

BRAIN TRAIN Cognitive Retraining Software	ARTICLES for Survivors & Families	OTHER SOFTWARE Freeware/Shareware
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[COGNITIVE-BEHAVIORAL BRAIN INJURY REHABILITATION](#)

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This article has some good news and some bad news. The good news is that there is no limit to the extent to which individuals who have sustained head injuries can be rehabilitated. The bad news is that the extent depends on you. Rehabilitation is hard work, the hardest work you have ever done. And the rewards will be slow and difficult to see. But is life so great now? Wouldn't positive change be welcomed? If you want Billy (or Susan, or whoever) to be just the way he/she was before, you will be disappointed. If you're willing to meet a new person, full of surprises and new skills, you may be interested in what I have to say. My message is a psychological message and it means I want you to think, to work, and to be actively involved in the rehabilitation process.

Until recently, the major focus of head injury rehabilitation was on medical and physical problems. Individuals who sustained head injuries received medical treatment and occupational, physical and speech-language therapy. When maximum physical and medical recovery had occurred, the patient was discharged and the family advised to "learn to live with the remaining deficits." As more individuals survived head injuries, it became painfully clear that the major long-term problems faced by head injured individuals and their families were in the area of cognition and behavior. Physical problems, while important, were managed more readily than the decreased memory, impulsivity, poor judgment, and social inappropriateness which frequently accompanied head injury. In fact, many family members discovered that if the injured individual remained in a wheelchair, he or she was easier to supervise and control than when fully ambulatory. The wheelchair itself served as a reminder that the injury had occurred and that some behaviors were no longer possible.

Clearly, if it was worthwhile to save head injured individuals, programs which addressed cognitive and behavioral problems and thus improved the quality of life for survivors and their families were required. Since psychologists are trained in evaluating and changing behavior and cognition, their role in rehabilitation needed to be expanded to achieve maximum rehabilitation. Over the past several decades, that transition has occurred: in many programs psychologists serve as directors or have key roles in the rehabilitation process.

I practiced in a medical setting until January, 1984. I found that medical goals had priority: the patient and the patient's needs had to fit the needs of the medical establishment. Almost every family member we encountered was on the road to becoming a "rehabilitation addict": the only cure would come from the medical model and success would be evaluated in terms of range of motion, seizure control, bowel program management, degree of dependence in ADL's, etc. Families were frantic, driven by the belief that progress would grind to a halt after the magical 18 months I hold a number of beliefs which influence the type of client I can work with, the rehabilitation goals my clients establish, and the way we work toward those goals. Allow me to share some of these beliefs with you:

1. HEAD INJURIES MAKE THE INDIVIDUAL DIFFERENT BUT NOT NECESSARILY WORSE. The first task of a rehabilitation program is the identification of the injured individual's strengths and weaknesses. Within a medical model, this assessment usually focuses on CT

scans, neurological examinations, nursing and other therapy evaluations and, in some cases, brief neuropsychological screening. Such procedures, conducted in a medical setting, overlook critical data about how the individual functions in the home setting and how the individual's family deals with behavioral and cognitive problems. Furthermore, these assessments tend to focus on deficits to be remediated to the exclusion of assets which could be developed and strengthened.

2. MEDICAL STATUS SHOULD BE CONTINUALLY MONITORED BUT IS NOT THE ONLY GOAL OF REHABILITATION. It is critical that neurological and physical examinations be conducted at regular intervals to detect new problems. Far too often head injured individuals develop undetected seizure disorders, visual disturbances, balance problems, or a host of other conditions which limit rehabilitation potential unnecessarily. The problem is that, as long as a physician manages the patient's care, hope for a "cure" remains and the injured individual and family can believe that time will resolve all problems. Most head injured individuals are not medically ill and therefore should limit their involvement with physicians and the medical model.

3. SUCCESSFUL REHABILITATION DOES NOT DIVIDE THE PATIENT INTO NEAT SECTIONS WHICH DEAL INTENSIVELY WITH A SINGLE BODY PART OR FUNCTION AT A TIME. Since head injured individuals tend to have difficulty generalizing from one situation to another, rehabilitation efforts must consider the complete person at all times. Little progress will be made if speech therapy is conducted 2-5 times per week and never practiced outside the therapy setting. Similarly, if speech is only practiced in a seated position, the client may be unable to utilize new skills when standing or walking. The more new and emerging skills are practiced, the better they become. Repeated practice in a variety of settings facilitates making the new behaviors habitual.

4. BEHAVIOR CONTROL MUST PRECEDE COGNITIVE AND PHYSICAL REHABILITATION. If the injured individual's behavior is out of control, it is unreasonable to expect new learning to occur. Therefore, it is critical to develop effective behavior control by changing the environment, the caregiver, or the injured individual before directly addressing cognitive problems. Until the individual can attend and concentrate, learning will not occur. Inappropriate behavior may preclude admission to a rehabilitation program and severely increases the stress on family and the head injured individual. Many behavior problems of head injured individuals are unnecessary and have little to do with the injury.

5. THERE IS NO SUCH THING AS A "PLATEAU" IN REHABILITATION. Many rehabilitation professionals expect head injured individuals to "plateau", i.e. cease making progress, at some point in their treatment program. This belief usually terminates the formal rehabilitation program and ignores what we know about human development: growth ceases only with death. It is much more useful to view periods of apparent lack of progress as times of "consolidation", where the individual is gaining sufficient practice with the new skills to make them become habits. When learning skills are impaired, it is unreasonable to expect the individual to learn new information and behaviors every day. Allow time to glory in success before presenting new challenges.

6. HEAD INJURED INDIVIDUALS REQUIRE TIGHT STRUCTURE IN THEIR DAILY LIVES TO SURVIVE, GROW AND IMPROVE. Most of us lead highly structured lives: we awake at the same time, follow the same pattern in morning hygiene, eat meals at the same time, and work the same hours each day. Grocery shopping, laundry, etc. are done on a schedule. This kind of structure allows us to put most of our lives on automatic pilot and reserve creativity, memory,

and novelty for more important areas. Far too often, head injured individuals have no structure in their daily lives and therefore accomplish very little each day: they nap throughout the day and then can't sleep at night; they eat meals at varying times and therefore can't recall if they have eaten at all; they leave things wherever they please and then can't find them. Tight structure reduces the need to continually make decisions, vastly increases the capabilities of the injured individual, and significantly reduces the demands placed upon the caregiver.

7. THE MOST EFFECTIVE REHABILITATION FOLLOWING HEAD INJURY OCCURS IN FAMILIAR SETTINGS. Since head injured individuals frequently have difficulty learning new information and generalizing new skills from one environment to another, the most effective rehabilitation programs occur in the home setting where old learning is maximized. When injured individuals are transported to another city or state, much of what they learn cannot be applied when they return home: the familiar cues which facilitated recall in the treatment setting disappear and the new behavior cannot be elicited. Therefore, whenever possible, rehabilitation should occur in the home and community rather than a hospital setting.

8. UNCONDITIONAL POSITIVE REGARD IS UNFAIR TO THE HEAD INJURED INDIVIDUAL. Head injured individuals have enough problems without increasing their burden by accepting any and all behavior. If family members tolerate behavior which drives others away, the injured individual becomes increasingly isolated from human contact and the burden on the caregiver becomes immense. The real world never offers unconditional positive regard and an individual who expects it will be sorely disappointed. One of the most constructive things you can do for head injured individuals is to provide accurate and realistic feedback on their behavior and its consequences.

9. BRAIN TISSUE MAY NOT RE-GROW, BUT WE HAVE ONLY BEGUN TO EXPLORE THE ABILITY OF THE BRAIN AND BODY TO FIND CREATIVE WAYS TO ACCOMPLISH ESSENTIAL TASKS. Clinical practice and research are just beginning to explore the plasticity of the human brain and the results are overturning long cherished beliefs about human potential. In my practice, for example, I have used hypnotherapeutic relaxation strategies to decrease severe ataxia and a variety of cognitive strategies to increase function in paretic extremities. In a more traditional vein, I have found that computers can be extremely powerful tools in rehabilitation. Unfortunately, the computer is a highly sophisticated tool which can do more damage than good. It is critical that programs be selected to meet the needs of the particular individual and that the material is presented at the appropriate level. I am deeply saddened when I discover a head injured person who hates computers because they were presented at an inappropriate time or used inappropriate material.

ONE HEAD INJURY IS ENOUGH! Individuals who sustain a head injury are 3 to 8 times more likely to sustain additional head injuries. Some of these added insults occur because of the cognitive and behavioral deficits following the original injury: the impulsive person who has poor judgment may repeatedly place himself in dangerous situations and then be unable to cope. Adequate supervision reduces the risk but does not eliminate the possibility of additional injury. What can be prevented, however, is the additional risk presented by:

Exposure to toxic materials. Anyone who has sustained a head injury should avoid environments which have high concentrations of fumes or toxic substances. This includes paint and solvent fumes, chemicals, non-prescription drugs and alcohol.

Exposure to megavitamin therapy. Many vitamins and minerals are toxic in dosages above MDR

and may interact in unknown ways with prescription medications or be metabolized differently by a damaged brain. A balanced diet may be one of the few pleasures left to a head injured individual and should meet nutritional needs without supplementation.

CONCLUSION

I hope this information has been useful to you and that you will begin to think about rehabilitation in terms of cognition and behavior rather than medical and physical problems. People who have sustained head injuries have a great deal to offer to family, friends, and society if they are given a chance.

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