

NEUROBICS

Lingraphica Puzzles

Stroke victims often have difficulty recalling words, a condition known as aphasia. People with aphasia typically understand speech but have trouble speaking. Lingraphica (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

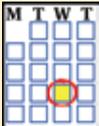
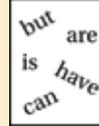
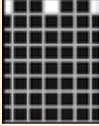
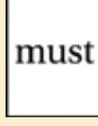
There is no acceptable drug treatment for concussions, which usually get better on their own, according to Dr. Parker. However, if a person who suffered a blow to the head remains confused and mentally “clouded,” they may have a hemorrhage or injury to the surface of the brain. For these injuries, neurosurgery 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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ANSWERS ON P. 10