

The right frame of mind

With one man's miraculous recovery from brain trauma in the news, an expert unclouds the mysteries of the mind

► The specialist: Dr. Wayne Gordon of the Mount Sinai School of Medicine

As a neuropsychologist, Dr. Wayne Gordon has spent the past 40 years working in rehabilitation medicine, a job that has introduced him to thousands of patients with traumatic brain injuries.

► The big story

Traumatic brain injuries happen all the time, and recovery from them is always a mystery. Four months after being pronounced dead, Zach Dunlap, a 21-year-old Oklahoma native who was critically injured in an all-terrain vehicle accident, wiggled his hand and foot. Dunlap still suffers memory loss, but he was healthy enough to be interviewed on the "Today" show on Monday. How did he recover? "Some people just recover on their own without any treatment, but every brain is different," says Gordon.

► Who's at risk

Traumatic brain injury, or TBI, is a blow to the head that results in a period of confusion or a loss of consciousness. "Basically, this blow to the head could range from being very mild, from a concussion, which is a brain injury, to quite severe, when the person is unconscious for a length of time," explains Gordon.

More than 50,000 Americans die every year as the result of TBI, most of these injuries sustained in motor-vehicle accidents, falls, sports injuries, assaults and more.

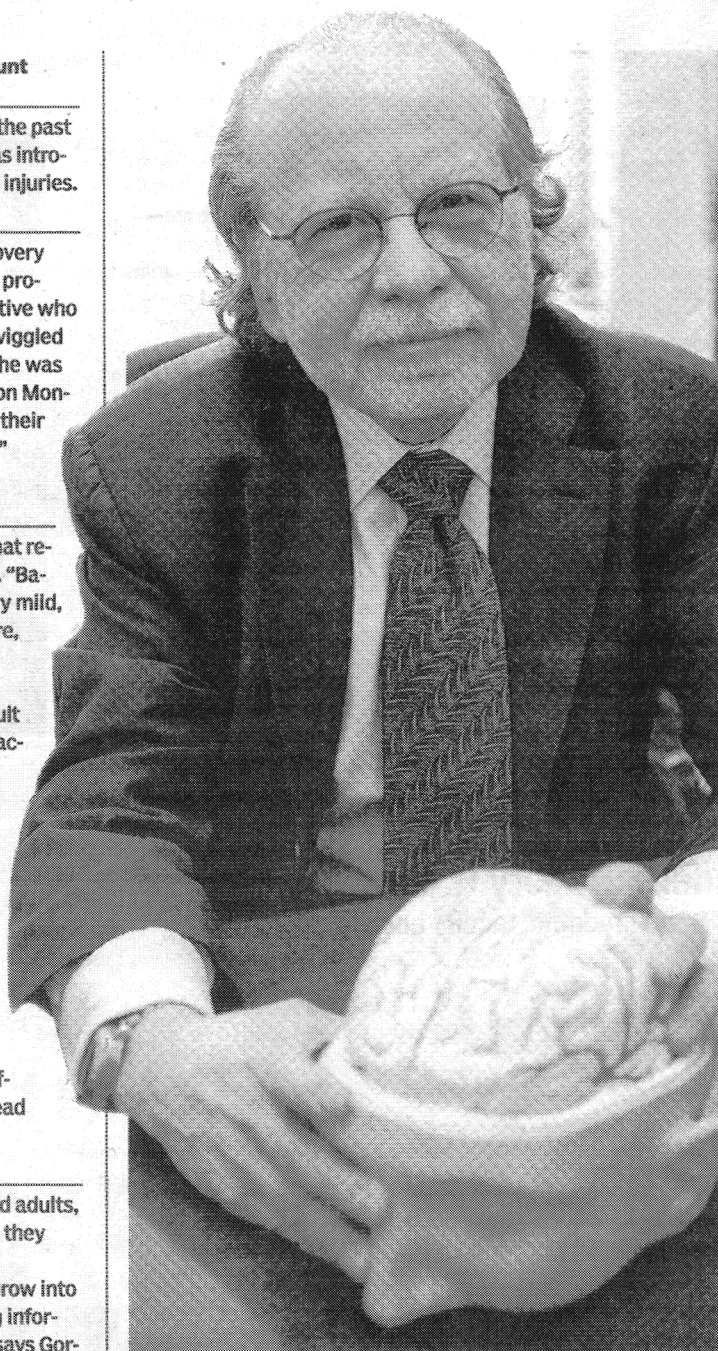
There are three age ranges most at risk: babies, adolescents and the elderly. "Very young babies often fall, or fall off changing tables, or trip while they're learning to walk. With adolescents, the risk-taking behavior is high. And the elderly are prone to falling," Gordon says.

Not every fall or accident leads to TBI. Most people who go to the emergency room after such incidents are told they'll be fine and sent home. "In most instances, that's true," says Gordon. "But about 15% of those who are injured do have persistent symptoms and remain unidentified. They're sent home, and they often don't connect their symptoms to the blows to the head they've sustained."

► Signs and symptoms

The symptoms of TBI are the same in adolescents and adults, but they can manifest themselves differently, and often they emerge over time.

Children can be hard to diagnose because they can grow into their injuries. "They may not have a problem processing information until the information becomes more complex," says Gordon. "So a child injured when young could have what appears



Mount Sinai's Dr. Wayne Gordon says patients often don't realize the extent of a traumatic brain injury.

MAYITA MENDEZ

► WHAT YOU CAN DO

The best treatment is prevention

If you're in a situation where you could hit your head — biking, skiing, snowboarding or rollerblading — wear a helmet.

Exercise

Evidence suggests that aerobic exercise helps both mood and cognitive function — which might help you recover if you do suffer a blow to the head.

Join a support group

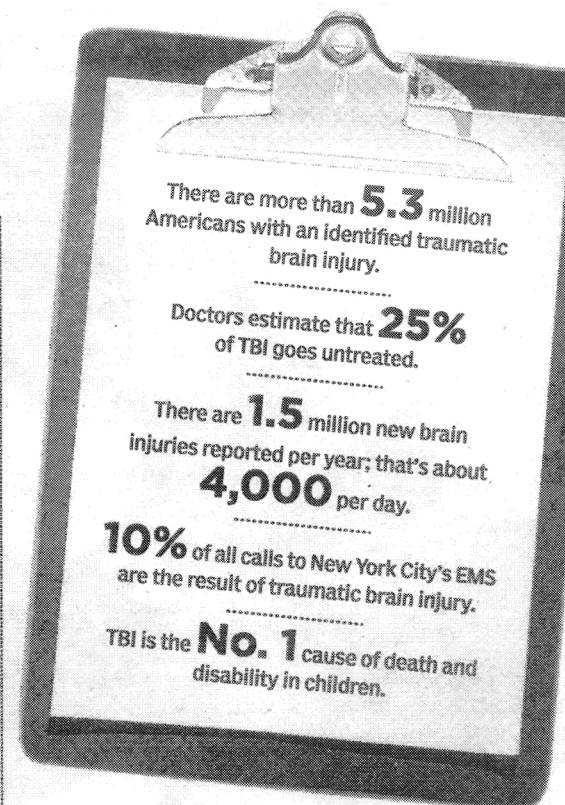
"Because the brain is the essence of who we are, people have trouble acknowledging that they're functioning in a different way," says Gordon, who recommends support groups run through the NYS Brain Injury Association.

to be a sudden-onset learning disability, which wouldn't necessarily be linked to the fall or the bike accident they had when they were many years younger. It becomes a conundrum when the child who was doing very well is suddenly not doing well." Symptoms can also involve behavioral problems, mood disorders and temper tantrums.

For adults and adolescents, TBI can cause an inability to multitask or shift from one thing to another, difficulty remembering new information, and disorganization. Many people will not immediately recognize these problems as symptoms. "At the time of the accident, all you know is that you're confused or you have a headache," says Gordon.

► Traditional treatment

If you have persistent symptoms, you need to learn compen-



satory strategies to help you cope with daily life. "For example, people with memory problems need to learn how to take notes that are meaningful to them," says Gordon. "You may have to highlight or index your notes to make them useful to you."

For kids, strategies can involve giving their parents a weekly homework assignment so they can monitor their work, and even little things like having one textbook at school and one at home, so kids don't have to remember them every day. The changes may sound simple, but they're not.

"Learning these behavioral strategies is time-consuming because you're trying to change somebody's habit structure," says Gordon.

► Research breakthroughs

Much of the cutting-edge research on TBI focuses on how best to help patients adopt compensatory strategies. Gordon directs his patients toward group treatment programs that require participation over extended periods. "The research is new, but anecdotally, people are reporting that the programs have been extremely helpful," he says.

Mount Sinai's programs are time-intensive (one meets five days a week for five-hour sessions) and use a group-based model where patients talk about their challenges and what strategies work for them. A structured curriculum teaches things like problem-solving skills, how to manage and regulate emotions, attention training and various compensatory strategies.

Mount Sinai's programs are innovative, taking the best strategies from other programs and bundling them into one program.

► Questions for your doctor

The vital first step is to tell your doctor about the accident. "Describe the event," says Gordon, "then ask, 'Could I potentially have sustained a brain injury?'"

Next, the doctor might send you for a neurological evaluation, which looks for signs of TBI by examining your reflexes, motor strength, taste and smell. The final step of diagnosis is a neuropsychological evaluation, which is a six- to 10-hour battery of tests of your memory, attention and processing speed.

If you are diagnosed with TBI, the next question is: "What can I get treated?" "It's hard to get good care," warns Gordon. "What I would want to know is how much experience the doctor has with TBI. If you want referrals, you can call the Brain Injury Association of New York State, which has lists of approved doctors and group treatment programs."