

# AFTER

A cowboy wearing a blue and white plaid shirt, blue jeans, and a tan cowboy hat is riding a brown horse in a green metal corral. The horse is galloping to the right, kicking up a cloud of dust. A brown cow is running ahead of the horse, also kicking up dust. The background shows a grassy field and a fence line.

**A person who hits the dirt isn't always a good judge of whether he's really OK. Getting right back aboard to "teach a horse a lesson" is a notion that belongs to a bygone era.**



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# FALL



*Sure, get back on that horse — but not just yet!*

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**By Maureen Gallatin**



IF YOU RIDE, SOONER OR LATER, YOU'RE GOING TO "HIT THE dirt." The cowboy way has been to "get right back on that horse!" If we didn't, we were told, we'd lose our nerve or teach the horse a bad lesson.

Turns out, that's no longer the best advice. In fact, recent research into neuroscience and horse training has taught us that a little time out may be beneficial for both.

Dr. Lola Chambless, a neurosurgeon at Vanderbilt University with a special interest in traumatic brain injury, sheds new light on an old problem. She consults on sports-related traumatic brain injury for the United State Equestrian Federation, National Football League and other high-performance sports, so she's heard all the arguments for "getting right back in the saddle."

She's also a lifelong competitive rider, so she gets it.

"Every athlete is there to play, to win. 'I can do this,' is part of their performance DNA. I personally know what it's like to fall during a competition and to be willing to ride even hurt. But this discussion isn't about toughness. It's about your brain, and the potential long-term consequences of a brain injury."

Dr. Chambless' riding credentials are impressive, including being a USEF national amateur three-day-event champion and long-listed for the World Equestrian Games in eventing, a discipline that requires guts and determination.

"I competed in a culture where when you fell off over a jump, you got right back on and jumped the same fence again. Or, if it was during a lesson, the instructor dropped the height, but you jumped. We all said, 'I'm OK.' Even if we weren't."

As it turns out, the person who has fallen is the least able to know if she or he is OK, especially immediately after a fall. Survival instinct and competitive spirit kick in, fueled by adrenaline. If you jump to your feet on a bad ankle, you're going to have an ankle problem. But if you jump to your feet – and particularly if you get back on the horse – too quickly after a concussion, you risk a brain problem, or worse.

## Not so Fast

IF SOMEONE ASKED YOU TO HOLD HIS HORSE WHILE HE MOUNTED, and you knew that person wasn't thinking or seeing clearly – or was maybe in danger of passing out – would you do it?

Just as friends don't let friends drive drunk, friends don't let friends "get right back on" if they suspect a concussion. Realize the person who seems fine (or protests that he's fine) immediately after a fall may be in a compromised position in a few minutes. Unfortunately, people with head injuries don't make good decisions. They may be more injured than they think, or could know, immediately after a fall. Signs may not show up for minutes, or sometimes even days.

Being on top of a horse – particularly if the horse is hard to ride or the rider intends to prove something – increases the danger and likelihood of a second fall. A second concussion prior to the first one healing significantly compounds the injury and the likelihood of long-term effects, such as memory problems, emotional and behavioral issues, pain, and thinking/cognitive difficulties. A quick concussion assessment and five to 10 minutes on the sidelines can make a world of difference.

Traumatic brain injury is an umbrella term. It spans the gamut from concussion to skull fracture – and injuries that can lead to a vegetative state, coma and even death. Because concussion is on the less-severe end of the spectrum, it would be easy to



**Dr. Lola Chambless, a neurosurgeon at Vanderbilt University, is also a horsewoman. She is educating riders to assess for potential brain injury after a fall. Friends should encourage friends to take a time-out, she says.**

COURTESY OF DR. LOLA CHAMBLESS

dismiss it as not a big deal. In fact, for many years, we've taken "getting your bell rung" as normal. But head injuries *are* a big deal, and the damage might not show up right away.

Concussions are no longer categorized as mild or severe. The older criteria – seeing stars or passing out – only happens in about 10 percent of cases. And you can suffer a concussion from rapid acceleration or deceleration, such as getting bucked off and landing on your rear. You don't have to have hit your head.

Concussion is a temporary, trauma-induced alteration of the brain. It's a problem of function, not structure, so imaging scans such as CT, MRI, PET are usually normal. (If they're not, you have a more severe TBI).

"At NFL games, we (neurosurgeons) are on the sidelines. When a player has a bad hit or complains of symptoms suspicious of a concussion, we're pulled in to do a quick sideline evaluation of that player and to make a go/no-go decision about return to play," says Dr. Chambless.

Riders don't have those professionals ringside, particularly when they're training at home, which is where the majority of serious injuries occur. As well, the guidelines for traumatic brain injury assessment have changed. So even if a paramedic, EMT, doctor or nurse is on property, most have no formal training in concussion assessment, or are operating on old information.

Dr. Chambless says that while a layman can't do a thorough concussion assessment, without training, everyone can learn a few key points to watch for. That might actually save a rider's life, particularly if you know to call for help – or at least prevent the rider from getting back on his horse. The most effective strategy for preventing serious brain injury is to avoid returning to exposure before a previous injury has fully healed.



JOHN CHAKRA

A hard knock to the head – or worse yet, repeated impacts – can cause lasting memory, cognitive, emotional and behavioral problems.

## Concussion Assessment

SIGNS OF CONCUSSION – WHAT WE SEE IN SOMEONE ELSE – can include the rider seeming dazed or stunned, confused about what just happened, uncoordinated or clumsy, and answering questions slowly. Over the next few days, you might see some behavior or personality changes, with the person unable to remember what happened before or after the accident.

Symptoms of concussion – what the injured person experiences or reports – include headache, dizziness, balance problems, nausea, double vision, sensitivity to light or noise, feeling sluggish, and concentration and memory problems.

If the rider has even one of those signs or symptoms after a significant head injury or fall, he likely has a concussion. Headache is the most common. Cognitive and memory problems are

the next most common. And of course, in any loss of consciousness, he or she should definitely not get back on the horse.

Many times when a concussion is a possibility, the rider won't feel great about 10 minutes after the fall, whereas he might have said he felt OK immediately after falling. If pride doesn't get in the way, the rider will likely indicate, "I'm just not feeling right."

During that 10-minute waiting time, ask the fallen rider a few questions, such as: What's your horse's name? What happened right before the fall? What color saddle pad are you using today?

If the rider has difficulty answering simple questions like that, he or she may need medical attention. At minimum, that rider should not get right back on the horse.

## It's a Big Deal

PEOPLE HAVE FALLEN OFF HORSES FOR YEARS, SO WHAT'S THE big deal?

Horseback riding accidents account for 45 percent of the 18,000 sports-related traumatic brain injuries seen at hospitals between 2003 and 2012. Yet, obviously, riders don't account for 45 percent of the people playing sports in the United States. In other sports, most TBIs happen in young

A traumatic head injury nearly ended Fallon Taylor's career. This professional barrel racer says wearing a helmet gives her the confidence to ride competitively.



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athletes, but that's not the case with equestrian sports. And most of us know that fallen riders don't seek medical attention unless significantly injured.

A motorcyclist can expect one serious accident for every 5,000 hours of riding. An equestrian? The averages say one serious accident in just 350 hours of riding.

The cost of rehab and recovery from a severe traumatic brain injury is astronomical. The direct costs average \$3 million! That's not caregiver, loss of income and other related expenses, and that doesn't presume full recovery.

Neurosurgeons don't know why, but an athlete who sustains a concussion is four to six times more likely to sustain a second concussion. You may not be able to prevent the first concussion, but you might prevent secondary injury by not returning to the saddle too soon.

## What About the Horse?

"HORSES DON'T NEED US TO JUMP RIGHT BACK TO PROVE SOME point to them – especially if we're upset, angry, feeling a little woozy or weak-kneed, such as after a scare, if not an injury," Dr. Chambless says.

Good horsemen know there's a reason a horse bucks or tries



to run off with us. There are better ways to solve that problem than to get right back on the horse when we are in an adrenaline-enhanced state.

There's no harm to the horse if we wait 10 or 15 minutes before we get back on him. In fact, you'll have let the horse settle, and he'll be better able to deal with a situation than right after an exciting or scary incident. And a rider coming unseated is often traumatic for the horse, too.

## What About Helmets?

FOR A RANGE-WORKING COWBOY, A COWBOY HAT SERVES A practical function, but more often in our western show horse world, a hat is usually a fashion item.

We know helmets reduce the risk of severe brain injury in all sports where they are used – including non-contact and non-riding sports. No one knows the lifetime number of “safe” concussions (likely zero), but we do know that repeated traumatic brain injuries produce delayed cognitive deficits. And there's a 50 percent reduction in traumatic brain injury risk when a rider is wearing a properly fitted helmet. Helmets don't just protect your skull, they protect your brain.

“As I take care of head-injury patients, I talk to their families on the worst day of their lives,” Dr. Chambless says. “One case I especially think of, I was standing across the bed of a woman in really bad shape, speaking with her husband. I'm very careful not to bring up topics that might cause someone to feel guilty about anything pertaining to the accident. I rarely mention helmets, but I casually asked whether his little daughters – standing by the end of the bed – wore helmets when they rode. He said, ‘No,’ that their family horses were gentle.

“His wife was there in a coma, having fallen off one of their gentle family horses. But he didn't make the connection. People tend to think of helmets only for activities involving speed or apparent danger,” she adds.

Here's another example. Dressage isn't considered an extreme sport, so time was, you wouldn't catch a dressage rider wearing a helmet. A top hat, yes. Helmet, no. Those were for jumping. But then Olympian Courtney Dye-King suffered a traumatic brain injury and a month in a coma when the horse she was riding merely tripped and fell. The dressage community took notice, and now it's rare to see a competitor not wearing a helmet.

Helmets are making their way into western sport, too. We're not talking just bull riders. Look around and you'll see the culture changing.

Just ask barrel racer Fallon Taylor. In 2014, Wrangler National Finals Rodeo fans were surprised to see her burst into the ring wearing a helmet. The fact she could ride at all was just as surprising, given that five years earlier, she suffered a near-fatal traumatic brain injury. But when she returned to riding, she didn't automatically reach for a helmet. It's wasn't the cowgirl way, or so she thought. She perceived the stigma against helmets as so strong she never even tried one on. In reality, she was afraid of peer pressure, of Facebook comments.

But then she realized she was tougher than that. Only a cowgirl would be brave enough to buck the trend. So, just as guys learned

they were “tough enough to wear pink” in support of breast cancer awareness, Taylor was tough enough to wear a helmet when she rode.

“After having my head shaved and four screws inserted to secure on my halo for a year, I quickly realized that I would look cooler in a Troxel helmet than I did leaving the hospital!” says Taylor. “If you're cool enough to ride fast, you're cool enough to protect your noggin.”

Taylor determined she was tough enough to face social media and rodeo comments if she wore a helmet. So she “cowboyed up” and put it on. Her inspiring story has been influential in so many lives, and she has become a spokesperson for helmet awareness ever since with her #WhatTheHelmet campaign.

Even this year's winner of the colt-starting competition Road to the Horse, Vicki Wilson, wore a helmet. It's a good thing, too, as Vicki's horse proved to be a handful. The Australian rider got bumped and injured her shoulder, but fortunately not her brain. She was the only one of the four contestants, touted as a “celebration of the cowgirl,” who wore a helmet during competition. Coming into it from a hunter-jumper background, she had no qualms about not conforming.

## It's Time

IT'S TIME FOR THE CULTURE TO CHANGE. THE HELMETS OF TODAY aren't the helmets of 10 years ago. They're way more fashionable, and offer more protection than they once did. Pick any helmet that fits well and meets ASTM standards, and you'll go a long way to preventing a potentially catastrophic injury.

The cowboy way is to do your best for man and horse. As we learn better, we do better – performance saddlepads, corrective shoeing, orthopedic leg boots, and so on. So maybe it's time for helmets and 10-minute timeouts to be the cowboy way, too. 🐾

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**Fallon is making more than just a cowgirl fashion statement. Stats show helmets save lives.**



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