

# THE WAITING ROOM

THIS WAY IN

## The Tragic Death of Natasha Richardson

**T**he death of actress Natasha Richardson in March from a skiing accident has drawn the nation's attention to traumatic brain injuries (TBI), especially from sports. What can be done to prevent and treat TBI?

Richardson was known for her star turn in 1988's *Patty Hearst* and Tony award-winning performance for *Cabaret* in 1998. The daughter of actress Vanessa Redgrave and director/producer Tony Richardson, Richardson was married to actor Liam Neeson.

While vacationing in Quebec, Richardson fell and hit her head on a ski slope (she was not wearing a helmet). She declined treatment initially. Shortly after, Richardson complained of a severe headache and was admitted to the hospital. She was then transferred to a New York City hospital, where she lapsed into a coma and died two days after the fall. The official cause of her death was epidural hematoma, which is an accumulation of blood between the skull and the thick membrane covering the brain (the "dura mater").

### TALK AND DIE SYNDROME

Symptoms don't always emerge right away after an injury like Richardson's—sometimes called "Talk and Die Syndrome"—making it difficult to determine the right response. "Talk and Die Syndrome" refers to a lucid interval before a person begins to lose consciousness after a brain injury," says Douglas I. Katz, M.D., associate professor of neurology at Boston University School of Medicine and medical director of the brain injury programs at Braintree Rehabilitation Hospital in Braintree, MA. "The person may appear fine initially because the mass of blood in the head is expanding and there isn't too much pressure on the brain yet," he says.

If the bleeding continues, the amount of blood may become large enough to put pressure on the brain, according to Rolland S. Parker, Ph.D., a neuropsychologist in private practice in New York, NY, and adjunct professor of clinical neurology at New York University School of Medicine. "Eventually the blood clot may be large enough to interfere with oxygen entering the brain, pressing upon areas



**WHY?** Natasha Richardson and husband Liam Neeson in London last year

**Prompt evaluation after a brain injury with a CT scan can help detect bleeding.**

that create heartbeats and breathing," Dr. Parker explains.

Fortunately, this isn't common, says Gregory J. O'Shanick, M.D., president and medical director of the Center for Neurorehabilitation Services in Richmond, VA, and national medical director of the Brain Injury Association of America. But prompt evaluation after a brain injury with a CT head scan can help detect dangerous bleeding. If a hematoma does exist, doctors will "drill into the skull to drain the clot before it can crowd the brain and cause further damage," Dr. O'Shanick says.

On occasion, the first CT scan is negative and the bleed does not develop until later—so patients at risk are observed longer in the emergency room.

### TYPES OF BRAIN INJURIES

"Primary" damage is sustained at the instant the trauma occurred. Secondary problems—includ-

NEUROBICS

# Lingraphica Puzzles

**S**troke victims often have difficulty recalling words, a condition known as aphasia. People with aphasia typically understand speech but have trouble speaking. Lingraphica ([aphasia.com](http://aphasia.com)) is a computer system that helps people with aphasia communicate through pictures. A user clicks on pictures that stand for words, and the computer speaks/spells the words. Here are 9 well-known figures of speech written with Lingraphica icons. The first is “An apple a day keeps the doctor away.” What do the others say?—*Scott Kim*

ing an inadequate supply of blood to the brain, brain swelling, and inflammatory reactions—can add to the damage, Dr. Katz says. “Secondary” means the damage evolves over time from the effects of the primary injuries.

When a force is applied to the head and then transmitted through the skull to the brain, blood vessels may be torn or damaged, according to Dr. O’Shanick. As a result, says Dr. O’Shanick, the vessels may leak blood into spaces in the skull and brain.

The most common form of TBI is diffuse axonal injury, which interrupts communication between neurons. In concussion, a mild form of diffuse axonal injury, “the injured areas are usually so small, although spread out in many areas, that they do not show up on the usual brain scans such as CT, X-ray, and MRI,” says Dr. Parker.

TBI may also involve bruising on the surface of the brain or bleeding between the brain and skull. The latter involves collections of blood (called clots or hematomas) under the membrane that lines the brain (subdural) or over the membrane (epidural). Epidural hematomas only occur in 1 to 2 percent of patients with brain injury—but up to 15 percent of fatal injuries.

“Generally, though, blood clots are not common after a brain injury, especially those in the mild to moderate range of severity,” says Dr. O’Shanick. When used for sports, protective headgear may soften the force of a blow to the head, making a clot less likely, he said.

## TREATMENT AND PROTECTION

There is no acceptable drug treatment for concussions, which usually get better on their own, according to Dr. Parker. However, if a person who suffered a blow to the head remains confused and mentally “clouded,” they may have a hemorrhage or injury to the surface of the brain. For these injuries, neurosurgery might be required. Regardless of the type of brain injury, anyone suffering from any fall or blow should seek immediate medical attention. (See “Signs of Injury” box.)

“Prevention is the only ‘cure’ for traumatic brain injury at this point,” Dr. Katz stresses. He recommends using seatbelts and airbags; avoiding alcohol, drugs, and cell phone use while driving or playing sports; and wearing helmets, which are proven to prevent or limit the amount of brain injury in sports injuries and accidents. —*Elizabeth Stump*

## Signs of Injury

Get to the hospital **immediately** if you:

- ▶ are stunned, unconscious, or suffer amnesia or confusion
- ▶ have headaches, nausea, vomiting, lethargy, dizziness, weakness, numbness, visual changes, or outwards sign of head trauma on the face or scalp
- ▶ suffer from an accident that also injures the neck, spine, arms, or shoulders—make sure your doctor examines the head for possible brain damage

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