

**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, 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
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930	_____	__success __failure
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10pm	_____	__success __failure
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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: _____

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 _____.

Signature of Self-Therapist

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.