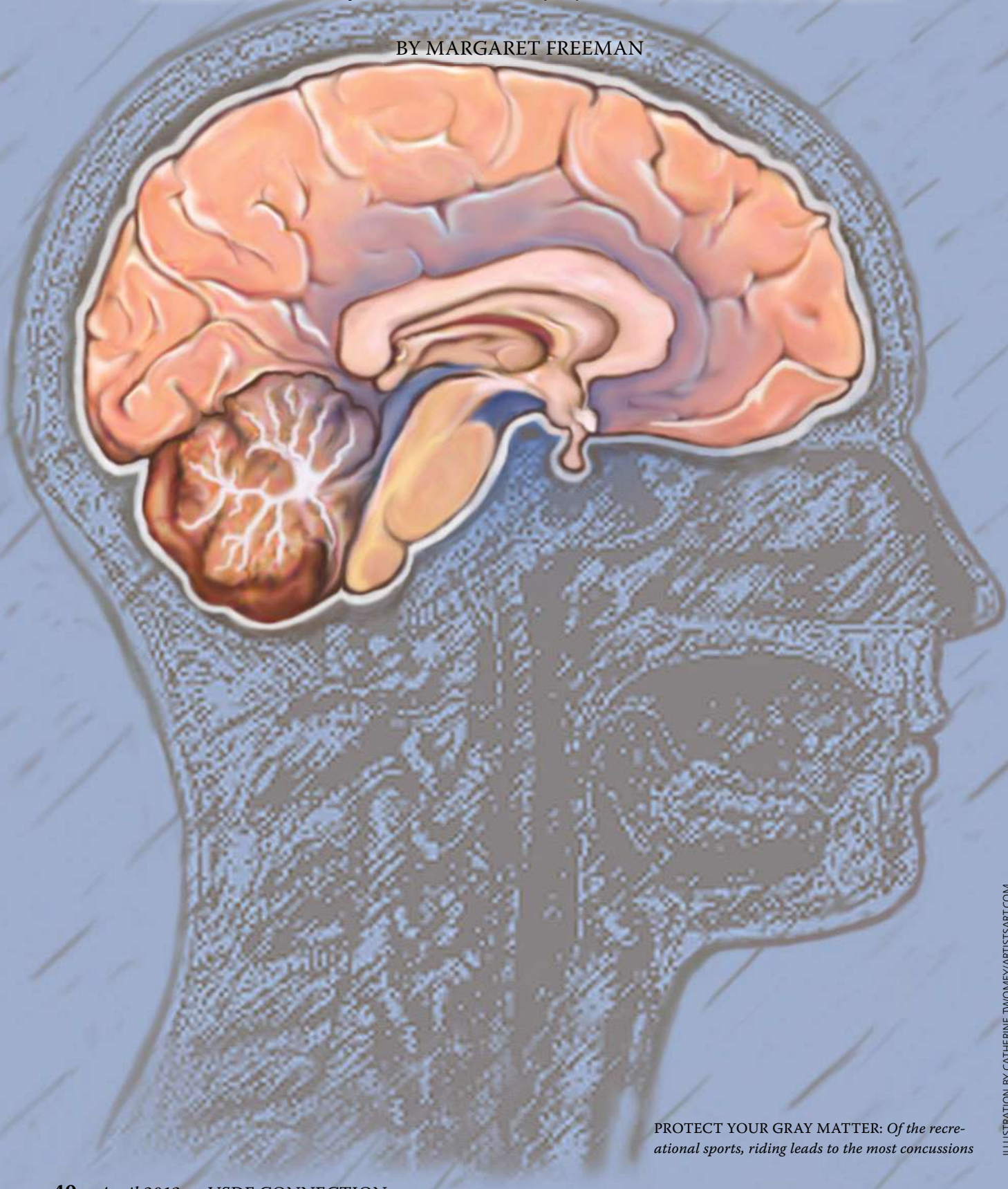


Head Games

Concussion: It's not just about football players. What riders need to know.

BY MARGARET FREEMAN



PROTECT YOUR GRAY MATTER: *Of the recreational sports, riding leads to the most concussions*

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The debate about whether riders doing flatwork should wear protective headgear is pretty much over, at least within the US dressage community. But the discussion about preventing traumatic brain injury (TBI) through helmet use has led to another area of concern for riders and their heads: the long-term effects of concussion.

There's no doubt that, if you hit your head while wearing a safety helmet, your chance of serious injury is greatly reduced. But, even with a helmet, there is still the possibility of concussion—not only if you hit your head, but also if you take a hard landing anywhere on your body, as a result of the brain's rebounding within the hard shell of the skull.

For horse lovers, the risks of head injury aren't confined to saddle time. Just working around a potentially volatile half-ton animal in proximity to solid surfaces can be a problem. Your horse could swing his head suddenly, for instance, and knock you into a stall wall.

The concussion discussion is taking place throughout the sports world: from professional football to youth sports to recreational activities. The long-term effect of multiple concussions on pro football players is making headlines right now, as it has been found to lead to chronic traumatic encephalopathy (CTE), which can set the stage for early dementia, amyotrophic lateral sclerosis (ALS), and other neurological and emotional problems.

CTE is a progressive degenerative disease of the brain caused by repetitive brain trauma, including concussions that show symptoms (see sidebar, page 42) but also concussions with no symptoms at all. The degeneration of brain tissue is marked by an abnormal protein called tau, which is now linked to Alzheimer's disease and other brain disorders. Previously, tau was found during autopsy of a significant number of retired pro football players, but it's recently been discovered in younger college-age players, as well.

What Is a Concussion?

A concussion is a type of TBI, caused by a jolt to the head, that changes the way your brain normally works. It's based more on function than structure—there's no apparent fracture, bleeding, or swelling. Often there are no symptoms at all.

Many riders shrug off the idea of a TBI or concussion if they don't sustain visible head trauma or if they don't black out. If you lose consciousness, after all, you know you've been hurt. We've all heard the phrase "getting your bell rung," which trivializes the problem and leads people to believe that a concussion is no more serious than a bruise.

Certainly, pro athletes who don't want to be pulled from a game will often disguise the fact that they've taken a hit that's made them briefly woozy.

Symptoms or not, a concussion is a very real injury that has one best therapy: rest. When someone who's had a concussion that isn't completely healed takes another hit, the damage is much more serious. The cumulative effect of many small (or not so small) concussions over time is now being revealed. But, just as smokers once denied the possibility of lung cancer decades down the road, riders who don't want to be grounded will dismiss the distant possibility of dementia.

Dr. Lola Chambless, a Vanderbilt University neurosurgeon and event rider, reported at the third annual Riders4Helmets Safety Symposium in 2012 that of all the TBIs reported in recreational sports, horseback riding makes up the largest group, at 12 percent, even with greater numbers of riders now wearing helmets. She emphasized that most such injuries happen at home, not at shows.

Research at Michigan State University further reports that females and younger athletes take longer to recover from a concussion than adult males, and that young athletes are the most likely group to reinjure themselves.

Other statistics show that half of TBIs for equestrians occur on weekends, and that doesn't take into account injuries on the ground or concussions that go unnoticed because another part of the body, not the head, hit the ground.

"You should realize, if you land on your tailbone, the jolt can cause a concussion," observes Riders4Helmets co-founder Lyndsey White. "Who would think, if you fall off and don't hit your head, that you can still have a concussion?"

How Can You Tell?

Without obvious injury or losing consciousness, how do you know if you've suffered a concussion? There are a variety of symptoms, and the impression of "bell rung" or "seeing stars" becomes reality. Sound can seem hollow.

Resources: Concussion and TBI

For more information about head trauma and concussion, check out these websites.
Boston University Center for the Study of Traumatic Encephalopathy: bu.edu/cste
Centers for Disease Control and Prevention: cdc.gov/concussion
Riders4Helmets: riders4helmets.com

You can have trouble for a while forming a sentence, or you can become disoriented or dizzy. Your vision may become blurred, and you could develop nausea.

Some concussion sufferers notice no ill effects right away, but symptoms appear the next day or for weeks to follow. You might seem “out of sorts,” have a persistent headache, or struggle with a lack of balance and coordination. You could be more drowsy than usual or have difficulty falling asleep. Often people around you will notice that you’re just not quite right.

Concussion Checklist

From the Centers for Disease Control and Prevention, here’s a list of concussion signs and symptoms. Post this next to your list of emergency telephone numbers at the barn, and refer to it if someone sustains a fall or a blow to the head.

Observed signs

- ☐ Appears stunned
- ☐ Confusion
- ☐ Repeats questions
- ☐ Answers questions slowly
- ☐ Can’t recall events prior to the hit
- ☐ Can’t recall events after the hit
- ☐ Loses consciousness, even briefly
- ☐ Shows behavior/personality changes
- ☐ Forgets schedule/plans

Physical symptoms

- ☐ Headache or head pressure
- ☐ Nausea/vomiting
- ☐ Dizziness
- ☐ Fatigue
- ☐ Blurred vision
- ☐ Light sensitivity
- ☐ Noise sensitivity
- ☐ Numbness/tingling
- ☐ Doesn’t feel “right”

Cognitive symptoms

- ☐ Difficulty thinking clearly
- ☐ Difficulty concentrating
- ☐ Difficulty remembering
- ☐ Feeling sluggish or groggy

Emotional symptoms

- ☐ Irritable
- ☐ Sad
- ☐ More emotional than usual
- ☐ Nervous

In fact, feedback from barn mates, friends, and family can be the best indication that you should give yourself a break and take it easy. Often people who’ve had a concussion won’t recognize—or admit—they’re having a problem. If they don’t understand why they’re having difficulties, they may feel nervous and upset.

It would be a good idea to post the list of the concussion symptoms included with this article (“Concussion Checklist, at left) in your tack room, right next to that list of emergency numbers already by the phone, so that friends can help friends in this situation.

What Should You Do?

If you suspect a concussion, get yourself checked out by a medical professional. The doctor will do a series of cognitive and neurological tests to assess alertness, attention, speech, memory, and reaction times.

Be on the lookout for any symptoms that worsen over time. Head to the emergency room if someone: has one pupil in the eye larger than the other; cannot be awakened; or has a headache that gets worse and does not go away, numbness, repeated nausea, slurred speech, convulsions, difficulty recognizing people or places, increasing confusion, or loss of consciousness.

White emphasizes that concussion sufferers must rest until they are symptom-free—meaning no computer time, reading, texting, or anything that demands a lot of concentration. When you return to daily activities, do so gradually. If symptoms return or if new symptoms appear, it’s a sign that you’re pushing yourself too hard. A TBI is not like a bump or bruise, so you can indeed make yourself worse if you don’t take time out.

“People will rehab a hip or knee but not their brain,” White says.

How quickly you’ll recover from a concussion depends on many factors, including the severity of the concussion, your age, how healthy you were before the injury, and how well you take care of yourself post-injury. It’s never easy to tell riders to avoid activities that are physically demanding, but they will recover faster and more completely if they do. They’ll also lessen the chance of another injury during the recovery period, and they’ll reduce the possibility of a degenerative brain disorder down the road.

The Lou Gehrig Connection

Lou Gehrig of the New York Yankees, one of baseball’s all-time greats, died at age 37 in 1941. He suffered from the

seemingly random fate of a degenerative motor disease, then little-known, that came to bear his name: amyotrophic lateral sclerosis or "Lou Gehrig's disease." One of his feats was playing in 2,130 straight games, a streak unbroken for 56 years that earned him the nickname "The Iron Horse."

Gehrig was famous for playing through injuries. Researchers have gone back to newspaper records and found four documented instances in which Gehrig was knocked out cold during a game but played again the next day. On one occasion, his head swelled so much that he had to borrow Babe Ruth's larger baseball cap. Since this was before batting helmets came into use, and because Gehrig also played as a football halfback in high school and college, it's likely that he suffered other concussions as well.

It can never be known for sure whether these repeat-

ed head injuries, and his failure to rest afterward, caused Gehrig's motor disease, but the implication mirrors similar instances in modern professional athletes. Ironically, as reported in 2010 by *The New York Times*, Gehrig might not have had the actual disease that bears his name but a similar disorder that may now be found to respond to therapy. ALS itself has no known cure.

Either way, the lesson is clear: Without rest, repeated head injuries can lead to serious disorders later in life. So take care of yourself and your horse-loving friends—and always wear a helmet when you ride. ▲

Margaret Freeman is a USEF "S" dressage judge and a freelance journalist living in North Carolina.



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