NEW DIRECTIONS

A NEWSLETTER FOR INDIVIDUALS AND FAMILIES WHO HAVE EXPERIENCED BRAIN INJURY

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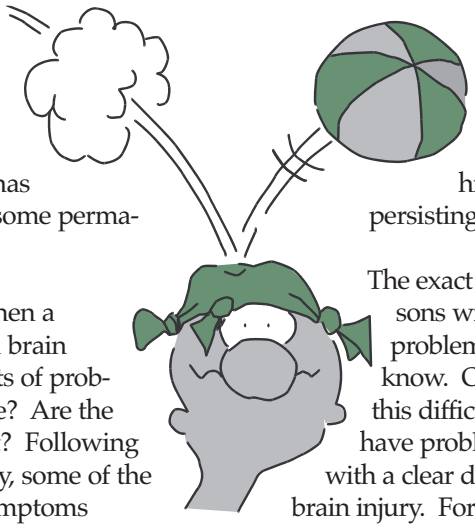
A Bump on the Head: Concussion or Brain Injury?

One can scarcely turn on the television or go to the movies without watching numerous people being "knocked out" in fights, car crashes, falls, or on the athletic field. What is amazing is that such injuries never seem to slow our heroes down! However, if you've ever hit your head hard enough to be "dazed" or 'knocked out' your experience is probably not like what you've seen in the media. It has been known for many years that a blow to the head, serious enough to cause changes in consciousness, results in damage to the brain. Sometimes the damage is seen in stretching and breaking of the connections between brain cells. In other instances, the brain is bruised (contusion) or bleeds (hemorrhage). These changes may take place in the brain with little or no change in consciousness.

Despite the large number of people who experience these kinds of injuries (about 360,000 new cases every year), not much is really understood about the consequences of these injuries. Part of the problem is that we often don't call these injuries a brain injury. We call them "concussions," or we say the person was "knocked out" or had their "bell rung." Why is this? Part of the reason is probably that people might be uncomfortable about telling others that they have had a brain injury. It's much easier to tell someone that you've been knocked out or had a concussion than to say that you've had a brain injury. Saying that one has had a brain injury sounds as though a person has been changed in some permanent way.



What happens when a person has a mild brain injury? What sorts of problems do they have? Are the effects permanent? Following a mild brain injury, some of the most common symptoms reported are headache, dizziness, memory and concentration difficulties, depression, and anxiety. The symptoms can be quite severe in the days and weeks immediately following the brain injury. However, they usually improve over the course of a few days or weeks.

Most people report that they recover fully from a mild brain injury. Others report that while they have been able to get back to doing their normal daily activities (including returning to work), they notice small differences in their concentration, memory, and problem solving abilities. Still others report additional problems with persisting headaches and/or dizziness. Perhaps as high as 10% of people with mild brain injury (36,000 new cases per year) are not able to get back to their normal day-to-day functioning. Persons who have had more than one mild TBI or a mild TBI with medical complications are at higher risk for persisting problems.

The exact number of persons with continuing problems is difficult to know. One reason for this difficulty is that we have problems coming up with a clear definition of mild brain injury. For example, if a person is knocked out or is confused only for a short time, but has a bruised and/or bleeding brain, some people might call this a mild brain injury and others might call it a moderate injury. Another problem is that some people with "mild" brain injuries may not even go to the hospital and are not counted at all. So, when we try to count the number of persons with persisting difficulties, the answer depends on how one defines the injury and how many people are actually at the hospital to be counted.

What is clear, though, is that not everyone who has a "mild" brain injury has the same outcome. Some people seem to be free of problems within several days. Others appear to be permanently disabled by an injury that seems to be of similar severity. How can this be

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explained? The answer is likely not to be a simple one.

• First, many of the differences in outcome may be explained by differences in the injuries. Was the person injured in a car crash (high speed) or an assault (low speed)? Were there any signs of bleeding or bruising in the brain? How severe were the initial symptoms?

• Second, what kind of brain got injured? Are there genetic factors that result in some people having more brain cells in reserve? Are there certain types of jobs that are more susceptible to the effects of brain injury? What role does age play in recovery?

• Third, what effects do stress or psychological factors have on recovery? If a person has a history of stress, depression, or anxiety, does that affect outcome?

• Fourth, what are the effects of outside factors? Such factors can include the person's feelings about who caused the injury (blaming others or feeling like it was their fault), level of financial responsibility for the injury, lawsuits or other court involvement, or financial factors that make returning to work less attractive.

The role of each of these factors in determining outcome has been argued in the scientific literature for over 100 years.

The Rehabilitation Research and Training Center (RRTC) on Rehabilitation Interventions Following Traumatic Brain Injury (TBI) has started on a two-year study of risk factors for poor outcome following mild TBI. Although no study can measure every possible risk factor, the study is one of the most comprehensive projects done so far. The study is being done at a large county hospital in Houston that serves a very diverse population. A large research team of neuropsychologists, neurosurgeons, statisticians, and research associates is involved in the study. This team is following hundreds of cases of new mild TBI to better understand what determines the quality of outcome in each case. The results of this study are being used to develop a rehabilitation treatment that may help reduce the chance of a person having a poor outcome from such injuries. After the risk factor study has finished, this rehabilitation treatment will be tested with a new group of people who have had mild traumatic brain injury.

The team of researchers at the RRTC is excited by the possibilities presented by these studies to help provide new answers to old questions. Please visit our website at http://www.braininjuryresearch.org for more information concerning the RRTC and the Brain Injury Research Center at The Institute for Rehabili-tation and Research (TIRR). ND

TIRR Brain Injury Research Center

Come Visit our Website at www.braininjuryresearch.org

Links to Other Sites

National Institute for Disability Rehabilitation and Research (NIDRR)
www.ed.gov/offices.OSERS/NIDRR

Brain Injury Association
www.biausa.org

TBI Model Systems
www.tbims.org

National Center on Dissemination of Disability Research (NCDDR)
www.ncddr.org

Department of Physical Medicine and Rehabilitation at Baylor College of Medicine
www.bcm.tmc.edu/pm&r

TIRR (The Institute for Rehabilitation and Research)
www.tirr.org

RESOURCES FOR THE CONSUMER

Coping with Mild Traumatic Brain Injury

by Diane Roberts Stoler, EdD and Barbara Albers Hill
New York: Avery Publishing Group, 1998.

Diane Roberts Stoler, Ed.D., is a practicing health and sports psychologist in private practice who has sustained a mild traumatic brain injury (TBI). This book is an outgrowth of her experience learning to adapt to her injury. There are few books concerning the effects of mild TBI written by and for persons with mild TBI. In this book, Dr. Stoler discusses many important issues about mild TBI including: definition; physical, mental, and emotional aspects; and recovery. The book does a good job of defining confusing medical terms and identifying the many different symptoms of mild TBI. The book also offers many helpful suggestions for persons who have experienced mild TBI. While no book is a substitute for proper diagnosis and treatment from well-trained and competent professionals, this book will be useful to many persons who have struggled with the effects of mild TBI. ND

RESOURCES FOR THE PROFESSIONAL

Neuropsychological Management of Mild Traumatic Brain Injury

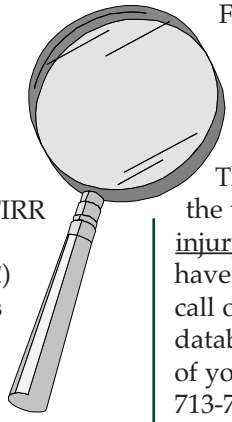
S.A. Raskin & C.A. Mateer
New York: Oxford University Press, 2000.

While the importance of effective treatment for individuals with mild traumatic brain injury (TBI) has been noted, little has been written about this topic. Drs. Raskin and Mateer provide one of the first comprehensive texts designed to provide a practical guide to the practice of rehabilitation for persons with mild to moderate TBI. The book is intended primarily for rehabilitation professionals, and assumes that the reader that has some understanding of the effects of and treatments for various types of brain injury. The authors balance theoretical background with practical clinical suggestions and case examples throughout the book, which lends itself to a greater understanding of the effects of mild TBI as well as to the practical applications of treatment techniques to such problems. While acknowledging the continuing controversies surrounding the causes of persisting symptoms following mild TBI, the authors describe the treatment as a "what works" approach and focus on dealing with the complex perceptions and symptoms that lead to ongoing disability. Treatment techniques are drawn from the literature and include the adaptation of behavioral, cognitive-behavioral, and traditional psychotherapeutic approaches to the problems faced by individuals with TBI.

The book aims to present guidelines for applying various rehabilitation techniques to cognitive and emotional problems following TBI. The initial chapters of the book provide an overview of the medical aspects of mild TBI and assessment issues faced by professionals. The next few chapters focus on domains of cognitive functioning, including attention, memory, and executive functions. The following chapters focus on domains of emotional functioning, including depression, anxiety, and irritability. The authors recognize the complexity of interactions between physical, cognitive, and emotional problems following mild TBI and emphasize the need to address these interactions in treatment. The final chapters of the book address vocational issues, and treatment of special populations (e.g., children, older aged individuals). ND

The National Database of Educational Resources on Traumatic Brain Injury

Looking for videotapes or written information on brain injury but finding it hard to know where to go? The National Database of Educational Resources on Traumatic Brain Injury is available to help you. The database is a joint collaboration between the RRTC on Rehabilitation Interventions following Traumatic Brain Injury at TIRR and the TBI Technical Assistance Center (TBITAC) in Silver Spring, MD. This database contains information on over 400 videos, booklets, pamphlets, and manuals developed around the country and addressing a wide variety of subjects. A few of the subjects are: Diagnosis and Medical Management, Cognitive and Memory Functioning, Education/School, Return to Work, and Computers and Adaptive Equipment.



The database can be found on the world wide web at www.braininjuryresearch.org. If you do not have access to the internet, you may call or write and request a FREE database search on two subject areas of your choice. The phone number is 713-797-5947 and the address is TIRR Library, 1333 Moursund, Houston, TX 77030-3405. You will receive a printout with a title, address, phone number, brief description, cost and year produced for each resource that matches your request.

If you are interested in receiving a printout of all of the resources in the database, you may purchase a new 2001 version of the "Compendium of Educational Resources on TBI." The Compendium, containing information on over 400 resources, is available for $60.00 including shipping and handling. Make your check payable to TIRR. ND

Rehabilitation Research and Training Center on
Rehabilitation Interventions in Traumatic Brain Injury
TIRR (The Institute for Rehabilitation and Research)
Division of Education, B-107
1333 Moursund
Houston, TX 77030-3405
(713) 797-5971, FAX (713) 797-5982
e-mail terrih@bcm.tmc.edu

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TIRR

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