or whatever.

## CHAPTER FIFTY-SEVEN: MAKING NEW FRIENDS

Very few survivors make new friends, and very few of those friends turn out to be close friends. That is true in part because most survivors don't lower their standards, and because they don't try to use strategies or special effort to fix themselves. If they decide to make friends, they try to do it the same way they always did, and those strategies produce too much impulsivity and too many head-injured moments. If you are going to make new friends you will need strategies, and the best way to get them is to put this goal onto your self-therapy Treatment Plan.

When new friendships are made, they usually happen because a family member sets up and structures the interactions. Other new friendships start up in the rehab program because the therapists set up and structure the interactions. Obviously, any strategy to make new friends depends upon having the right kind of people (at the same level of popularity and desirability), and having a structure that makes interaction easier.

Survivors have difficulty with the initiation involved in making a new friend. It is necessary to reach out, and to try to find a common interest, and to keep the interaction going. A number of the former patients who have been successful in making new friendships are young, attractive women who make friends with older men. It seems obvious that the men are making an extra effort to build the friendship because they think the young ladies are hotties. This illustrates a more general point--you can build friendships that help meet the other person's special needs. Other friendships have started with people who were very lonely, probably for the same reason.

Others have started with people who belong to the same church. Here the factor seems to a combination of common interests and a need (to reach out) that is met for the other person.

There are several strategies you can use to make friends, but first you have to get access to some people to choose from. You can do that by joining an organization (as an employee, a volunteer, a parishioner, or member of some community club). The best way to do it is by being a part of some activity oriented group, in which you do things with other people that are structured activities of the organization. That allows you the opportunity to get to know the other people. For example, working as a volunteer in a political campaign or in a program for disabled children provides a good opportunity for that. When I volunteered to become a telephone crisis counselor for a community organization, I made a number of friends. Organizations that do things together, like Greenpeace, Jenny Craig, Alcoholics Anonymous or the Ku Klux Klan, provide more opportunity to get to know someone than organizations that just have meetings and listen to programs. If you decide to try to meet people through a church, you should investigate programs like study groups that provide a lot of interaction.

Once you have a chance to meet people, you want to look for people who speak your language. By that, I mean people who come from a similar educational and cultural background.

When you have found someone who you think is a reasonable possibility, you need to reach out. Invite the person to talk one on one. Chat about a few subjects. If it goes well, invite the person to go to lunch. Remember, you will probably need to prepare some things to chat about. As you try to develop a friendship, remember that you need to move slowly from acquaintanceship to friendship. You can't just ask a new acquaintance to become your friend. People gradually work their way toward friendship, by offering to do things together and seeing if the invitation is accepted. If you jump the gun and push for friendship too soon, you will probably scare the other person off. But if you wait for them to make all the moves, they will probably not do that. You have to take some initiative, but work slowly and gradually.

## **PSYCHOLOGICAL TREATMENT GOALS**

Head injury affects psychological and behavioral functioning as much as it affects cognition. These “psychological” issues don’t mean that the injury has made you crazy. They mean that life is hard to live after a head injury, putting all kinds of new demands and stresses on you.

### **CHAPTER FIFTY-EIGHT: SHOULD I TELL PEOPLE THAT I HAVE A HEAD INJURY?**

Survivors with certain, severe injuries look and sound abnormal. They can’t walk, or they have spastic arm or body movements and/or an unusual, spastic voice. Others with large, focal injuries of the left hemisphere have so much difficulty with language that they sound abnormal to everyone. These survivors are seen as disabled whether they explain what happened or not. In most cases, if they can explain that they are head injured, and describe what a head injury is, that tends to make a better impression on strangers.

Nearly nine out of ten survivors don't look injured. There is nothing about them that would give a stranger the impression of a head injury, or any other medical or psychological problem. Their behavior may be flawed in certain ways, like being impulsive, disorganized, slow to respond, over-reactive, or socially inappropriate, but the flaws aren't gross enough to be seen as a medical problem. It just looks like the person is a little crude or strange or un-cool. The world is full of people like that who have never been hospitalized, and probably don't have head injuries.

For this reason, most survivors have the choice to reveal or to hide the injury from others. Most are tempted to hide it. First of all, we are taught to put our best foot forward, so why call attention to anything that might be wrong with you. Second, most people are extremely ignorant about head injuries. They assume that a head injury makes a person mentally retarded, stupid, or crazy. If you admit to being brain injured, you invite these prejudices. Even if you can explain that head injury is something different, the other person may still be uncomfortable with you. Third, the other person may not be as willing to trust you after finding out that something is wrong with you.

On the other hand, if you don't tell, the person will have normal expectations for you. That means that the person will not be understanding when you have head-injured moments. When an ordinary person sees a head-injured moment, they assume that the survivor was not really trying to do things properly. This may be seen as a sign of bad character or of a bad attitude. When more head-injured moments occur, the other person's impression becomes more negative and more certain. Thus when behavior is egocentric or impulsive actions affect the other person negatively, they assume that the survivor doesn't really care about or respect them. It looks much, much worse when they see you make the same mistake again, or when you do something they asked you not to do. This can create serious problems very quickly if the other person is a romantic partner, a friend, or a job supervisor. People who don't understand that you have a head injury have no tolerance for head-injured moments, and quickly develop a prejudice against the survivor.

Often, important relationships get very ugly on this basis. The other person begins to doubt your sincerity, and begins to show his or her displeasure with you. Unaware that it has anything to do with head injured moments, you feel mistreated by this sudden negativity, and react by developing an attitude of your own. Since the other person already has a valid complaint about your behavior, your new attitude looks twice as bad to them, and the relationship starts to dissolve in ugly feelings and misunderstandings. More jobs and relationships get ended this way than any other.

If you are working on a program of recovery, the people you don't tell about your injury will not help in your recovery. Others can often be particularly helpful by giving you direct feedback when they see a head-injured moment occur. But they can do that only if you have told them about the injury, and asked them for the feedback.

Most people hide their injury from the people they meet afterward, either believing that there is nothing wrong with them, or thinking they can hide it. When they don't pull it off, and the relationship breaks down over head-injured moments and the feelings they cause, the survivor often does not realize why it happened. On this basis, it can take many years for a survivor to realize that not telling people about the injury can cause a great deal of trouble.

There are also some people who go to the opposite extreme, and tell everyone that they are head injured. When people introduce themselves as head injured, this tends to create a bad first impression. When they blame everything that goes wrong on the head injury, that also makes a bad impression. Some people go to the extreme of using the head injury as an excuse for not trying to make anything of themselves, and for not trying to do their share of work for the family. They say whatever pops into their mind, make no effort to control their impulses, and then use the head injury as an excuse. People soon figure out that this person is taking advantage of their injured status.

So what is the answer? There is no easy answer. You are likely to regret it if you hide your injury from everyone, and to regret it if you talk constantly about your injury. As with most things, the best answers are not found at the extremes, but in being moderate. I think the best way to handle it is to make your best prediction of what will happen if you do explain it, and what will happen if you don't explain it. Then learn from the outcome. If you keep your injury to yourself, and the job or relationship blows up, look carefully to see if head-injured moments were a part of the problem. If they were, then you probably should have told the person about your injury. If you tell the person about it, and from that point forward they show a bad attitude toward you, you may have made a mistake in telling them.

If you apply for a job, and tell the person doing the hiring that you have a head injury, that person may not hire you, or may expect you to prove that you can do the job in spite of your injury. These are the risks you take if you choose to be honest. But if you explain your injury, the law (the Americans with Disabilities Act) prohibits prejudice against you, and requires your employer to help you in certain ways. If you conceal your injury, the law offers you no protection at all.

When you make the decision about whether or not to tell a job interviewer, you should think about the kind of impression you will be making. If there is a big gap in your job history during which you were recovering from the worst part of the injury, the interviewer will ask you to explain it. You can lie, but if it sounds like a lie, you've probably lost the job. You can refuse to answer, but most interviewers turn down candidates who refuse to answer questions. Or you can tell part or all of the truth. Many people have chosen to tell the interviewers "I was recovering from a car accident," without necessarily mentioning the head injury.

Some of my patients have felt sure that they could not tell their employer about the injury, because they held an important job and the employer would not be willing to let them continue if he or she knew about the brain injury. In some cases, they have been able to pull it off, by putting in the extreme work it takes to have a tremendous recovery. They have been able to perform up to the level of the boss's expectations and keep the job, or even get promoted. In looking back over what happened, it looks like they made the right decision to keep it to themselves.

You should be aware that if you hide the fact of your injury from a boss or boyfriend/ girlfriend, and only admit to it later on when you are in trouble, that will look very bad. They will realize that you hid the truth from them, and they will feel like you manipulated your way into their good graces. That will make you look like an evil person as well as an impaired one. So don't try to hide your injury unless you think you can stick with it. People are almost never able to hide their head injury from a spouse, so if you try, be prepared to get found out and resented.

I know of at least two cases in which patients were about to be fired when they reminded their boss

about the head injury, and got a second chance. With my help, both were able to save their jobs, and they still have them. In those cases, it was smart of them to tell the boss about the injury.

For most people, I think about it this way. If you tell someone you have a head injury, they won't know exactly what that means. If your explanation shows that you DO know what it means, that you are educated about head injury and know about what is wrong with you, they will probably get a favorable impression of you. If you then go on to show that you are an unusually responsible friend or employee, who makes extra effort to do the right thing, and works hard to learn from your mistakes, they will learn to respect people with head injuries. So if you are in control of your recovery, it's safe to explain your injury to people who are important in your life and probably smart to do it. If you are not working hard on your recovery, or are allowing yourself to be out of control of some parts of your life, then neither telling or not telling is likely to protect you from the consequences of your head-injured moments.

## CHAPTER FIFTY-NINE: ANGER MANAGEMENT

Head injury gives many people a short fuse--they get angry over little things, and they get angrier than most people. Several strategies are helpful.

First, don't assume that you can tell when you're angry. Many injuries take away the ability to sense your own anger. If somebody who is with you says you are acting angry, they are probably right. Give them the benefit of the doubt. Look at your body. Are your muscles tight? Are your teeth gritted? Is your voice loud? Is your face flushed and your expression intense? Checking yourself out this way can help you to discover how angry you are.

Second, when you get angry, your behavior becomes a source of trouble. People who have always yelled when they get angry, after a head injury, yell more. They yell louder. They yell about little things that aren't worth yelling about. Sometimes they sound out of control. It makes a very bad impression. It is a good idea to get control fast, and to shut down the yelling.

People who have always had a tendency to break things when they get angry, after a head injury, tend to break things that are valuable and important to them. They tend to break things that don't belong to them. They tend to break things carelessly, in a way that can cause an accident and hurt someone. It is a good idea to get control fast, and stop breaking things.

People who have always had a tendency to hit others when they get angry, after a head injury, become violent too easily, and cause danger to others by their violent behavior. Society does not tolerate a person with a head injury getting out of control and hitting people. The police will lock you up for that without a second thought. Getting control right away is extremely important.

There is only one sure way to get control when you are angry. You need to get away from the person or thing that is making you angry. Take a walk. Go outside. Get to a quiet place. Once you are away, you will start to calm down, though it may take awhile. Stay away until you can relax and regain good self-control. That will keep you from doing things you would regret while angry, and getting in trouble. Develop the habit of getting away whenever you get mad.

It is important to let your family and friends know about this strategy ahead of time, before you have gotten mad. They need to know that you are getting away to regain self-control, that you need to do that, and that under no circumstances should they follow you or prevent you from going. Often when people get mad at one another they won't let the other person leave. You need to make sure they understand that it is dangerous for you and for them to prevent you from leaving to get control. If they don't understand, or if they say they understand and then stop you from leaving when you are losing control, you need to visit the doctor or psychologist with them so that the professional can explain to them how important it is to let you leave at those times.

Some men are accustomed to fighting. After a head injury, they are more touchy and more easily insulted, which leads to more fighting. But a person with a head injury should never risk getting hit in the head, because another head injury will produce much more impairment. So the fighting needs to stop.

Once you have developed the habit of getting anger back under control by walking away and chilling out, you need to work on preventing anger. When you get angry, what set you off? Some people get mad when they feel threatened. Others get that way when they feel disrespected or put down. After a head injury, it is easier to misinterpret what somebody says to you, thinking that they are threatening or disrespecting you. Try to be prepared for the situations in which you tend to get mad. Before losing your temper, make sure you aren't jumping to a conclusion about what the other person is saying.

Sometimes people get touchy about the fact that they are head injured. Sometimes they feel that other people don't listen to them just because they're head injured. Sometimes they feel that they have to take the blame for everything. Sometimes they are correct--some family members learn to doubt everything the survivor says.

It is important to realize that your credibility is at stake when you get angry. If you act berserk--in a rage, out of control--then the people around you will lose respect for you. If you want to be taken seriously, you need to show that you handle your touchy emotions well.

Note: early in recovery from a severe injury, survivors can get caught up in emotional reactions without the ability to break out of them. One young man who got enraged at this stage and would yell and scream for hours broke out of this pattern using a unique strategy. He, his wife and I agreed to try having him suck on a hot cinnamon candy (a "Red Hot") when he got into this state as a way to pull him out of it. The candy worked the first time and every time after that. This strategy works wonders, but only if everyone agrees completely to use it.

## CHAPTER SIXTY: DEPRESSION, DISCONTENT AND DESPAIR

The term “depression” has two definitions. In common language, it refers to feeling blue, down, or unhappy. Head injury causes this state. In the language of mental health, it refers to feeling so negative and unhappy that no normal person would react to the events of your life that strongly. A person who is diagnosed with depression is not only upset about losing a job or a relationship, but feelings worthless, and life seems pointless and hopeless. That person has nothing to look forward to. Many people who have head injuries become clinically depressed.

Clinical depression is not “normal sadness.” So when a person is sad and blue, the question is, how reasonable is their reaction. If you have lost your career, your independence, your future and your self-confidence, a great deal of sadness would be reasonable. Some people even think that it might have been better to have died in the accident. That borders on depression. But if you can’t enjoy yourself at all, that is depression. If your favorite meal, your favorite music, your favorite movie, your favorite scenery, and your dearest friends give you no pleasure at all, you are depressed. If you have absolutely nothing to look forward to, not even something small, and you haven’t had an enjoyable experience for days, then you are depressed. If you think about committing suicide, you may or may not be depressed, but if you wish you were dead, you are probably depressed.

Clinical depression is dangerous. It is life threatening and health threatening. It is not something to “tough out.” If you have it, you should get professional help right away. There are two choices. You can get medication from a physician. It works pretty quickly, building up to full effectiveness within 3 to 4 weeks, at which time it should protect you from being deeply depressed, though you may still be unhappy. The other choice is to get counseling or psychotherapy from a psychologist, counselor or social worker. The established treatments for depression, though they usually take longer to gain full effectiveness, have a very high rate of success, and unlike medication, they have a permanent effect. If you want to get rid of depression as quickly as possible and not have it come back, do both--get medication and therapy.

There are two excellent methods for preventing depression. The first one is to be sure that you plan out your days to give yourself something to look forward to--something you will enjoy. A person who plans several pleasant events every day rarely gets depressed even when trouble comes. It is also a good idea to set up your plans so that you do some things that are physically active, and some things that involve other people. A schedule like that keeps you from hiding away from people and shutting down, which is what people do when they get depressed. And remember, it is important to plan and live your life this way even when you don’t feel like it--because when depression starts, you don’t feel like doing anything. You can fight off depression by using your planning methods.

The second way to control depression, and to make your life work better, is by controlling what you expect. Depressed people set their expectations for each day at the extreme ends. Some depressed people expect too much, setting their goals so high they can’t be met, which makes every day a failure. Other depressed people set them too low, and low goals produce poor results--it’s a self-fulfilling prophesy. Expectations and goals that are set in the middle--set for things you know you can achieve--produce a daily track record of success. Doing that makes your life worth living.

People who have recently been injured sometimes make themselves depressed by locking their mind onto the bad things that have happened to them. When you begin your recovery, many or most of your long-term objectives, hopes and dreams may be ruined by the injury. If you compare your new self and new life to your old self and your old life, it will make you unsatisfied and unhappy every time. These are bad strategies--they kill your spirit. Eventually you will need to set new goals for yourself, ones that make sense for the new person you are. But that takes time. Before you can do that, you will need to focus on short-term goals--goals for today. The logic of short term goals works like this. Your life is not going the way you wish it could. You need to take control of it. You can’t change everything you want to change in one day--to try

would be to fail for sure. What you need to do is take control of your life one small piece at a time. As you fix the small parts of your life, you will begin to realize that you have the power to run your own life, and to fix the parts you don't like. The more small parts you fix, the stronger you get, and the more your life becomes what you need it to be. So focus on your goals for today.

Here's a look at the way people change their long-term goals. Those goals are often about making something special of yourself. You may want to be famous, or successful, or the best at what you do. After an injury, you need to change your standards. If you think about all of the people in the world who have your injury, some of them are real winners and others are real losers. You want to be one of the winners. So you ask, what would a successful person with a head injury be like if they did what I want to do. Say you are an athlete. Have you ever heard of athletes who used to run long distance races or play basketball, and then were crippled in an accident, becoming stars of wheelchair competitions? That is an example of adjusting your goals. One survivor whose story you will read about in Section Three was crippled on one side of his body, but he decided to become a long-distance runner. He feels like a big success because he is the only long distance runner in the country who is paralyzed on one side of his body. He is a winner, because he is comparing himself to other people in his situation. Some people with head injuries so severe that the odds against being able to hold a job are very high take great pride in holding down a minimum-wage job, because they know that doing that in spite of their injury is a great accomplishment.

The biggest winners I have ever met are always people whose biggest long-term goal is to take their life back from the injury. Bit by bit, piece by piece, they are going to make their lives more normal and more satisfying. They fight that battle every day, and they win victories on most days. They are proud of themselves, and they have earned total respect from the people who know them. That is the way to come out on top.

## CHAPTER SIXTY-ONE: HOW TO THINK POSITIVE AFTER A HEAD INJURY

You have probably heard that thinking positive is something that successful people do. Perhaps you are a person who has always thought positive. Perhaps you have never been that kind of person. There is a certain kind of positive thinking that is very helpful to recovery, and another kind that is very harmful to it.

Just as you wouldn't think positive about being able to fly if you jump off a building, so you need to not think positive about being your old self. I can do my old job, I can make the same impression I used to make, and so on.

You can think positive about doing the positive things you have done since you injury. You can think positive about making improvements in yourself. You can think positive about learning from your mistakes. You can think positive about maintaining your values and your character. You can think positive about going through an ordeal and making it through.

Perhaps the best way to think positive is to remember that you are from the World of Head Injury. Some of the things you accomplish may be no big deal in the ordinary world, but they may make you a hero/heroine in the World of Head Injury. If you have earned that respect, you owe it to yourself to think positive about it.

Some of the strongest and toughest people I have known are head injury survivors. They have been through hell and come out of it on their feet. They can be confident that they can get through anything.

Some of the people who feel most positive about their lives after head injury feel that their injury and their survival demonstrate the grace of God. Some feel that God chose the injury for them to teach a lesson--a lesson that made him/her a better person. Some feel that God saved them from sure death for a reason, that they feel more sure than ever that God has a purpose for them. Some feel that the injury has brought them closer to God.

Quite a few survivors who were injured in their teens feel that they learned huge lessons about life from their survival. They feel that they have become deeper and more aware of what is really important. They no longer have time to worry about the concerns of a teenager. This is a point of pride.

There is an old saying: whatever doesn't kill me makes me stronger. Is that what happened to you?

## CHAPTER SIXTY-TWO: ATTITUDES TOWARD MYSELF

It's healthy to like and respect yourself. After head injury, self-esteem problems are common. Some survivors distrust themselves, feel ashamed of themselves, some even hate themselves.

One special problem for some people is blaming themselves for getting into the accident. Sometimes this blame is rational--people whose injury results from a DUI or from speeding, or car surfing, or street racing, or other acts of bad judgment. Sometimes it isn't, like when a person keeps getting mad at himself because he didn't sleep in that day, or take a vacation, or take a different street. These regrets are not sensible--nobody can avoid going to the scene of a traffic accident because we can't see the future. Sometimes self-blame is unfair. A young man found out in the hospital that his younger brother was killed when he lost control of his car in the rain. Witnesses swore that he wasn't driving recklessly--the car just hit a patch of deep water and spun out, but this guy had not stopped blaming himself for his brother's death many years later.

If you blame yourself for the accident, you need to get past it. Allow yourself the same second chance you would give to a friend--try to forgive yourself. People have different ideas about how to earn forgiveness. Some people forgive others when they are sincerely sorry. Others ask for a promise not to let it happen again. Still others need actions to make up for the wrong done. Give yourself a chance to earn forgiveness from yourself. If you have a hard time with that, talk with a minister, rabbi, or counselor to get help in forgiving yourself. Your life is already hard enough without you being against yourself.

How can you respect yourself if you are disabled? Many survivors are down on themselves because they no longer bring home a paycheck. They feel like they are not pulling their own weight. It is easy for us to be unfair to ourselves, so think how you would treat someone else. If you had a brother or sister who was injured, would you be down on them if they couldn't hold a job? What would you expect from them? To me, it is reasonable to ask an injured person to work hard on his or her recovery. That's fair to ask. Because recovery is very hard to get after the first year, any improvement should be something to feel proud of.

Some of my patients wind up taking part-time minimum wage jobs. A young man who lost almost half of his brain when he shot himself in the head ended up taking a job at a supermarket, helping customers with their grocery bags. Although it is not a high-status job, he was proud of himself for holding it--with good reason! Most people with an injury like his would not be able to hold a job like that. He earned the right to be proud. Another young man with a severe injury from a parachuting accident had the same job at a different store. He felt that it was a menial job, and had no pride in it. He quit his job.

When you evaluate yourself, you have to compare your performance to some standard. What standard do you use? Do you compare your current self with your old self? That is a big mistake--you can never win when you compare that way. Do you compare yourself with your old friends? That would not be fair to you. If a person was blinded in an accident, would it make sense to compare him- or herself with sighted friends? What is your comparison group? When we go to a reunion, we compare self to people we graduated with. When we go to a family reunion, we compare self to our relatives. When we watch TV, we compare self to superheroes and supermodels--a big mistake. But what about after an injury? There are only two sensible standards for comparison, and both of them usually take some work to be sure you use them.

The first is to compare yourself with other people who have head injuries. That is difficult for many people because they never see others from the World of Head Injury. However, if you attend a head injury group, you can make comparisons. Thanks to the Internet, it is also possible to find self-descriptions of other survivors on some Web sites and chat rooms on others. So you really can make that comparison. It is most sensible and fair to compare yourself with the new you--the self you have become since your injury. If you are getting better, more productive, more responsible over the past months or years, that is grounds to take pride. Stick with that way of thinking about yourself if you want to be realistic.

## CHAPTER SIXTY-THREE: GRIEF, SELF-PITY, AND TURNING THE PAGE

Adjusting to the changes in your life has been, and will be, a long process. First you had to realize that your whole life had been changed. Then you had to say goodbye to the things you lost from your old life, a process which is probably still going on. As you began to understand that the things you lost were valuable parts of life, you may have felt angry and resentful, or sad and disappointed. These emotions are called "the grief process." By feeling these intense feelings, people accept the changes that have taken place and can leave the past behind and move on to live their new lives.

The grief process for head injury takes a long time. Many people are not sure what they have lost for several years. Until the losses becomes clear, the grief can't happen.

Once the grief starts, some people let the feelings come, shed tears, say goodbye to things that have been lost from their old life, and move on. Other people try to avoid accepting their losses, or shedding any tears over them. They seem to think that by refusing to allow themselves to get sad, they will protect their strength. Actually, the opposite is true. People who delay their grief process can't move on. They get stuck in trying to live in the past. It is not a happy life, but some people cling to it. It is the strongest people who face their sadness, and when they turn the page on the past and move on, it makes them even stronger.

Some people get hung up in the feelings of the grief process. For example, some become preoccupied with anger and resentment. They protest the unfairness of the injury. They blame other people for not helping them enough--family, friends, doctors, everyone. A handful of angry episodes is normal. Months and years of angry mood are a trap. That kind of anger keeps the person from turning the page, leaving the past behind, and moving on.

Another trap is the emotion of self-pity. Normal grief is all about missing the activities, satisfactions and successes of your old life. Self-pity is feeling sorry for yourself. Some people take a great deal of satisfaction in self-pity, as if suffering were some kind of badge of honor. Self-pity also makes it easy to use the injury as an excuse to not try difficult things. The more people get into self-pity, the less they realize that they are doing something self-defeating, and the less they cope and recover. That's what makes it such a deep trap.

The way to get your life back is the middle path. By that, I mean that you can't pretend that you haven't lost anything, nor can you tell yourself that you've lost everything. You must find, measure and grieve the actual losses, while remaining clear that you can still rebuild a life and cope with it.

## CHAPTER SIXTY-FOUR: HANDLING FRUSTRATION

Many of the experiences of recovery depend on what kind of injury you had, how old you are, what you were like before, and what your world is like. But there is one thing survivors all say: after a head injury, life is harder. At first, that makes everything you do a source of frustration. It takes a lot of getting used to.

Cognitive psychologists say that adults do 99% of what they do on “automatic pilot,” reacting by habit without a need to do any concentrated thinking. That simply doesn’t work anymore. When you try to do things on automatic pilot, you get them wrong far too often. Sometimes everything works fine, but sometimes you forget to do things you need to do, do things too carelessly or sloppily, ignore things you need to notice, and do or say things people find to be inappropriate or rude, while failing to realize until it is too late that you’ve done something wrong. You no longer seem to know how to get along with people, how to meet their expectations, how to earn their approval. Jobs, friendships, parenting, pets, purchases, it all turns out to be harder than it should be.

By now you understand these recommendations to fix the problem: make it even harder. Prepare for everything. Look ahead, see what’s coming, search for things you might possibly screw up, make a thoughtful plan on how to do them, do them carefully, watch for mistakes, and learn from every flawed outcome. Do everything the hard way. Because the hard way is the way that gives consistently good results. The hard way is what produces recovery, and keeps it going.

How to avoid frustration: expect what is coming. If you know that what you are trying to do is going to be extra hard, then when it happens just that way, you won’t be surprised or frustrated. It is what you were expecting. The more realistic you make your expectations by re-programming them to expect things to be hard, the more you will get rid of the frustration. Two magic words in re-programming yourself: “Of course.” I did it wrong the first time I tried it, of course. I had to apologize for what I said, of course. “Of course” means that you know what kind of life you have now, and you are ready for the problems and difficulties. “Of course” is the cure for the frustration.

## CHAPTER SIXTY-FIVE: SPIRITUAL AND RELIGIOUS WELL-BEING

Most people are brought up to believe in a supreme being who cares about us and is willing to help us. Many people fall away from the practice of worship when they become teenagers, and some even lose their religious beliefs altogether. When people almost die in an accident, they usually think about what it means to still be alive. These thoughts can be deep and troubling for people who lost friends or family members who died in the same accident. Some people end up believing that their lives were saved by the supreme being. They may feel grateful for being saved. They may feel that God gave them a second chance at life. They may feel that they were saved for a reason, and that reason gives their life a special purpose. These peoples' faith is strengthened by the injury. The faith helps to give them support, courage, and confidence to go on with life. There is no doubt that the group of people who have strong faith recover better than the group who have no faith.

Some people lose their faith when the accident happens. They feel hurt and angry that they were singled out to suffer for no good reason. They feel that life is unfair. They resent God for abandoning them, or even punishing them. They may even feel hatred for God deep in their hearts. This reaction saps their strength, weakens their hope for the future, and burdens them with despair and self-pity.

Some people who were not religious become religious after a crisis like an accident. In fact, some people wind up believing that the accident was good for them--even though they had to pay a big price in terms of the lasting impairments, what they gained spiritually has actually made their present life better than their past life.

Some people who have lost their faith because of the accident are able to regain it later on. If you have lost your faith, perhaps you should consider talking to a person who specializes in pastoral counseling. Those who reconnect with God tend to be very glad that they did so.

Recovery is hard enough. If you can do it with a friend, so much the better. If you can get help to recover, that is a blessing. If you have a great friend who is ready to be a great help, maybe you should let Him help you regain your faith in yourself.

If you are religious and have kept your faith, you should be aware that your head injury can impair your spiritual life. Head injury makes the mind lose awareness of everything else when focusing on one thing. So when you have something on your mind, not only do all other personal issues vanish, but so does God. You lose your spiritual connection very easily. If you want your spiritual beliefs to be an active part of your life, you should set aside a specific time each day, or even more than one time, to pray and enjoy your relationship with God. One wonderful practice that is part of Islamic religion is the practice of praying five times every day. How often do you want to experience your uplink to God?

## PRACTICAL GOALS

### CHAPTER SIXTY-SIX: DRIVING

Driving is the most dangerous thing most head injury survivors do. They get out on the highway and use their slowed reactions, distractibility, impaired judgment and impulsivity to pilot three thousand pounds of rolling steel. And many of them do just fine. The way they do fine is of course by being extra careful, and by maintaining total concentration.

Should you be driving after a head injury? Some people shouldn't. If your injury was severe enough to slow your reactions, or take away your self-control so that you do things in anger when you are driving, or take unwise risks, you should be restricted from driving. People who have been in a coma for more than one week usually need some work on their attention skills and reaction time in order to get ready to drive. Those who have been in a coma for more than two weeks definitely need that kind of training, along with people who have focal injuries to the frontal lobes. People who have parietal lobe injuries, particularly in the right parietal lobe, or who were in a coma for more than a month, may be too impaired to drive even with the training exercises. They should get evaluated by an occupational therapist to make sure they enough coordination and visual perception to be safe behind the wheel.

The standard of care for driving safety differs from state to state. In some states, the motor vehicle department is always notified if someone is hospitalized for a head injury, and they require proof that the person is medically cleared before the person can drive again. In other states, reporting the injury is left up to the doctor. Thus some people resume driving when they choose to, while others are placed under a medical restriction and allowed to drive only when they are judged to be capable.

How is the decision made to clear people for driving? When driving is restricted, it is almost always left up to the physician to decide when driving is okay again. This is an odd way to do things, since physician training doesn't deal with driving readiness, and physicians have no tests of their own that can measure readiness. They tend to make the decision based on experience and intuition--an educated guess.

At the other extreme, there are centers where driving impairment is studied and evaluated with special equipment, for example, at the University of Michigan. The decision about someone's driving readiness is evaluated in driving simulators and in actual cars on special obstacle courses. This is the best way to know whether someone is safe or not.

In advanced head injury rehabilitation programs, the driving evaluation usually has four components: the physician's assessment, performance on driving-related neuropsychological tests, performance in driving-related therapies for vision and coordination, and an on-the-road evaluation. The road tests used in our program were not the simple trip around the block required by the DMV, but instead required driving for 25 miles on all kinds of roads under the trained eye of a specialist in neurorehabilitation driving evaluations. Our evaluation was not perfect, but more than 96% of our patients were accident free across an average of almost two years in a study we presented.

The problem with the driving safety issue that most people face is that they don't have access to an expert evaluation, or if they do, they can't afford the several hundred dollars that one is likely to cost. You need to know this: if you still have your license, that doesn't necessarily mean that you are safe to drive. If you passed a driver's license test, that doesn't necessarily mean that you are safe. If you enrolled in a driver's training course and got passed by the instructor, that certainly doesn't mean that you are safe. Those instructors have no idea what to watch out for.

Head-injured drivers who are unsafe are not like pre-teenagers. They know how to operate the car. They know the rules of the road. That isn't the problem. They can drive just fine under good conditions. The

problem is that under bad conditions, they may not react properly. When they are tired, upset, distracted, in a rush, or driving under problem conditions (bad weather, road construction, in unfamiliar places, or around people who make driving errors), they may be dangerous. And how dangerous these conditions are depends in part on how bad the injury is, and in part on how extra careful the person has learned to be. The only way to be sure is to look at how the person reacts under those difficult conditions.

Other drivers are unsafe because they have seizures. A survivor whose seizures could cause a loss of consciousness while driving are not allowed to drive by law. In some states, hospitals and doctors are required to report a seizure disorder, and this cancels the driver's license. In other states it is left up to the survivor's doctor, or to a committee of doctors who advise the department of motor vehicles, to decide whether the license should be revoked. Some states also revoke the license of anyone with certain defects of vision, such as the loss of peripheral vision. Know your state laws. If you drive when the law says you should not, whether your license has been taken or not, you may be committing a crime, and your auto insurance does not have to cover anything that happens to you. Don't risk it--you could ruin yourself and your family's financial assets.

If you have had an accident, and realize that you were at fault, you should look carefully at the kinds of impairment that were involved in your accident. The more it can be related to the head injury, the more sense it makes to quit driving until you can work on your impairments.

When you are not sure whether you are safe to drive, or have no evidence that you are safe, get the best evaluation you can find and afford. To find an experienced on-the-road evaluator, you should contact the national or local chapter of the Brain Injury association, or the social worker at the nearest brain rehabilitation program. If you can get a neuropsychological evaluation by an experienced neurorehabilitation psychologist, you should look into this also. A neuropsychologist should be able to evaluate your driving readiness with a small battery of tests, which will control the cost of the service.

## CHAPTER SIXTY-SEVEN: GETTING AND KEEPING A JOB

More scientific research has focused on who can and who can't return to work than on any other topic in brain injury rehabilitation. Mild injuries allow most survivors to work, and severe ones prevent most from working unless they use self-therapy to make themselves employable again.

Most survivors can hold a job IF they get enough self-therapy accomplished, and few survivors can hold a job unless they do. It has been my experience that injuries with less than 60 days of coma usually leave open the possibility of getting a job. If there is more coma than 60 days, it is possible to work in a family-owned business, in a sheltered workshop, or in a volunteer position, but a mainstream job generally does not work out. When focal injuries are very large, they can also make it impossible to hold a mainstream job. However, the great majority of survivors have the potential to work.

In almost every case, survivors want to go back to their old job or old career. If the injury is severe, this usually doesn't work out without intensive brain rehabilitation. It also doesn't work if the old job or career requires certain skills that have been damaged by the injury. There are four major areas of job skills that can be a total barrier to going back to an old job: (1) Speed: If a job requires quick thinking or actions, or has a high quota for productivity, the slower decision making that goes with a head injury may make working that job impossible. For example, court reporters, air traffic controllers, high-volume sales people, and cashiers in busy stores and restaurants have to be able to work quickly. (2) Consistency: If a job leaves no room for making errors, a survivor who has head-injured moments that reduce consistency cannot hold a job of that kind. There is no room for a paramedic or a pharmacist or pilot to have a bad brain day. (3) Memory: Certain jobs depend on learning new information, and cannot be done if there are learning problems. For example, a server in a restaurant has to remember who ordered what. A police evidence technician needs to remember where the bloody knife was found. Forgetting is not acceptable. (4) High-Level People Skills: Managing, counseling, persuading, and selling require reading people and controlling their own reactions. Ninety-nine percent of survivors whose jobs require these skills cannot hold those jobs.

Most people who lose their jobs after a head injury do so because of behaviors that are not directly related to their job skills. They get fired because they are late to work, or goof off on work time, or become emotional on the job, or say or do things that upset people in the workplace, or appear not to have a proper attitude. In many cases, they don't meet the supervisor's expectations for conduct and attitude. In other words, they have interpersonal problems related to give and take (Chapter ) or empathy (Chapter ) or impulse control (Chapters and ). If you want to hold a job, these problem areas belong in your Treatment Plan.

Survivors who want to work above entry level, or at least want the prospect of advancement above entry level, need to do self-therapy on the areas that might block their goal. Developing a career-oriented Treatment Plan is technically difficult, and should probably be done with the aid of a career counselor. There is a major reference book that codes all job categories according to the main skills required (called the Dictionary of Occupational Titles), and this is a good starting point to understand the skill requirements of a particular career. As a neuropsychologist, I am often asked to do detailed ability testing in order to determine what kinds of jobs a survivor can reasonably be expected to hold. However, even without professional advice, your understanding of head injury should help you to identify some of the areas that would need therapy in order to prepare for a particular career. After getting a detailed job description, go through each chapter of this manual and identify the chapters that deal with skills needed either to do the job or deal with the people. Add a Treatment Plan goal for each one.

Be sure that you realize this: Since vocational retraining after a brain injury is a complex activity, difficult for professionals, it is major challenge for a self-therapist. There is likely to be an element of trial-and-error in your treatment planning. Once you have finished working on your skills, you should try them out in activities that are similar to the job want. If you can find them, try out a volunteer job or an

apprenticeship or assistant's job related to the job you want, and use Analysis Forms to keep track of what still needs further fixing. Then when you finally get hired, view your first job as a trial run. If it works out, great. If it doesn't work out, don't get discouraged. The first try is not supposed to work. It is supposed to be a learning experience that you can use to fine-tune your self-therapies and strategies for the next try. Be aware that it may take a number of adjustments. If your approach doesn't work several times, you may be setting your sights too high. Keep working on it, because as long as you keep making adjustments, you can keep making progress toward employability.

Finally, one thing that is extremely important to get from your job supervisors is feedback about what went wrong. The more feedback you can get, the better the self-therapy you can do to prepare for the next job. It always helps to tell the supervisor how much you appreciate getting the negative feedback for self-improvement. Sometimes it is the negative feedback from one job that makes the crucial difference in getting you to the level of permanent employment the next time.

## CHAPTER SIXTY-EIGHT: FULL INDEPENDENCE IN THE HOME

Survivors with very severe injuries cannot be left alone at home because their judgment is so impaired that they cannot stay safe without some distant supervision. Survivors with mild head injuries generally have no trouble being home alone, or managing their own homes. In between these two extremes are people who leave the hospital unready to deal with a home by themselves and gradually become more capable.

The most important strategy for staying alone when impaired is to avoid risks. The greatest danger when alone usually comes from trying to do things that are unfamiliar. What will you do if the bulb blows out in an overhead light? Will you take the risk of climbing on a shaky piece of furniture to try to change it while you are alone, or will you wait until others are around? The same goes for some problem on the roof--will you go up there when you are by yourself or wait until you have help? What will you do if a stranger appears at your door? Will you let them in, figuring that you can deal with whatever they might do as you could before your injury, or will you refuse to open your front door? Since people with head injuries have often lost physical power and fighting skills, and in any event are no match for an armed home invader, any action other than leaving the door shut to all strangers is a risky one. How would you respond to a poisonous snake if it got inside the house? Would you try to kill it? What would you do if there was a fire in the house. Would you try to put it out even if it had gone up the curtains?

The person who is safe to be left alone is the person who avoids risks. The person who is least safe is the risk taker who believes that he or she can handle danger situations. So for most survivors, a cautious attitude is the most important personal quality when it comes to safety.

Age is also a factor, though it is a less important one. A middle-aged adult with a head injury has more life experience to draw from in solving unusual problems. However, that doesn't guarantee that good judgment will be used. A sixty-one year old man whose head injury came from falling off a ladder insisted on climbing up another ladder to fix his roof in a storm. So age can be helpful, but only if the attitude is to be careful.

By the way, one of the reasons that being extra careful about physical risks is so important is the fact that a second head injury is much more disabling. The factory-fresh brain has a margin of safety built into it because of duplicate circuits. But when there is a second injury, the duplicate circuits have often been destroyed, and the second injury ruins more skills as a result. A survivor needs to use maximum protections against another injury--bike helmet, seat belt, air bags, and so on. More than that, staying away from sports like sky diving and mountain climbing, and other high places where you can fall, shows good sense.

Working toward independence in an activity is something you can do through your Treatment Plan. Take each activity and break it down into its parts. If you want to be allowed to stay home by yourself, for example, the parts include preparing meals, dealing with phone calls, dealing with people who come to the door, dealing with home emergencies, toileting, first aid, and judgment about taking risks. Each part becomes a goal on your Treatment Plan. For example, you make a plan to develop consistency in preparing meals, and then you make a plan to prove your new abilities to your caregivers. Do this for each skill that is required, and you can work your way toward independence. Caregivers who are still nervous about your ability to remain independent may want to let you try it out while they watch quietly, or observe through a video monitor or video recorder, or while hanging out at the neighbor's home. Once you have shown that you don't have any problems and don't need any help on a number of occasions, you will probably be given your full independence.

## CHAPTER SIXTY-NINE: PARENTING

Like working and driving, parenting is one of the tasks in life that requires the best cognitive skills. Like those other activities, a head injury survivor can do parenting, but the natural tendency is to make a lot of mistakes. A survivor can be a parent who makes few mistakes only by being in full control of his or her own mind, and by being extremely careful in dealing with the children.

Parenting is a complex package of different challenges which depend on the age of your child, the personality of the child, and the family situation. The youngest children are difficult because they require constant watching, and only the greatest care and caution can keep a survivor from getting distracted and leaving the child un-noticed for a period of time. Preschool and school-aged children are also a parenting challenge because they are constantly changing. The head-injured parent has a tendency to be inflexible, stuck in dealing with the child in the old way even when the child has outgrown it. It is important to take time to review you child's growth and changes each month, and to make plans and preparations to deal with the child appropriately before every situation that calls for parenting.

Children of this age also represent a discipline challenge. When a parent gets home from the hospital, the child quickly learns that the parent is forgetful, absent-minded, inattentive and poor in following through. This means that the child can get away with almost anything, and children often take advantage of this situation. Siblings often start quarreling and fighting more intensely at this time. Because the survivor is often more passive at first, the child may become more openly disobedient and defiant, as well. This is the time when the survivor needs help--from the co-parent, or step-parent, or even from a live-away lover or friend if this is a single parent. They need to plan the parenting goals and actions carefully, perhaps on a daily basis. The survivor needs to be as active as possible, even when it would be easier to transfer all of the active jobs to the co-parent.

If the children have experienced a period of passive, absent-minded parenting and have gotten somewhat out of control, things become even more difficult when the parent regains the energy and concentration to start disciplining again. At this point, the children's out-of-control behavior can be infuriating, and the survivor can over-react. It is important to be firm and consistent in enforcing the household rules, but to avoid delivering any punishments when angry.

Overload is a special problem for survivors who are parents. The young child's crying, the older child's play, and the adolescent's blaring stereo and TV, all tend to produce overload. In addition, when a child is disobedient or becomes emotional, it tends to produce emotional reactions in the parent, sometimes very strong ones. This kind of overload usually makes behavior more impulsive, which increases the chances that the survivor will yell at the child, or punish, or even strike the child. This problem must be solved or parenting cannot continue. Noise-reducing earplugs can help to dampen down the effects of crying. As to emotion, survivor/parents must develop very strong emotional control responses to prevent reacting without thinking. The first step is simply to put distance between yourself and the child, by walking across the room, or by gently sending the child to his or her room, or both. A decision about how to handle a child's misbehavior should never be made while you are angry. Instead, you should calm down first and then decide how you will handle the problem behavior. Striking, slapping, shaking, spanking, or otherwise using physical punishment is no longer acceptable in today's society, and when done by a parent who has a brain injury, is often taken as evidence of being unable to control self.

Children who are in the later grades or in high school pose different problems. They often feel abandoned while you are in the hospital, and may be needy, or clingy, or even resentful when you come home. Because so much attention has been focused on you, your children may begin to act badly just so they can get you to pay attention to them. You can fix this problem by making a special effort to schedule time to focus on each child, talking about what is happening in the child's daily life and doing things the child enjoys doing. At this age, a child can also be told about the injury, and can understand at least in a

limited way that the changes in mom's or dad's behavior are about the injury and not about the child. However, this understanding only happens when the parent spends quality time with the child and shows that the love is still there by talk and by actions. Discipline is best handled by writing out a list of family rules and punishments, and working hard to apply those rules consistently.

By the time the child enters adolescence, the problems shift again. Now the child is likely to be embarrassed by head-injured behaviors of the parent, and may avoid spending time at home or bringing friends home. A parent cannot control this behavior, and should not try to force the child into situations of embarrassment. It is best to try to talk about the problem, and to accept that the child's concerns are reasonable. You can break down the barrier somewhat by inviting the child to bring friends home to do things in which you take no part. If you keep your distance and say little, it will teach your child not to fear embarrassment from you. Children of this age are also exploring feelings of independence and rebelliousness, and the rebellion can get very intense if the parent is impaired, impulsive and emotional. Parents often get into destructive, no-win struggles with their children at this age. If at all possible, avoid a power struggle. Again, if you have written house rules and the child chooses to break them, they can and should be enforced every time, without getting angry. Handling teenage rebellion in many families is the hardest thing a parent ever has to do, and if the injury is making it too difficult, it may be a good idea to see a family therapist for help.

Adolescent and young adult children who are not handled carefully have the greatest risk of cutting off all contact with parents, by running away or, if already living on their own, by cutting off all visitation. This usually takes place as the result of power struggles, as the impaired parent clings to the picture of the old relationship. A parent who is stuck in the past, treating a child as if giving orders is still appropriate when the child has outgrown that level, almost guarantees that kind of trouble. Anticipation and preparation for a child that age involves reminding yourself that the child is now old enough to be making his or her own decisions and facing the consequences. It is an extremely good idea to remind yourself over and over again about how you felt when your parents gave orders or meddled when you were that age, so you can decide to back off and keep trouble away. Of course, it is also not a good idea to go to the other extreme and allow your child to make bad decisions without saying anything. Your role with a child at this age is to offer suggestions and opinions, but be ready to have them rejected.

Parenting is so complex that I have only scratched the surface in discussing parenting challenges and problems in this chapter. The problems a particular parent faces are also fairly specific to that person's personality and the personality of the child. So there is no simple fix. The process of dealing with parenting disability is just like the process of dealing with any other disability. Whatever problems you run into should be subjected to Analysis. If Analysis does not fix them, they should be added to the Treatment Plan. You may want to read up on parenting techniques, take a parenting class, or get advice from experienced parents if you have trouble meeting these goals. You may even want to make up a written Parenting Plan for each child.

One of the things that makes it hardest to be a good parent is the problems we inherit from the poor parenting we received as children. If you run into such problems, getting counseling can be extremely valuable. Every parent has some leftover problems from their own childhood, and the smart parent is the one who deals with them.

## CHAPTER SEVENTY: BOREDOM AND LONELINESS

These are the most common complaints of people with severe injuries and limited recoveries. People who aren't working and can't drive may spend every day at home, watching TV or just passing time, and feeling bored. People who have left-brain focal injuries may not be able to enjoy watching TV or reading, which limits their activities. Curing boredom and curing loneliness are both excellent problems to put into your personal Treatment Plan.

The daily schedule process is designed to help out with boredom. By making a menu of all of the things you do in your spare time, you give yourself choices of different ways to spend your time. If that list is not long enough, try to add more items by thinking back into your past to remember things you have done to fill the time at home. Think about hobbies you used to have or craft activities you have tried. Surf the Net looking for interesting activities, and ask people in TBI chat rooms for suggestions. You can also find lists of free-time activities in books on Recreational Therapy. You may also find out that members of your family can remember more things that you have done in the past to fill your time. Whenever you come to an activity, even if sounds stupid at first, take time to think about how it might be okay. For example, you come across a show on gardening. You are not interested in planting flowers in your back yard, or you don't have a back yard. But there are other kinds of gardening. You can learn about indoor gardening, or even read up on how to make a rock garden. If you like music but you don't play an instrument, maybe you can develop a hobby of burning CDs that have the perfect songs for each of the different moods you experience. These are just a few ideas--coming up with some that suit you requires taking the time to think about it, being open minded, and gathering some information.

Remember that making good use of your time requires structuring your day. Just thinking up things you might do is of no value unless you put them into your schedule and then do them. And just doing them is not enough to make them enjoyable. You have to do new activities enough times to get familiar with them, before they begin to become enjoyable.

People who are not working often feel bored and empty partly because they are not doing anything they consider to be useful. You can do something about this by programming in recovery activities you pick up from this book, or physical exercises to improve your strength and stamina. You can make it a goal to learn more about certain topics that are useful to know about. You can make it a goal to learn a new computer function each day--buy a computer guide for the internet, or for one of your programs. You can also find tasks that are useful--by making things, taking up chores of house and yard work that are not getting done right now, or even doing some piece work jobs that are advertised on the internet. None of these things is likely to be as satisfying as having a career and bringing home a paycheck, but they can all give you a feeling that you are doing something useful with your time.

People who are bored and have too much time and not enough to do can take up hobbies. The easiest kind of hobby to start is one that you have done before at some time in your life. For example, many survivors find that they get a lot of satisfaction from pet care. One housebound survivor considered keeping his tropical fish alive to be his greatest accomplishment of his second year of recovery.

If you don't have enough social life to be satisfied or find yourself alone too much, you should look into community clubs and organizations that give you an opportunity to spend time with other people. Volunteer work is often a great source of activity, social contact and a sense of doing something useful. Head injury survivors are often welcome to serve as volunteers providing help or companionship to other people who are disabled or disadvantaged: children with physical or mental disorders, dying children, ill or injured adults or elderly people. Some of the best experiences that severely impaired people have described include becoming a regular volunteer at Give Kids the World, or babysitting for autistic children, or volunteering at a hospital rehabilitation ward. Survivors often get some social needs met by writing letters, or making phone calls, or developing relationships on the Net. These are all good options, but all of them

require taking some initiative. If you are used to making friends by just running into people who become your friends or being pursued by others who want to be your friends, you need to realize that those strategies don't work anymore. Now you need to make some effort to make friends.

If you have been trying to make friends, and have had little or no success, it is important to recognize that making friends is a complex skill, and that considerable self-therapy may be needed. Many survivors are unsuccessful in making new friends because they don't try hard enough, but many others are unsuccessful by trying too hard. People are only interested in potential friends who are relaxed and who don't force themselves on others. If you select making new friends as a Treatment Plan goal, you may want to practice meeting people and offering to do things with them on tape, so that you can check out your style by listening to the tape. (See Chapter 56 for more on this.)

A huge obstacle to improving loneliness and boredom is being stuck in the past. Some survivors are angry at their old friends and ex-boyfriend or girlfriend for leaving them, and they continue to harp on those feelings instead of moving on to create new relationships. Some survivors feel crippled by obstacles in making new friends and romantic connections, because they have lost the ability to drive, or no longer have spending money, or have some kind of disfigurement or obvious disability. They may react to that obstacle with self-pity rather than with efforts to overcome it. People who allow self-pity can become completely stuck in an empty lifestyle (See Chapter 61.)

People who are single and want to date can feel especially lonely. Resuming dating requires dealing with the social problems I discussed in earlier chapters. It also means meeting other single people. If you are always at home, you can't meet people to date. You have to get out--to a volunteer job, church, a coffee shop or bookstore where people talk to one another, a recreation center, and even chat rooms on the Net.

Finding a date means taking the initiative, but it means taking it carefully. You need to indicate a little interest in someone, see if they respond with interest in you, then show a little more interest, and so on, until the time is right to invite them to go somewhere for a meal or a show or some other recreational activity. A huge problem for survivors is their tendency to focus only on people who they might have dated before, not realizing that their injury makes the less desirable as a date. It is important to lower your standards enough so that the people who you look at as possible dates are willing to look at you that way, too. Since dating is another one of these activities that is quite difficult cognitively, getting advice and input from members of a support group or chat room could be helpful, although you have to be careful to avoid bad advice. Something people never think of doing naturally is to actually make a formal plan to get a date. That means writing out your goal, and then trying out different plans until you have one that considers all the necessary issues. Yes, the idea of writing out a dating plan is weird. But if it gets you a date, what's wrong with weird?

Here is a problem-solving line of thought for the dating problem. You need to find someone who would be willing to date a person with a head injury. Would you be willing to date a person with a head-injury? What kinds of people are willing to date a person with a head injury? People who like to have the upper hand on their dates, people who like to take in strays and care for them, do-gooders, extreme loners, people on the rebound, people who want a good excuse not to have to be nice to you, people who lack self-esteem and self-confidence, people who are looking for someone to marry so that they can become an American citizen, people with disabilities or flaws of their own, and so on. Keep looking for different types until you find a type that you could accept and enjoy as your date. Then you will know what kind of person to look for.

## CHAPTER SEVENTY-ONE: SEIZURES

Head injury increases the risk of seizures. The risk is still very small--the great majority of head injury patients do not get seizures. But you need to know about seizures and seizure risk.

Seizures occur in many forms. There is a dramatic kind of epilepsy (once called grand mal seizures, now called tonic-clonic seizures) in which the person loses consciousness, falls to the ground, jerks and flops around, may lose bowel and/or bladder control, and eventually quits squirming and re-awakens. But there are other, less obvious forms. A muscle or a set of muscles can start twitching and jumping or moving without your attempting to move them. You can suddenly blank out, and come back to awareness after some time has passed. You can suddenly get strange smells, sights, sounds, thoughts, emotions, or body sensations that go on for a few minutes and then suddenly stop. These can all be seizures, and if you have symptoms like these, you should discuss them with a neurologist. It is not safe to let these symptom go on without getting medical care--when they are severe, they sometimes hurt your brain. Most seizure symptoms can be controlled with medication, so don't mess around with them--get help if you have them.

A seizure is nothing more than a part of the brain misfiring. It happens after head injuries because scar tissue on the brain puckers just like scar tissue on your skin does, and when that happens it can pull on healthy brain tissue and get it to misfire. Seizures can occur many years after a head injury, but 99% of them occur within two years of the accident. Seizures from an accident sometimes go away after a period of months or years, and sometimes are permanent.

If you need to get seizure medication, expect that it may take some time to get diagnosed and even longer to get the medication set right. The normal practice is to prescribe low doses of seizure medication and increase the prescription bit by bit until it does the job. Also, there are many anti-seizure drugs available, and sometimes you may need to switch to a different drug or even a combination of drugs before you get good results. There are also some very interesting alternatives to medication being developed at the present time. Since these high-tech seizure cures have not been fully developed and accepted yet, they won't be discussed here. But you should ask your neurologist about them.

The best way to develop a seizure disorder is to drink alcohol. The research suggests that brain scars that were not going to cause seizure disorder can be turned into seizure-makers by drinking one beer or one drink. The more you drink, the greater the risk. The next best way to bring on seizures is to deprive yourself of sleep and adequate food and water. Being tired, hungry and thirsty stresses your brain. If you're close to having a seizure, body stress can tip you over the edge.

In working with several hundred patients with seizure disorder, I've found that many of them can reduce their seizures by being careful to manage these factors. One of my patients had seizures for years because he ate breakfast at a specific table in a restaurant, and the ceiling fan flashed light from the skylight across his eyes in a way that kicked off his seizures. All he had to do was to switch to another table, and he rarely had seizures after that. Others get a warning feeling (called an aura) that gives them time to chill out, and sometimes that can prevent a seizure. Experiments are also being done with special medical devices that notice when seizures are starting and shut them down. So if you have seizure disorder, don't assume that you just have to live with it. Put it on your Treatment Plan and look for ways to get it under better control.

## CHAPTER SEVENTY-TWO: PUBLIC TRANSPORTATION

If you don't drive, it is important to use public transportation. Some communities have special transit vans for people with disabilities. You can call a dispatcher, and they will send the van to your home. This service is easy to use if your community has it. All you need to do is to bring the phone number of the dispatcher and a cell phone (or a phone card or change) with you on your trip, and remember to call for a ride long enough ahead of time to get put on the schedule. You may want to wear an alarm watch, and set it to go off to remind you to call for your ride home. The service in our community has had many problems with being late, and even with forgetting to pick people up, so those who use the service here need to be prepared to wait hours to get their ride home, and to call the dispatcher again if their ride has not shown up within a reasonable amount of time.

If your community doesn't have transit vans, but it does have a public bus system, that is a more complicated process to learn. When you learn to ride a public bus, you need a map of the town, a bus schedule, and money (or bus tokens) to pay for the bus rides. You need to learn to read the bus schedule carefully. The information is listed in long columns, and it is easy to jump over a column and read the wrong information for your bus stop, so double check everything you find on the schedule. It is also important to look in the right section--bus schedules often have different sections for weekdays, holidays, so double check the section as well.

When you take a bus trip, you want to make a plan in writing. Looking at the bus schedule, plan the time you will board the bus. Write down the stop where you will get off, and time the bus will let you off. Write down the first place you will be going after you get off the bus. Then write directions to get there, and double check them. For each place you plan to go, write down the name of the place, the directions to get there, what you want to get or do there, and how long you think it will take. Add up the time, and figure out when you will be ready to head for home. Then look at the bus schedule to find the bus you are going to take. Write down the bus number and the time you will be taking it, and what time it will have you back at the stop nearest to your home. Your plan is almost complete. Put up a note (on the front door or the TV) reminding yourself to check the weather report before you go. That way you can be sure you have the proper clothes for the temperature, and rain or snow protection if it is needed.

There are two challenges in riding a bus. The first one is that you have to board the bus, pay the driver, and walk back to your seat as the bus is moving, jerking and bumping. If you have a balance problem, this is a high-risk situation for a fall, and falling on a bus can mean banging into a metal pole or seat. You will want to be prepared for the risk of falling, use both hands to grab handholds, and move slowly enough to avoid rushing faster than your brain can adjust your movements. If you have impaired balance, you will want to practice these skills with a therapist or helper until you have your techniques down. The second challenge is seeing your bus stop long enough before the bus gets there to pull the cord that signals the driver to stop for you. If you miss your stop, it could ruin your plan, and might end up with you getting lost on the city streets or having to ride and change buses for a long time before you get back to your stop. This can be a total disaster. How much of a problem this is depends on how good your reactions and perception are and how well you know the area you are going to. If you are slow, have impaired perception, or are unfamiliar with the area, you should take the trip with a helper first, and look for landmarks before you get to your stop. You should mark the landmarks on your bus schedule, and also put them on your trip plan. Remember to always sit on the right side of the bus, so that your landmarks are on the side you are facing when you are looking for them. A landmark should be something big, hard to miss, and unique. It shouldn't be a gas station unless there is only one gas station in town. But if there is a donut shop one block before your stop with a huge donut out front with arms and legs and a sailor cap, that should be your landmark. When you see the giant dancing donut, you know to pull the cord.

## CHAPTER SEVENTY-THREE: GIVING BACK

### 18. “When I have learned to do self-therapy, I will give back by helping others to learn it.”

Do you understand that head injury recovery has been one of life’s great mysteries for generations? That millions of survivors have lived and died empty lives because recovery techniques had not been developed, and because recovery without them is limited and rare. That millions more have lived and died empty lives because the recovery techniques have been a trade secret kept by hospitals and clinics who have made millions of dollars helping a small fraction of the survivors who needed the help? That millions more are out there living empty lives right now because--being just like you used to be--they don’t *get* it. They don’t understand how to recognize their deficits or how to understand their injury, and they aren’t even to first base in learning how to cope with the problems their injuries cause. I can assure you that nobody is busting their butt to help those survivors. They, too, will probably die at the end of an empty life.

But *you* now know the secrets of recovery. Now *you* are one of the people who could help them, and isn’t helping them. You have learned so much about recovery from completing this book that you could change their lives if only you took the time to help them a little bit.

It’s not your job to help your head-injured brothers and sisters. But the people whose job it was didn’t do it. There isn’t anybody else whose job it is.

Please forgive the plain language, but if you don’t help them, they’re up shit creek for keeps.

What can you be expected to do for them? You’re just a survivor, and you have problems of your own to deal with. Of course, that’s what the textbooks say about *you*. As you know, they call you egocentric, all caught up with yourself, no time or mind set to worry about others. Maybe they’re right.

Or maybe they’re wrong.

The people of the World of Head Injury are scattered to the winds. They are not united. The only reason they ever get together, if at all, is to hang out. They make no effort to help one another to recover. It’s the same situation that minorities were in a hundred years ago. It’s the same situation that alcoholics and drug addicts were in 50 years ago. Since they got it together, banded together, and now have active groups for mutual self-help, I see no reason why the people in the World of Head Injury can’t do the same thing. Unless it turns out that they are just too egocentric. But I reject that prejudiced, defeatist belief.

If you want to help a head injured brother or sister, start a GiveBack group. Start asking around to find your brothers and sisters with head injuries. It won’t be hard. About one in every 12 people has one. They are easy to find if you contact your local rehabilitation center or hospital. You can contact your local chapter of the Brain Injury Association.

Here is what you can do in a nutshell: learn to recover, and then teach others who haven’t learned it. If the people in the World of Head Injury don’t take care of one another, nobody is going to take care of them. Reach out, and maybe you’ll find that you’ve become one of the good people who help others. There is no better good cause than this one. If God smiled on you when He let you in on these recovery secrets, give Him another reason to smile on you.

## CONCLUSION

There you have a complete program. Now "how to recover" isn't a mystery anymore.

Don't forget that recovery isn't a natural phenomenon. It's natural for survivors to remain disabled for life. So you can expect something better out of your life only if you decide to force recovery to happen, by sticking to the recovery creed (summarized in Appendix C).

It's possible. You have the time. You have enough good brain left. You know what you need to do. How badly do you want it? How much do you fear not recovering? A good recovery requires both the desire for improvement and, even more, the fear that you won't get it. It requires making promises to yourself by setting up your own home program, and by structuring your life, and by teaching yourself to think as hard as you need to (instead of as hard as you're used to). You don't do that based on a whim or good intentions. It has to be your will to control your life and control your new brain. Some survivors are going to do it. Are you going to be one of them?

If you are reading this within the first year after your injury, it certainly must sound terribly negative and be very hard to believe. Am I really messed up enough to need all this therapy? And you can't put your heart and mind into a self-therapy program like this if you only halfway believe in it. But the good news is that you don't have to believe in it right away. You can start out by trying to prove to yourself that you can make your life work right using your old ways. Just be sure to give yourself a deadline. When that day comes, you'll know if you can't make it work *your* way that you have to make it work *this* way, and then you can commit yourself to it, mind, body, and spirit.

If you are devout, perhaps you trust God to rescue you from the life you have and return you to the life you had before. By all means, pray for that, as hard as you can. But if those prayers are not answered, pray for the strength to fix yourself. I believe that God is generous with that kind of strength.

If you are stubborn and independent-minded, and hate the way this book tells you what to do, by all means try it your own way. Surf the Net looking for other ways you can do it. Try to invent your own way. But keep this book handy, because if you find out that there isn't any other way, you may decide some day that you would prefer to use these methods.

If this seems like an awful lot of work, you truly understand self-therapy. Self-therapy is a lifetime of hard work. In fact, it's a *lifestyle*. But no one is setting any deadlines on you. You can do it one step at a time. In fact, it usually works best when you do it that way. So pick a goal or two and start to work. Don't commit to doing anything you aren't going to follow through on. If self-therapy is going to work, you need to prove to yourself that you are truly taking control of yourself, which makes your follow-through the proof that you are going to change your life. Bite off only what you are prepared to chew, as they say.

If you want to do it by yourself, have at it. If you want help, I encourage you to get as much as you can. Let us know at GiveBack ([www.givebackorlando.com](http://www.givebackorlando.com)) how you're doing. We welcome your questions, and invite you to compare notes with other survivors who are doing the same things you're doing. Together, we can get done what we need to do.

## **APPENDIX A: AN ANNOTATED BIBLIOGRAPHY OF GOOD BOOKS, CHAPTERS, AND ARTICLES ON HEAD INJURY REHABILITATION AND RECOVERY**

As they say, keep it simple, stupid! It would be stupid of us to recommend complicated books filled with twenty-dollar words before first recommending a set of basic readings in plain language:

1. Head injury: The facts, 2<sup>nd</sup> edition by Gronwall, Wrightson, & Waddell (1998). New York: Oxford University Press. While there are a number of “introductory” books about brain injury, this is the one written by top professionals. It is somewhat slanted toward the system of care in Australia, so do not be surprised that some of the services they describe do not match what is available here.
2. Over My Head by Claudia Osborne (1998). Kansas City: Andrews McMeel Publishing. This is the only survivor autobiography I recommend. Claudia Osborne is a physician who struggled with her head injury on her own for months before turning to one of America’s top treatment programs. This book is wonderfully honest, an “inside” view of what it is like to not realize that you have a head injury, and how therapy and life experiences slowly bring a person to awareness and readiness to adapt.

Learn as much about the brain as you can. The more you learn, the clearer recovery issues become. What I have done here is to create a series of books for you that begin with books you could pick up and start reading easily. They get gradually more complicated. There is no denying that much of the important information about the brain is only available in difficult books, but if you start with the easiest ones, and make heavy use of a medical dictionary along the way, you will find that you can make sense of harder and harder books as you get more knowledgeable.

1. How Brains Think by William Calvin (1996). Calvin is one of America’s top brain biologists, but he has a remarkable knack for explaining the complicated systems of the brain clear and simple terms.
2. Lovers, Liars, and Heroes by Stephen Quartz and Terrence Sejnowski (2002). Written in plain English, this is a very thorough story of current information processing concepts about the brain, including some thought-provoking ideas about brain evolution.
3. The Executive Brain by Elkhonon Goldberg (2001). Luria’s major student explains the workings of the part of the brain that is most vulnerable to traumatic brain injury. This book is delightfully easy to read and vivid.
4. Descartes Error by Antonio Damasio (1994). Is emotion the enemy of rational thought? That is what Descartes claimed. Damasio takes the opposite tack, and supports it with research results. This is a wonderful book full of interesting examples and references to literature and the arts.
5. Human Nature in Light of Psychopathology by Kurt Goldstein (1963). This book is a little harder to read, but it is the most readable to the books written by a remarkable man who was the first to explain how the mind and the brain affect one another. Many modern brain experts root their thinking in Goldstein’s ideas.
6. Emotional Intelligence (1995) and Social Intelligence (2002) by Daniel Goleman. These are both books written for the popular press, so they are pretty readable. Both books summarize a lot of recent scientific research on the brain’s special capabilities reasonably well. Not science, but the next best thing.
7. Two Sides of the Brain by Sidney Segalowitz (1988). The topic of “left brain versus right brain” has entered pop culture in the form of some terrible books. This one is accurate and written by an expert.
8. The Cerebral Symphony by William Calvin (1989). New York: Bantam Books. Beautifully written, takes its time getting to the point, but you leave with a better understanding of the brain as a total system.

9. Wet Mind by S. Kosslyn & A. Koenig (1992). This is written at a college difficulty level but it covers the emergence of issues in cognitive science with considerable wisdom.

10. On the Self-Regulation of Behavior by Charles Carver & Michael Scheier (2001). This is a complete book on the social psychology of information processing. The ideas are complex, sharp, and sage.

11. In Search of Memory by Daniel Schacter. I am not crazy about this book, and it spends too much time talking about non-brain-injury related memory issues, but Schacter is a memory expert and he does tell the story clearly, so this is a decent read.

This is where the difficulty level starts to get higher. These are all at least college-level books. I recommend them because they are worth the effort to decode.

1. Cognitive Neuroscience by Gazzaniga, Ivry, & Magnun (2002). This is a mid-level psychology textbook and so fairly tough to read, but it does provide a very detailed and sensible survey of information about the brain from laboratory research studies.

2. The Working Brain by A. R. Luria (1973). This book is as close to a modern “Bible” of how the brain works as there is. It focuses on explaining the brain’s networks, and goes into considerable detail. The main sections are remarkably easy to read given that Luria was a Russian neurologist and neuropsychologist. Passages that go into great detail about Russian psychology and about the history of neurological concepts are impossible to read, and can be skipped without losing the meaning of the chapters.

3. Plans and the Structure of Behavior by G. Miller, E. Galanter, and K. Pribram (1960). This book launched the “cognitive revolution” in psychology by explaining a way to understand how the brain processes information. This is a very difficult read, as it is written in technical language throughout.

4. The Mind and the Brain by Jeffrey Schwartz and Sharon Begley (1999). This out-of-the-mainstream book by a UCLA Neuropsychiatric Institute staff member explores the ways in which mental effort can be used to conquer varied brain disorders.

5. Principles of Neuropsychological Rehabilitation by George Prigatano (1999). You cannot be in Who’s Who without reading at least one book by Prigatano. His most general book cuts a wide swath in explaining how rehabilitation involves psychotherapy.

6. Awareness of Deficit After Brain Injury by George Prigatano and Daniel Schacter (1991). Reading this one will get you into Who’s Who a second time. This is must reading to understand why it is so hard to educate people about the traumatic deficits.

7. Human Memory by Allan Baddeley (1992). Baddeley is a top British memory researcher who popularized the concept of working memory that is now used by everyone.

8. The Organization of Behavior by Donald O. Hebb (1949). Strictly for brain history buffs--this is the book that started modern thinking about how the brain works as a set of networks.

9. Cognitive Rehabilitation by McKay Moore Sohlberg and Catherine Mateer (2001). These two authors wrote the original encyclopedia on how brain rehabilitation is done. The quality of their work is consistently excellent, and in this book they cover almost everything except how to harness motivation.

10. How to do cognitive rehabilitation therapy. Malia, K., & Brannagan, A. (2005). Surrey, England: Brain Tree Training. Kit Malia was kind enough to send me a copy of their book. It is an amazing

scrapbook of simple, useful bits of information and wise sayings about how to do brain rehabilitation. It is the perfect complement to Sohlberg and Mateer for the beginning student.

Here are the most difficult books for those who are willing to pound their brains into tapioca in the search for high-tech wisdom about the brain and about doing therapy.

1. Principles of Cognitive and Behavioral Neurology by M. Marsel Mesulam (2000). Mesulam is virtually impossible to read, but he also has by far the most advanced model of the brain presented in any textbook.
2. Languages of the Brain by Karl Pribram (1971). Compared to Pribram, Mesulam is like A. A. Milne. Pribram could well be the genius of our generation. If you can figure out this book, we have a matching set of Karl Pribram beer mugs to award.
3. Principles of Frontal Lobe Function, edited by Donald Stuss and Robert Knights (2002). There is no better collection of major theories about this part of the brain.
4. The Parietal Lobes by MacDonald Critchley (1953). 1953? Yes--no one has written a scholarly book since this old gem. Critchley only has part of the picture, but he understands that part thoroughly.
5. The Neuropsychology of Anxiety by Gray and McNaughton (2000). Curiously, this book is neither about neuropsychology nor is it particularly about anxiety. Instead, it explains how the emotional system and the cognitive control center communicate.
6. Affect Regulation and the Origin of the Self by Allan Schore (1994). This book has enough information in it to pickle your brain completely. It explains how brain development and early social experience hard-wire your personality.
7. Cortex and Mind (2005) and Memory in the Cerebral Cortex (1999) by Joaquin Fuster. Fuster is a top laboratory scientist with a genius mind for theory. He is easier to understand than Pribram. I wish he were as smart, but at least he's close.
8. Brain and Perception by Karl Pribram (1993). If you are not yet ready to commit hara-kiri from all of this tough reading, I promise you that this Pribram book will push you right over the edge.
9. From Neuropsychology to Mental Structure by Tim Shallice (1988). It may seem like Shallice is trying to make this hard to read on purpose, but I really think he can't write any better than this. The ideas are profound.
10. Ego Psychology and the Problem of Adaptation by Heinz Hartmann (1938). Hartmann took Freud's system and gave the ego the ability to cope. Brilliant!
11. The Collected Works of John Hughlings Jackson (1958). If it was a good idea, you can be sure that Jackson came up with it first, a hundred years before anyone else. We are still learning from him.

Many neuropsychologists, including this one, will tell you that helping people to recover is so difficult that you need the very best techniques from psychotherapy to do so. Most therapists have developed their own styles, blending the influence of many theorists. Here are the influences that shaped my approach:

1. Effective Psychotherapy by Hellmuth Kaiser (1965). If you want people to listen and make sense of their experiences, don't lie to them. Don't bulls\*\*t them. The truth can be refreshing and inspirational.
2. The Interpersonal Theory of Psychotherapy by Harry Stack Sullivan (1955). Sullivan preaches that hard truths must be presented a bit at a time, allowing the person to deal with them as they are tolerated.

3. Participant Observation by Leston Havens (1983). This is a brilliant Yale psychiatrist's explanation of Sullivan's theories of therapy.
4. Stress Response Styles by Mardi Horowitz.(1977). Every person needs to be approached in a way that is best suited for their particular make-up and personal issues.
5. Modern Psychopathology by Theodore Millon (1968). More specifics about individualizing to the person.
6. Self-Efficacy: The Exercise of Control by Albert Bandura (1997). How to feel like you can cope.
7. Motivational Interviewing by William Miller & Ron Rollnick (2002). How to convince a patient that he or she really wants to recover. Not very profound, but very helpful.
8. Cognitive Behavior Modification by Donald Meichenbaum (1977). Self-control techniques that are very applicable to TBI.
9. Stress, Appraisal, and Coping by Arnold Lazarus and Susan Folkman (1984). Critical study of adaptation.
10. Narrative Therapy by Jill Friedman and Gene Combs (1993). How you tell your story mirrors how you run your life. I find this way of thinking easy to understand and use.

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## **APPENDIX B: RECOMMENDED VIDEO GAMES FOR THERAPIES**

### Best:

- Tetris Elements
- Classic Atari games
  - Super Breakout (original Breakout even better)
  - Frogger
  - Asteroids
  - Missile Command
  - Space Invaders
- Need For Speed--Underground
- Gran Turismo

### Good:

- Zaxxon
- Super Mario Brothers games
- Classic Atari games
  - Ms. Pac-Man
  - Donkey Kong
- Final Fantasy VII
- NBA Street
- Grand Theft Auto
- Mortal Combat
- Street Fighter

### Okay:

- Doom/Halo/other first-person shooter games
- Tom Clancy games
- Star Wars Battlefront
- Legend of Zelda

## **APPENDIX C: THE RECOVERY CREED**

1. **“I have a head injury that damaged my brain and changed my life.”**
2. **“Hope and prayer can give me strength, but I’m the only one who can fix my life.”**
3. **“My injury hides itself from me, but I can teach myself to see what it’s doing to me.”**
4. **“Usually I can do everything I try to do, but sometimes I have head-injured moments.”**
5. **“I can’t feel or sense my head-injured moments; I learn about them by studying my actions.”**
6. **“If I pay attention to them, those moments can teach me how my new brain works.”**
7. **“My head-injured moments are like gold--the more I treasure them the faster I will recover.”**
8. **“To make sure that I remember and learn from them, I try to write down as many as I can.”**
9. **“No head-injured moment is too small to matter; they all teach me something about my new brain.”**
10. **“The more carefully I analyze my head injured moments, the better I know when to expect them.”**
11. **“There is a pattern to my head injured moments. They affect me in certain, specific ways.”**
12. **“For example, I tend to forget certain kinds of information that I need to remember.”**
13. **“By knowing how severe my injury is, I can understand how much disability to expect from it.”**
14. **“I want to teach myself how to live like a self-therapist so that I can have more recovery.”**
15. **“I learn how to do self-therapy by watching other recoverers, and by reading recovery stories.”**
16. **“I know that by making recovery techniques a part of my day, I commit myself to recover.”**
17. **“Every Analysis Form I write takes me one more step closer to my recovery goals.”**
18. **“When I have learned to do self-therapy, I will give back by helping others to learn it.”**

## **AN EXPLANATION OF THE STATEMENTS OF THE RECOVERY CREED**

1. **“I have a head injury that damaged my brain and changed my life.”**

Maybe your life seems okay, but if you look at it hard, is it really going the way you need it to go? Are you earning the kind of money you expect to earn? Are you earning the kind of respect you need to earn? Do you have the kind of love in your life that you need? Do you have the kind of friends? Do people trust you and count on you? Would it be okay with you if things stay the way they are for the rest of your life? If that hard look shows that your life is not okay, if it has gone off track, that would put you in the same boat with the other people in the World of Head Injury. Whether it seems that way to you right now or not, the head injury is probably the main problem. The brain you are using right now feels like the one you got from the factory, but it’s not. Head injuries change brains, simple as that. And then the survivors forget about their injuries, and the injury ends up running the person’s life. If you want things to get better, it starts

with admitting what happened to you, and accepting that it has changed you.

## **2. Hope and prayer can give me strength, but I'm the only one who can fix my life.**

Nobody else is going to fix your life for you. There is no cure for head injury. There is no way to go back to being your old self--your old self and your old life are gone. You have every right to pray for a miracle, but among the many miracles I've seen, there hasn't been a single case of somebody praying and then waking up the next morning and being okay. Every miracle I've seen involves a person being given the strength to fix himself or herself. Your family and friends can help you to work on yourself, but they can't fix you. It really is up to you.

### 3. To fix my life, I have to fix the head-injured moments from my head injury.

The problem is the head-injured moments. The problem is not the person who caused your accident. The problem is not the restrictions the doctors have put on you, or your family members who enforce those restrictions. The problem is that your brain doesn't work the way it used to work. When you try to do things the way you did them all your life, this new brain doesn't do them well enough, or consistently enough, or without having you do or say something that gives others a bad impression of you. The only thing you can change that will make your life work better is the way the head-injured moments affect your behavior. You need to learn a way to do things that works in spite of having the head-injured moments. There is a way to do that, but you have to learn what it is.

### 4. I can fix my head-injured moments only as I discover what they are.

You don't know what's wrong with you--them's fightin' words! How can I tell an intelligent adult that he/she doesn't understand his/her own flaws? You feel totally certain that you know exactly what's wrong with you. But you don't. Head injury does that to people--it leaves them unaware of what it has done to them. They can't feel their head-injured moments. They can't see their head-injured moments. Their feelings tell them that there *aren't* any head-injured moments. And if they believe their feelings, they never become able to fix the head-injured moments. You can't fix what you don't know is broken--that's just common sense. Are head injury survivors naturally ignorant of their head-injured moments? Ask anyone from the World of Head Injury. Ask successful survivors--they'll tell you that they started out believing that they had no head-injured moments, and found out that wasn't true. Ask family members. They'll tell you that their survivor doesn't know his/her symptoms, and argues if they mention them. Ask therapy professionals--they'll tell you that lack of awareness of deficit is one of the most serious and universal problems of head injury--it totally blocks recovery. Are you going to be a victim to the lack of awareness, or are you going to force yourself to discover what your injury has really done to you? If you choose to discover your injury, you can move forward toward a recovery.

### 5. I can't feel or sense my head-injured moments; I learn about them by studying my actions.

Remember, there is no such thing as feeling head injured. Unlike your body, your brain has no nerves in it to sense damage. And your injury has broken the system we use to notice changes in ourselves. You have to *study* yourself to find the evidence that tells you what's changed. Here's an example: Do you have a different personality now than you had before your injury? It doesn't seem different to you. But watch a videotape of yourself. The person on the tape will act in ways that are nothing like your old personality. Ask a family member or friend who is able to be truly honest with you. They will tell you that you act like a different person now. How can you figure out who the new you is? You have to reach for every bit of information you can get--and it's hard to get that information. Try to look at your behavior objectively. Make the best use of any feedback other people give you. If they tell you something about yourself that doesn't sound right to you, it's probably something you need to learn about yourself--don't throw it away just because it sounds like they're talking about somebody else--learn from it!

6. I will always need to learn more about my head-injured moments and my new self.

It's so hard to learn about your new self that you will never get it all learned. There will always be things to discover that you haven't learned yet. I've worked with many people who have had their injury for longer than ten years. Nobody has gotten their new self figured out yet. Every one of the people who have the very best recoveries will tell you that they are still actively working on trying to understand their new selves better, and finding out new things all the time. If you work hard, get lots of honest feedback from the people around you, and are very honest with yourself in admitting your flaws, you can probably learn all the main facts about your new self in two or three years. But there will always be some new surprises. That's how it works.

7. Every mistake I make is gold to me--I will let it teach me about a head-injured moment.

Mistakes are the things that teach you the most about your new self. When you make a mistake, it means that you expected yourself to be able to do something that you can't do anymore, or you failed to notice something you should have noticed. It probably means you didn't switch off automatic pilot and activate enough of your brain to think the task through. If you notice your mistake, admit your mistake, don't look for an excuse or someone to blame it on, study your mistake learn how you made it, figure out what you might have done differently to have prevented the mistake, then you have just learned a lesson about how to use your new brain effectively.

8. I will put every lesson mistakes teach me down on paper where I can't forget them.

Every Analysis Form I write will be one more step toward recovery.

Noticing your mistakes is only the first step. You have to *do* something about them. It's incredibly easy to see a mistake, go on, and forget the mistake ever happened. It's human nature to do that. But if you do that, nothing is learned. A golden opportunity has been thrown away. And you will repeat the mistake. A person whose memory has been damaged by a head injury can easily forget almost every mistake he/she makes in this way. If you don't write down your mistakes when you make them, you will probably forget most of them. A form called an Analysis Form is used not only to record mistakes, but to indicate how they happened and how to fix them. It is through the Analysis Form that you fix the head-injured moment. It is through the Analysis Form that you teach yourself the new habit that prevents the mistake from happening again. Each Analysis Form is a promise to yourself to take a step of recovery, and a guide for yourself about where to take that step. The more Analysis Forms you do, the more recovery you are making happen. If you aren't doing any, you really can't say that you're on the road to recovery. Do as many as you can, and treat each one as an opportunity to make a better future for yourself.

9. When I know how I made each mistake, I will plan a better way to do that thing.

The core of the Analysis Form is making a better plan for the next time you do that task. By analyzing what went wrong, and only by doing that, you will know exactly what to do next time..

10. I will keep trying a better plan until I find one that prevents the mistake

Once you write an Analysis Form, you need to make sure that your better plan worked. If it didn't work, you need to change it, until you find a better plan that will work. It is important to have a time and place to keep track of how your Analysis Forms are working, and to develop better plans if you're having a hard time coming up with one on your own. This is why it is recommended that you have a Therapy Team Meeting once a week. This is the time to review your Analysis Forms and see how well your better plans are working out. If you have had to write more than one Analysis Form for a particular task, that should alert you to discuss the better plan in your meeting. If your Therapy Team can't come up with a better plan that

works, that is the time to seek advice from outside experts. Don't quit until you come up with an answer--there is always an answer!

11. I will remind myself to use the better plan until it becomes my way of doing things.

It may prove difficult to remember to use your better plan. If that turns out to be the case, it means your better plan is incomplete. The plan needs to include some method of reminding yourself to use it. That might just be a matter of planning ahead when you think about what you are going to do the next day, reminding yourself to use the better plans you have made for yourself. It might be a matter of making a reminder note or using some special object as a reminder signal (the way some people wind yarn around a finger to remind themselves to do something). You may have to work on making a proper reminder system for awhile before you come up with one that works every time. Once you remember to use a better plan, each time you do it you will get closer to doing it as a habit, every time. It may take a few months or a few years, but if you always use the plan eventually it will become second nature to you.

12. I will commit my time and effort to work hard on my self-therapy every day.

Successful Self-Therapy takes work. Most successful graduates say it was the hardest work they ever did. It takes hundreds of hours to learn, practice and master the techniques. The techniques themselves take time--many hours every week, for the rest of your life. And if you are going to get all this work done, it requires a commitment. You need to set aside the time each day to work on it, or it simply won't get done.

13. I will ask for and accept only the help I need to make my self-therapy successful.

What kind of help do you need to do your Self-Therapy Program? Do you want some help to get started, to get organized? Most people benefit from getting that kind of help. If your family can help you to plan your program, that's good. If they plan it for you, that's bad. In fact, that just about guarantees that it won't work. If they help you by reminding you that it's time to do your scheduled work, or they suggest that you should write an Analysis Form, or they give you feedback on something you did wrong, that's good. If they do your forms for you, that's bad. In fact, that's not a program. If they always have to remind you, and convince you, to do your self therapy, then it's not your program, it's theirs. That won't work. You can't leave that up to them. If you do, you're not moving toward recovery--you're stuck where you are!

Are you asking God to help? People who do that tend to have better recoveries. What kind of help do you want from Him? Do you want Him to do your therapy for you? Or do you want Him to help you become a great Self-Therapist? If I had to do Self-Therapy, I'd want Him on my Therapy Team.

14. When I have learned to do self-therapy, I will give back by helping others to learn, too.

When you have become an expert Self-Therapist, you will be ready to give others the kind of help that made it easier for you to learn Self-Therapy. Don't just be thankful for the blessings you got--pass them on!