

# Horse-Related Injury



[saddleupSAFELY.org](https://saddleupSAFELY.org)



COMMONWEALTH OF KENTUCKY  
OFFICE OF THE FIRST LADY



*Jane Beshear*

Dear Fellow Equine Enthusiasts,

As a lifelong horseperson and First Lady of the Commonwealth, I understand how important horses are to the state of Kentucky. This is why I am proud to support Saddle Up SAFELY, a rider safety campaign sponsored by UK HealthCare, the UK College of Agriculture and many other organizations. While our program goals are to reduce the number and severity of injuries, we must recognize that injuries will still occur. This booklet provides in-depth information on how to prepare for a possible injury, and more importantly, how to respond once an injury has occurred. In addition, you will find information on how to recover from an equine-related injury, a topic that is often overlooked. We have long been known as the "Horse Capital of the World" and to ensure we retain this title, we must focus on the health and welfare of the horse and rider. By educating ourselves, we can make a great sport safer!

Sincerely,

*Jane Beshear*

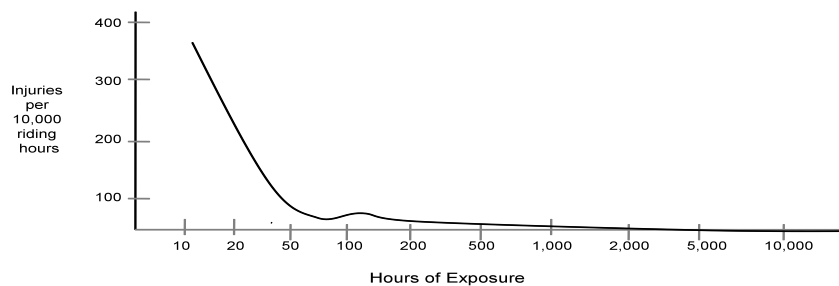


# INTRODUCTION

Riding accidents can happen to anyone, even experienced equestrians riding well-trained horses. Specific studies have shown that 40-60 percent of these accidents could have been prevented with education and preparation. Safe riding and horse handling practices are key to preventing accidents. It is also important to point out that many riders know the safe way to avoid injury but choose to engage in risky behavior. So knowing the right way isn't enough, we must also be mindful of our own attitudes toward riding safety and practice safe horsemanship. Proper riding instruction, selection of suitable horses for the level and type of riding, appropriate equipment and attire for both horse and rider, and planning with proper attention to detail before every ride all contribute to safe and agreeable experiences with horses. The intention of this brochure is to highlight important tips to help avoid accidents and provide valuable information should an accident occur.

A study of 679 horsemen by John Mayberry and colleagues published in 2007 showed that novices – riders with 50 hours or less riding experience – are most likely to be injured.

**Figure 1 Incidence Rate of Injuries** *Study of 679 Equestrians in Oregon and Idaho*



SOURCE: Mayberry et al. Equestrian Injury Prevention Efforts Need More Attention to Novice Riders, *The Journal of Trauma*, 2007. 63:734-739

However, in this same study, it was recognized that the more advanced the rider, the greater the chance of serious injury – one leading to hospitalization, surgery or permanent disability. The study also showed a disturbing trend – the most experienced riders were less likely to use a helmet.

**Figure 2 Years of Experience, Risk of Injuries and Helmet Use** *n=679 equestrians*

Equestrian Experience	Average years of experience	Risk of any injury	Risk of serious injury*	Use of helmet
Novice	3	52%	9%	74%
Intermediate	17	80%	19%	61%
Advanced	30	84%	22%	58%
Instructor/Professional	34	94%	37%	59%

\*Serious Injury=medical care, hospitalization, surgery, permanent disability

SOURCE: Mayberry et al. Equestrian Injury Prevention Efforts Need More Attention to Novice Riders, *The Journal of Trauma*, 2007. 63:734-739

## Could this happen to you?

"I was fox hunting in slippery conditions (top part of the ground had thawed – hard underneath). My horse was green and took a turn a bit too fast, leaning in on the turn as he went around the corner. His legs went out from under him and he fell on his side before I even knew what happened. Luckily, I was wearing a helmet and only had a concussion."

*Always be sure of your horse's footing.  
Slow down in slippery conditions.*



## Preventing Horse-Related Injuries

What can you do to be ready when you or someone you are with is injured while handling or riding a horse? First, be prepared. Take a basic human first-aid class before you engage in riding so you will know what to do. Your local fire department and American Red Cross chapters usually provide regular classes. Know where the nearest emergency medical services (EMS) and first responders are and how to reach them. If you are in an area without phone coverage, you might not be able to reach EMS immediately, so knowing what to do is important. Keep a well-stocked first-aid kit in your horse trailer, car, barn or stable.

Education is paramount to injury prevention. Get appropriate instruction when you begin your horse experience. As you progress, continue to absorb as much knowledge as you can about horse behavior, horsemanship skills and riding safety from those more experienced than you.

A good resource for tips on safety issues is **SaddleUpSAFELY.org**. Armed with the number of horse-related injuries seen annually in UK HealthCare's emergency departments, a unique collaboration between the University of Kentucky and community partners was born. "Saddle Up Safely" is a five-year educational and awareness campaign to educate about horse handling safety that aims to reduce the number and severity of injuries. This site has an ever-expanding volume of first-hand tips submitted by riders.

### Cost of Serious Injury

The cost of a serious injury goes beyond the actual initial medical costs and includes the cost of missed work, long-term rehabilitation, psychiatric care and counseling.

Cost data from UK HealthCare's Level I Trauma Center, where the most severely injured patients are treated, shows that the initial medical care without including rehab or psychiatric counseling averages \$16,218 if the person requires hospitalization. If hospitalization is not needed, the cost of treatment is about \$2,357 per person.

*Source: UK Level I Trauma Center Analysis of Patients, 2009-10*

### Could this happen to you?

"I was leading the horse by the cheek strap of his bridle and he reared, taking me up off the ground, and my hand was trapped in the bridle cheek strap. I swung under the horse as he leaped forward, jerking my right arm out of its socket. I fell to the ground and the horse trampled on both of my legs. Thank goodness I was wearing a helmet, as the horse's hooves hit my helmet. If I had taken the time and used proper leading equipment, I might not have been injured."

*You should always lead your horse with a halter and a lead rope attached to the ring under the chin. If you have been riding and need to lead your horse, remove the reins from his neck by bringing them back over his neck and head and lead with two hands as you would with a halter and rope.*



## Basic Tips for Horseback Riders

Plan ahead. Whenever you ride, be prepared for emergencies. Try not to ride alone, but if you do, be aware of the risks. Keep your cell phone charged and with you. If you do go out alone, always let someone know where you will be riding and when you anticipate returning. When taking an extended trail ride into unfamiliar territory, someone in your group should carry a GPS. Wear appropriate clothing for the weather conditions, and, depending on anticipated time away, consider taking drinking water, sunscreen, rain gear, a blanket, flashlight, signaling mirror, tack repair kit, halter and 12-foot lead rope. Pack a basic first-aid kit with you.

Below is a list of items that should be included in the kit:

- Disposable latex or synthetic gloves (at least two pairs)
- Antiseptic solution or towelettes
- Saline solution
- Antibiotic ointment
- Adhesive dressings
- Assorted sizes of gauze pads
- Assorted sizes of rolled gauze
- 4-inch elasticized athletic wrap
- Triangular bandage
- Cold pack
- Scissors, tweezers and pocket knife
- Lighter/matches
- First-aid instruction manual
- CPR facemask
- Drugs to treat allergic reactions: i.e. Benadryl® or EpiPen® if prescribed by your physician.
- Adhesive tape

Be sure to check your first-aid supplies periodically and replace open packages or expired items. Check expiration dates of saline, antiseptic solutions and ointments. A more extensive first-aid kit should be available in your horse trailer, car, and barn or stable.



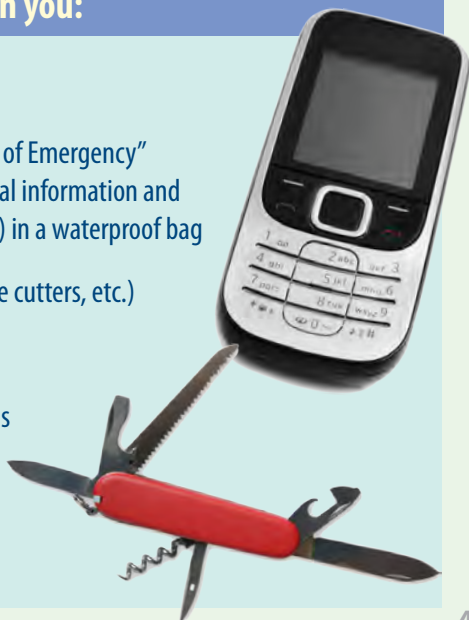
## Extended Trail Riding Check List

Keep this checklist with you and review it before riding.

- ✓ Always let someone know where you are going and when you expect to return.
- ✓ Always carry some form of communication (cell phone) on your person – not just on your horse – because you might get separated from your horse. Do not carry a pouch in the small of your back.
- ✓ Carry a basic horse and human first-aid kit.
- ✓ Carry a jacket and/or light raincoat – especially in cold weather.
- ✓ If riding in a wooded area, carry a small emergency or pruning type saw, and make sure it has a protective cover.
- ✓ If the ride is of any length, have some means of starting a fire such as waterproof matches or cigarette lighters – especially in cold or damp weather.
- ✓ If you are riding in an area not familiar to you, someone in your group should carry a compass or a GPS device.
- ✓ It is always much safer to ride with someone than to go alone.
- ✓ Be sure your horse has solid trail experience before leaving.
- ✓ Check your tack and equipment to be sure they are in good repair before you head out.
- ✓ Find out in advance if ATVs, bicycles and hikers will be using the same trails.

### What to carry on you:

- Mobile phone
- ICE – List of “In Case of Emergency” information (personal information and emergency contacts) in a waterproof bag
- Multitool (knife, wire cutters, etc.)
- Emergency whistle
- Personal medications



## Medical Conditions

Even if you have a medical condition, riding can be safe if you take a few precautions. First, do not ride alone. If you are on blood thinners such as Coumadin®, Plavix®, or aspirin, you are at increased risk for severe bleeding in the brain should you fall. Wear an approved riding helmet (see next page).



Riders prone to severe allergic reactions (anaphylaxis) in which breathing could be compromised should carry Benadryl and an EpiPen. You must have a doctor's prescription for EpiPen, but in the case of severe allergies, an EpiPen can save your life. Let your riding partner(s) know of your allergies and that you have medication with you.

If you have diabetes, make sure you have your blood sugar meter with you. Keep snacks handy for quick access; carry high-sugar snacks and glucose pills or gel if needed for battling episodes of very low blood sugar. Those with insulin requirements should remember to carry insulin on the ride, especially if you plan to be gone for an extended period and/or during mealtimes.

If you have asthma, bring your inhaler.

## Helmet Safety

Wearing a helmet might be the most important safety behavior you can practice. The key is to wear one all the time! The protection afforded by your helmet depends upon safety ratings, fit to correct position on your head and proper adjustment of the straps. These factors as well as the age of the helmet, wear and tear, and previous accidents all will affect how well a helmet performs. No helmet can protect you in every situation. Certain trajectories, speeds and impact can diminish the protective aspects of the helmet.

The current industry helmet standard is American Society for Testing and Materials (ASTM) F-1163-04a. Helmets are certified to that standard by the SEI (Safety Equipment Institute). Approved helmets carry a label proving they are so certified. Some helmets also carry a European safety seal. This can be written EN1384 or BS1384, and these helmets meet the same standards. The initials EN or BS simply mean the lab filed the paperwork using that particular code. There is a false belief that BS1384 helmets are different, when it simply means the paperwork was filed a particular way.



## Shopping for a Helmet

Helmets come in various shapes, sizes and colors. Experiment by trying on many types. The helmet that fits your friend might not be the best for you, even if it looks like you would wear the same size. Certain helmets fit some head shapes better. Don't worry about how the helmet looks; pick one that fits. The closer the helmet fits to the side of your head, the better it will protect; ideally there will be no gap on the sides of your temples or front or rear – also the deeper the helmet fits in back down toward your neck, the better protection you have. When shopping for a helmet, wear your hair the way you will when you ride. A ponytail, clips or headband can change the way a helmet fits. Only hair or a hairnet should go under your helmet. Wear each helmet around the store. If it gives you a headache, it's too tight. On the other hand, don't buy a helmet too big thinking it will fit next year. You need one that fits well now!



## Fitting a Helmet Correctly

- The helmet should fit snugly all around the head without any pressure points to the front or on the sides. This may require wearing it around the store for a few minutes in order for it to adjust to the shape of your head.
- When you shake your head, the helmet should not slip up and down or side to side.
- You should be able to put at least one finger space between your chin and the chin strap. If you have to make it as snug as possible for it to stay on, it may not fit properly. This can be tested by being able to yawn without restriction.
- If you are going to wear your hair up, be sure to put it more on the back of your head rather than on top, and compress it as flat as possible. Ideally you are better off to gather it in a hairnet at the base and sides of the helmet. Some helmets have space on the sides to allow for this.
- Helmets that have V-shaped strap adjustment systems require particular care when fitting the straps. Take the time needed to make sure the straps pull the helmet straight down atop your head.
- About every three months, check the fit of your helmet, as straps stretch out, padding settles and the fit changes.
- Also check the fit if you cut your hair; you don't want to be going over a jump and find you cannot see because your helmet has fallen over your eyes simply because you had your hair cut.
- Request to have your head measured.



## Helmet Myths

### *Bike or skateboard helmets are fine for riding horses.*

Bike helmets are not appropriate for horseback riding. Equestrian helmets are specifically designed and tested to protect your head from impact in the event of falls from a horse. Equestrian helmets also cover a larger area of your head than bike helmets and have straps that, when properly adjusted, keep them in the right position while riding and if you fall.

### *As long as you wear a helmet, you'll never get hurt.*

It's not enough to wear any helmet. It must fit well, including a snug chin strap, be certified and be properly adjusted every single time you ride. Helmets will not protect you from unsafe behavior, however. You must practice other safe behaviors.

### *Tilting the front of your helmet up makes it easier to see, so you're safer.*

Tilting the front up makes the helmet unstable. The visor should be parallel to the ground and just above the crease of eyebrows.

### *Really good helmets are too expensive.*

You can spend \$500 on a helmet, but it won't make it any safer. As long as it's ASTM/SEI certified, and it's new, you're buying a certified protective helmet. Spending more might get you different padding and trendier decorations or materials, but it doesn't translate into more protection.

### *Helmets aren't cool.*

Check out the newest designs and styles if you believe this. Newer helmets are more fashionable and comfortable than ever, and there are styles with vents and for every discipline, including Western.

### *If you don't have a helmet, just borrow a friend's.*

Your helmet needs to fit YOU – not your friend. Even if your heads look like they are a similar size, head shape can make a difference. For maximum protection the helmet must fit well. Also, you don't know if a borrowed helmet has been taken care of properly.

### *You can keep wearing your helmet after an accident unless you see a crack in it.*

You need to replace your helmet if you fall and your head hits the ground. It could have a defect that's not readily visible, and the original protection afforded might be diminished should you fall on that same part of the helmet again. Even if your helmet never takes a hit, it's a good idea to replace it at least every five years (sooner if you ride frequently). The helmet material can break down with exposure to sweat, heat, dust and rain.



## If an Injury Happens

### *Responding to a severely injured rider*

If an accident resulting in an injury occurs, do not approach the victim until you know the scene is safe. You don't want to become a victim yourself. Think clearly and pay attention to the environment. If the scene is not safe, try to create a safety zone around the victim. If possible, make sure the horse is secured. If it is not safe to approach the victim, call 911 for help immediately.

As you approach, speak to the injured person to see if he/she is able to talk or respond to you. If the person is alert and able to talk, ask them where it hurts. Determine whether you are able to help the victim yourself or call 911 for assistance if necessary.

If the injured person does not respond, then touch, rub or pinch the patient's skin to try to incite a response. Do not shake the patient in case a spinal injury is present. If the injured person remains unresponsive, or if he/she appears to have serious injuries, do not move him/her or allow him/her to move unless absolutely necessary (for example, if the rider is face down in water). Call 911 to get help.

### *If the patient is unresponsive, follow these steps:*

1. Look, listen and feel for breathing. If the patient is breathing, do not move him/her. Look for signs of injury.
2. If the injured person is not breathing, ensure the airway is open. Open his/her mouth by lifting the chin or pushing the jaw forward.
3. Feel for a pulse in the patient's neck or wrist. If there's no pulse, start cardiopulmonary resuscitation (CPR) if you are trained. If you are not trained, wait for emergency medical personnel.

If an injured person is bleeding, place a dressing over the wound and apply pressure to the site until the bleeding stops. If you suspect the person has a broken bone, stabilize the injured part and seek medical assistance. Keep the injured person warm, and do not allow him/her to eat or drink until he/she has been evaluated by a medical professional. It is always good to have one or more persons in your riding group trained in CPR.



## Could this happen to you?

"Just last Monday I rode my horse. He is a good horse, we never had a problem. A few days ago, however, the air was crisp and we were both feeling a little frisky. We got into a trot which I wanted to sustain for a while. He obliged me, staying in perfect cadence for several runs around our equipment garage. He let out a few snorts, telling me that this was fun! Then, ever so quickly, I felt him tighten and I felt myself flying up and over his right shoulder. Usually this sort of thing happens in slow motion. Not this time! I slammed onto the ground – right on my head – and then slammed onto my back on the gravel driveway. Yes, I was wearing a helmet. As it turned out, I got a really good concussion and wrenched my arm in the fall – probably from reaching out and grabbing the saddle as I fell. My left hand was blistered and torn. My back quickly swelled. And my head ached. When three days later the ache became piercing and my attention became fuzzy, I went to the doctor. After a CT scan I was diagnosed with a concussion and contusions. As of today – a week and two days later – my arm still hurts, but my head is much better."

*Lunge or walk a horse that has been inactive or is frisky. Some horses need to be able to let off some steam without a rider on their backs, some don't. Know your horse and its personality so you can approach riding safely.*



**Figure 3**  
**Causes of Horse-Related Injuries of Patients Admitted to UK Chandler Hospital via Emergency Department 2005-09**

Fell/thrown/bucked off horse	165	59%
Kicked by horse	55	19%
Horse fell on rider	38	13%
Stepped on	11	4%
Foot caught in stirrup/dragged	5	2%
Hit fence	3	1%
Other*	5	2%
<b>Total</b>	<b>282</b>	<b>100%</b>

\*Hit by car, saddle broke, rolled ankle dismounting, bitten by horse, horse ran over

SOURCE: UK Trauma Registry

Figure 3 describes how riders/handlers who were seen in the UK HealthCare trauma unit were injured by a horse. The most common reasons were the victim fell/was bucked off the horse, was kicked or the horse fell on the rider. The figure shows there are many ways riders and handlers can be seriously injured.

**Figure 4**  
**Cause of Patient Hospitalization with Horse-Related Injuries at UK HealthCare 2005-09**

Fractures of arms & legs	136	48%
Head & neck injuries	89	32%
Chest injuries	65	23%
Spinal injuries	56	20%
Abdominal injuries	51	18%

- Based on 282 total patients.
- Doesn’t add up to 100 percent as many of the 282 patients in this analysis had multiple injuries.

SOURCE: UK Trauma Registry

Figure 4 describes the most common injuries detected in this population. Many riders suffer multiple injuries simultaneously, so it is not uncommon to have a head, neck and extremity injury at the same time. Spine, head and neck injuries can often have serious consequences.

## Calling EMS (911)

When you call Emergency Medical Services (EMS), give the dispatcher as much information as possible about your location and the type of injuries the victim sustained. Be sure to give EMS a phone number where you can be reached if the emergency personnel have difficulty finding you. If possible, send someone to meet the EMS unit at the nearest road to escort them to your location. Request that EMS turn off sirens at that point to avoid spooking horses. Never leave the victim alone unless absolutely necessary. If EMS is arriving by helicopter, be sure to secure all horses. Let EMS know if there are loose mounts in the area. Avoid cutting fences, as EMS can usually climb fences to get to a victim, and try to avoid situations where other animals could get loose and cause problems. Unless necessary, avoid cutting and removing the victim's clothes, boots, etc. as it may cause further injury.

## Minor Injuries

Minor cuts and scrapes usually do not require a trip to the emergency department. With proper care you will be able to avoid infection and other complications. Here are some guidelines for care of these minor wounds:

1. **Stop the bleeding.** Place a clean dressing or cloth over the wound and apply gentle pressure. Elevate the wounded area if possible. Keep constant pressure over the wound. Do not remove the dressing. If you notice spurting of blood or you are unable to get the bleeding to stop, seek medical attention.
2. **Clean the wound.** Once the bleeding has stopped, rinse the wound with clean water. Remove any dirt or debris from the wound. Retained debris can lead to infection, so seek medical attention if you are unable to get the wound clean. Wash the area with soap and water or a disinfectant wipe. Apply an antibiotic cream or ointment to keep the surface moist, and cover with a clean dressing. Change the dressing at least daily until the wound heals.
3. **Stitches.** If the wound is deep, gaping or jagged, it might require stitches. If you cannot easily close the wound, see your physician as soon as possible to have the wound closed. Most wounds must be closed within six to 12 hours, if they are to be sutured.
4. **Watch for signs of infection.** If the wound is not healing or you notice increased pain, redness, drainage and/or swelling, seek medical attention. Also, if you have not had a tetanus booster shot within the past 10 years, get one as soon as possible after the injury.

## Could this happen to you?

"I was working with a trainer, helping back a 3-year-old who had some negative experiences with a previous trainer. The trainer was giving me a leg up onto the horse (bareback). After several very calm mounts and dismounts, the horse spooked at something and started spinning and bucking while I was on his back. I reached the point where I decided to let myself fall. However, he had spun so many times, I had lost my bearings in the arena and came down nearly on top of the thick steel-pipe arena fencing (it was an old roping ring). My right leg hit the top rail of the arena fence, impacting about 4 inches above my ankle. My tibia was broken in two places, and fibula in one place. Those were my only injuries. The fractures did not compound. They did require surgery and two plates and 10 screws to repair the tibia. Then, I wore a cast/boot for eight weeks, then underwent about nine months of physical therapy to really get it strong and flexible again."

*Stay away from arena fencing or walls when initially backing a young horse or one with known issues. Young or untrained horses are unpredictable; never put yourself in a situation where you might be trapped or thrown against a wall or fence.*



## Sprains, Strains, Extremity Fractures

Sprains, strains and fractures are common due to falls. Results of some fractures are obvious due to deformity of the injured part. Fractures are considered compound if there is a break in the skin at the site of injury, or closed if no open wound is present. Sprains, strains and fractures where there is minimal displacement of the bones are less obvious so X-rays might be necessary to determine the exact injury. Each of these injuries could be characterized by pain at the injury site, decreased ability to move the affected part, and/or swelling at the site. Bleeding might be present with open wounds. The treatment goals for these injuries are to prevent further injury, reduce pain and control any external bleeding.

1. Do not attempt to straighten the injured area or pull broken bones back into the skin.
2. Apply a dressing over any areas of broken skin and apply direct pressure over the dressing to control bleeding, if present. If bleeding is severe, continue holding pressure over the bleeding site and call 911 for help. Keep adding dressing if it becomes saturated; do not pull old dressing off, as it will tear blood clots away.
3. If you have to move the patient, immobilize the injury site to stabilize the injured part and prevent further injury. This can be done by making a splint long enough to immobilize the joint above and below the site of injury. You can use pieces of wood, a walking stick, sturdy tree limbs, or rolled-up newspapers or magazines as splints. Place these splints on each side of the injured limb. Wrap roll-type bandages, triangular bandages or thick tape around the splints to secure them to the affected limb.
4. Elevate the limb and apply an ice pack to site if possible.



### Could this happen to you?

"I purchased a cheap saddle off the Internet for my youngest daughter, thinking I would 'upgrade' in a year or so and purchase a nicer saddle. The first time I put the saddle on the horse, it didn't "feel right." The second time, I thought to myself, "This just doesn't feel safe ... but it will just be for a few minutes." My daughter's arm was severely broken just above the elbow. She had to have three pins put in her elbow. She spent two days in the hospital but has healed perfectly. Slowly but surely, we are working our way back to the fearlessness of riding we had prior to the accident. It was my fault for trusting a cheap cinch strap."

*Always do a safety check on your tack, regardless of the quality. This will help to identify problem areas before they become a problem.*



## Head Injuries

The best treatment for head injuries is prevention. When riding, always wear an approved helmet that is in good working condition. If a rider who has sustained a fall displays any of the following, call 911 and make sure he/she receives immediate medical attention:

- Severe bleeding from the head or face
- Bleeding or clear fluid draining from the nose or ears
- A severe headache
- Vomiting
- Loss of consciousness; disorientation or confusion
- Bruising below his/her eyes or behind the ears
- Weakness or inability to use an arm or leg
- Blurring of vision
- Unequal pupils
- Slurred speech
- Seizures

Keep the patient still and calm. Avoid moving the patient, and immobilize his/her neck if possible. Do not remove the helmet until EMS makes that decision. Control any external bleeding by applying dressings and holding gentle pressure over the site.

Watch for changes in the patient's alertness and breathing pattern. Be prepared to start CPR if breathing and heartbeat stop.

## Spinal Injuries

If a rider falls and has pain in his/her neck or back, or is unconscious, suspect that a spinal injury might be present. Do not move the victim or allow him/her to move unless the patient cannot breathe. Call 911 for assistance with immobilizing the person and transporting him/her to the hospital.



### Could this happen to you?

"I was bucked off my mare during a natural-horsemanship clinic. On the second day of the clinic, we were to ride our horses through an obstacle course. One of the tests was to grab a hula hoop off of the fence post, walk a few feet, and then throw the hula hoop around a cow head. When I reached for the hula hoop, my horse spooked to the side. I was still on her and just about to regain my balance when the lady who was running the clinic yelled for me to drop it. When I did, it bounced and hit my mare's leg, which sent her into a rodeo-style bucking spree. Needless to say, I did not last eight seconds. I was catapulted off and landed with my knee twisted to the side."

*Desensitize your horse to any unusual stimuli ahead of time.*



## Chest and Abdominal Injuries

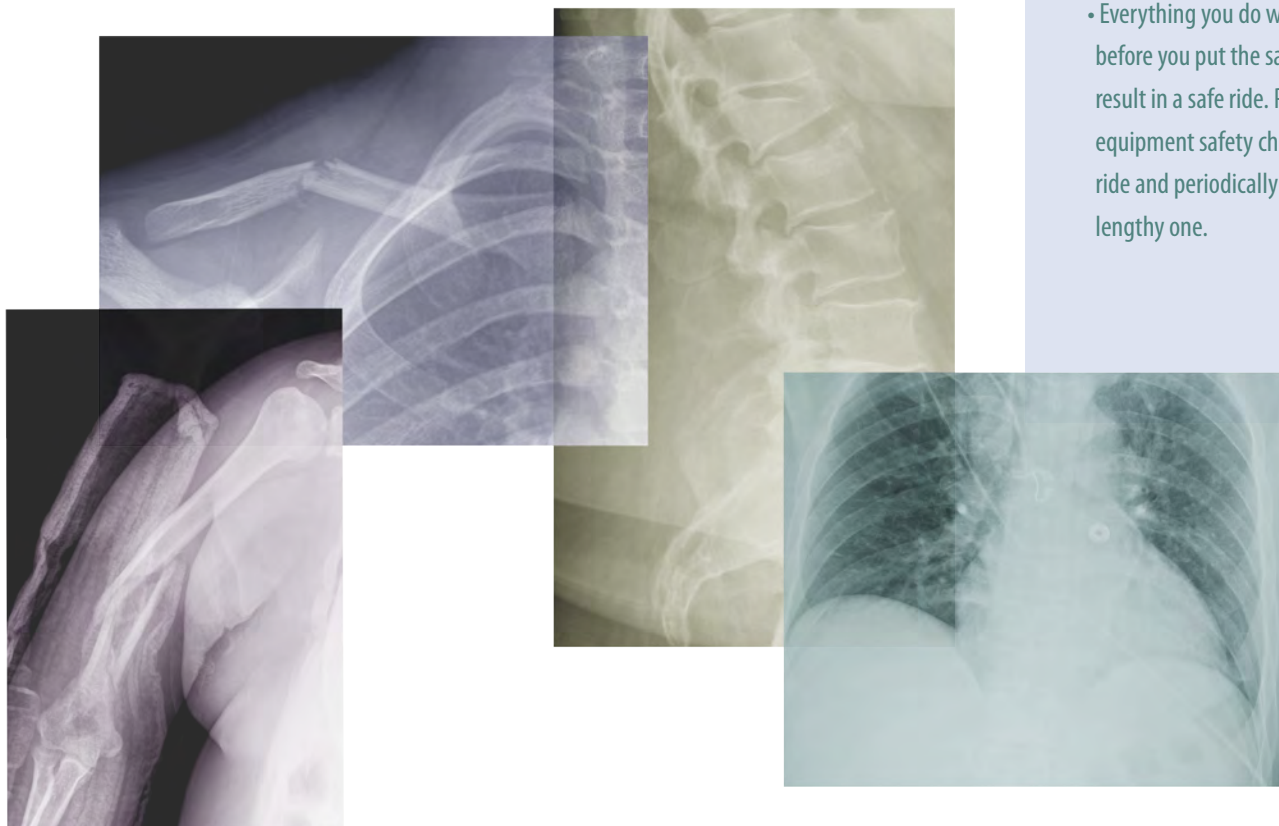
Many chest and abdominal injuries can be prevented, or their severity can be minimized, by wearing protective vests. The routine “old” vests helped prevent puncture wounds. The new rapidly inflatable (CO<sub>2</sub> canister) vests provide more protection from crushing. If a patient has a wound that penetrates the chest or abdomen, he/she should be evaluated by a physician. Do not pull out the penetrating object.

Riders who have sustained blunt trauma can be more difficult to evaluate because internal bleeding might be hard to recognize. If an injured rider develops any of the symptoms below, call 911 for transport to the hospital immediately:

- Shortness of breath or difficulty breathing
- Pain with breathing
- Severe abdominal pain
- Coughing up or vomiting blood
- Abdominal tenderness
- Blood in the urine or from the rectum or vagina
- Signs of shock, including pale skin color, weakness, loss of consciousness, faintness, thirst, anxiety, rapid heart rate and skin that's cool to the touch

### Tips from Injured Riders

- Put toe stops on your stirrups.
- I always give my horses a quick check over. I touch their back, run my hands down their legs, and check their hooves and girth area to make sure there are no unseen injuries. Sitting in the saddle is not the time to find out the horse has a sore back.
- Always wear your helmet, and after a fall replace your helmet.
- If you fall or are kicked, it is wise to be safe and make sure there are no internal injuries. Often injuries to liver, spleen and other organs are not evident initially. Seek medical care immediately to be safe.
- Everything you do with your horse before you put the saddle on will result in a safe ride. Perform an equipment safety check before each ride and periodically during a lengthy one.



## After the Injury Happens

If you visit a physician or a hospital emergency department for diagnosis and treatment of your injury, make sure your treatment team knows you ride horses. It is important that they tell you what your injuries are and if there are any limitations on your activity. Before you ride again, be sure you have medical clearance. Any individual with persistent post-concussion symptoms that (a) worsen, (b) do not improve over time, (c) increase in number, (d) begin to interfere with the daily activities (for example, sleep disturbances, cognitive difficulties) and/or (e) cause personality changes (often noted by family and friends) should seek further evaluation.

The Centers for Disease Control and Prevention recommends, “Referral to a specialist who cares for patients with mild traumatic brain injury (MTBI) is appropriate if symptoms do not improve within three to five days post-injury, or sooner, and if the type or severity of symptoms is of concern. An assessment by a specialist such as a neurologist, neuropsychologist or physician with training and expertise in concussion management can be particularly valuable to further evaluate the patient’s situation and to help manage their condition (e.g. return to sports, school and work).” Getting help soon after the injury by trained specialists may speed recovery.

## Signs of a Concussion

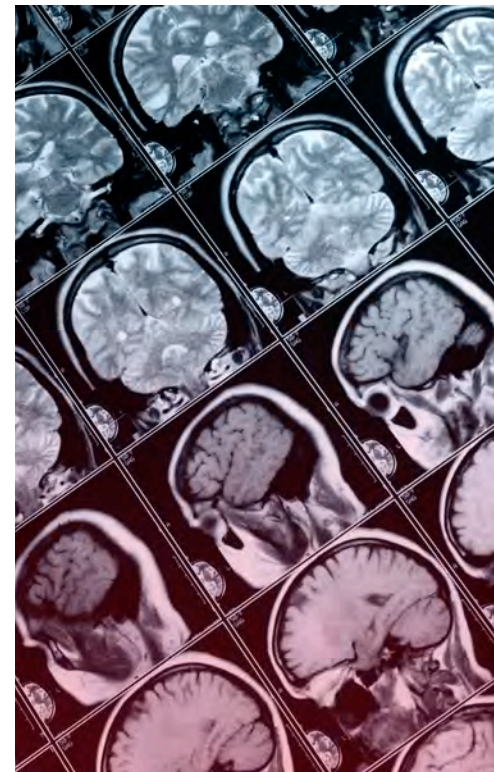
The signs and symptoms of a mild traumatic brain injury (MTBI), also known as a concussion, can be subtle. Symptoms of MTBI may not appear until days or weeks following the injury or might even be missed, as people might look fine even though they could act or feel differently.

- Headaches or neck pain that do not go away\*
- Lightheadedness, dizziness or loss of balance\*
- Mood changes (feeling sad or angry for no reason)\*
- Difficulty remembering, concentrating or making decisions\*
- Slowness in thinking, speaking, acting or reading
- Getting lost or easily confused
- Feeling tired all of the time, having no energy or motivation
- Changes in sleep patterns (sleeping a lot more or having a hard time sleeping)
- Urge to vomit (nausea)
- Increased sensitivity to lights, sounds or distractions
- Blurred vision or eyes that tire easily
- Loss of sense of smell or taste
- Ringing in the ears
- Loss of consciousness, although this does not always occur

*\*most common*

### When you visit your doctor, here are some important questions to ask:

- What can I do to help my recovery from this injury?
- When is it safe to get back to my daily routine, such as school, work, or riding and doing other physical activities?
- Do I need to see a specialist?



## Rehabilitation

Rehabilitative therapy is usually the next step in the recovery process following a serious injury. Major rehabilitation hospitals provide their patients with multidisciplinary therapies based on their diagnosis through inpatient, outpatient and home health care services. Treatment plans are individualized based on the patient's diagnosis and physical ability to participate in therapy. Daily activities could include physical, occupational, speech and/or respiratory therapies, and nursing care. Most rehabilitation hospitals offer numerous types of therapy along with technology and equipment for their patients. Upon discharge from a rehab inpatient stay, patients could be referred to an outpatient or home health program. Consistency is the key component in each patient's recovery. Therapy teams need to work together to determine the best recovery path based on the diagnosis.

### Therapies that could be prescribed after horse-related injuries

**Physical therapy** – assesses and treats the individual's mobility, strength and endurance needs.

**Occupational therapy** – assesses and addresses the individual's daily living activities and vocational skills and interests.

**Speech therapy** – treats speech problems and disorders, especially through use of exercises and audiovisual aids that develop new speech habits.

**Respiratory therapy** – manages acute and chronic breathing disorders.

**Aquatic therapy** – uses water to improve mobility.

**Hippotherapy** – utilizes equine movement to facilitate physical, occupational and speech-language therapeutic recovery as part of an integrated intervention program.

**Therapeutic riding** – (also known as **equine-assisted activity or adaptive riding**) improves balance, coordination, focus, independence, confidence, and motor and social skills of the patient. Therapeutic riding is beneficial to children and adults who have cognitive, physical and emotional conditions.

## Resources

Kentucky Vocational Rehab – [www.ovr.ky.gov](http://www.ovr.ky.gov)

Brain Injury University at Cardinal Hill Hospital – [www.cardinalhill.org](http://www.cardinalhill.org)

Brain Injury Alliance of Kentucky – [www.biak.us](http://www.biak.us)

Spinal Cord Injury Association of Kentucky – [www.sciak.org](http://www.sciak.org)



### Wear, tear and accidents – replacing your helmet

1. As a general rule, you should replace a helmet every five years. Time takes its toll on the material properties of a helmet mainly because of small dings and bumps, as well as the effects of temperature variations that occur over time, expanding and compressing the materials over and over again. If your helmet has been subjected to a lot of hours in a hot car or has been handled and used a lot, plan on replacing it closer to the three- or even two-year mark.
2. Replace your helmet anytime you're in an accident, whether the impact is severe or minor. Even if you don't see any damage, the inside material of the helmet where impact occurred could have been compromised. NEVER use a helmet that has sustained an impact.
3. Another reason to regularly exchange your helmet is the ongoing improvement in helmet technology.
4. Most companies have low-cost replacement policies. Read the manual that comes with your helmet. It is important to register your product with the manufacturer upon purchase and/or keep your receipt to show proof of purchase date.
5. While most people have a tendency not to read manuals, when it comes to your helmet, reading the manual could save your life!

## Psychological Consequences of Equine Injury

Equestrians who have been traumatized as a result of equine injury will often experience some psychological distress. For most injured riders it passes within a few weeks, but it's not uncommon for others to have difficulty coping with the consequences of trauma for a much longer period, and in some cases it can generate a long-lasting impact on their well-being. Some examples of the psychological consequences of trauma are intrusive thoughts, nightmares and flashbacks of the injury, avoidance of horse-related activities and other reminders of the injury, and sleep disturbances. When these last a long time, they can result in considerable social, occupational and interpersonal difficulties.

Equestrians often avoid dealing with psychological trauma. Talking about the injury without adequate help can cause additional distress. Also, equestrians may incorrectly think themselves weak or inadequate if they are unable to deal with their distress on their own. One other danger is that the fear and anxiety caused by the injury can negatively influence riding skills and communications between rider and horse and might result in repeated accidents.

To recover from equine injury:

1. Seek support from family and friends.
2. When necessary seek professional help.
3. Think of the injury as an opportunity to learn and grow both as a person and equestrian.
4. Consider working with an instructor or attending a clinic that addresses issues related to fear and recovery from equine injury.



### Could this happen to you?

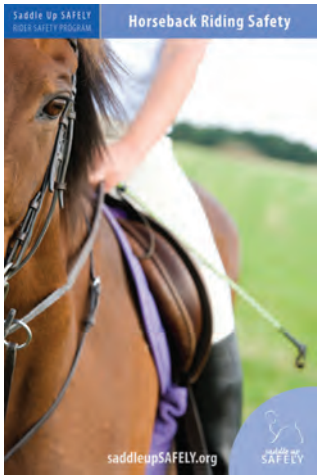
"I was trampled by another person's horse. My horse threw me while I was riding with five of my friends. I was just fine, got up to catch my horse, and the inexperienced rider in front of me pulled back on her reins and her horse knocked me back down in the narrow trail and trampled me. She then turned the horse around on top of me. I was stepped on at least 15 times, four on my head. My helmet saved my life. So it does not have to be damage from your own horse. I also had four broken ribs, multiple fractures, and hoof-shaped bruising on my legs, arms, face, chest and abdomen; but my head was protected. I would not be here today if it weren't for that helmet."

*Wearing a properly fitted approved helmet all the time is good advice.*



## RESOURCES

### Available Booklets



#### Horseback Riding Safety

This booklet reviews some of the facts about horseback riding injuries and reviews many basic safety tips for equestrians to use.



#### Horse Transmitted Diseases

While not common, it is possible to acquire some diseases from a horse. Some of the more common diseases are discussed and suggestions for prevention are offered.

If you would like more copies of **Horseback Riding Safety**, **Horse Transmitted Diseases**, or this booklet **Horse-Related Injury**, please call 859-257-1000 or 1-800-333-8874 (toll free).

#### SaddleUpSAFELY.org

The Saddle Up SAFELY website is always expanding, with new information constantly being added by our experts and visitors, especially those who have been injured. To read tips from other riders and notes from our review team of certified horseman safety experts, go to **SaddleUpSAFELY.org** and click on **Tips from our website visitors**. You may also share your injury or leave a tip on the site, as well as read Dr. Fernanda Camargo's horseback riding safety blog and columns from our safety experts.

### Could this happen to you?

"I was kicked in the hip by my horse while he was in cross-ties. It was a very cold day when I went to ride. I put my horse in cross-ties in his stall, removed his winter blankets and stuffed them into the grates of his wall hay-rack, which was located toward the rear of the stall. Then I proceeded to groom him. As I was brushing his flank, loin and hindquarters, unbeknownst to me, the blankets were coming loose from the hay-rack, slipping out of the grates. They have a nylon cover and upon coming loose entirely and falling to the ground they made a loud rustling sound. Immediately, my horse cow-kicked at the sound and hit me in the hip. This all happened so fast, I had no idea what had just happened. I was on the ground in pain, so I rolled over and crawled out of the stall. Even though I was wearing heavy winter jodhpurs, the blow had torn the fabric and I was bleeding. The story all came together for me as I was lying in the aisleway, looking back into the stall. Hence, my first and hopefully last ambulance trip."

*Stalls need to be safe for horses. Take blankets and other horse equipment out of the stall and store them in the tack room.*



## Further Reading

The best way to learn horseback riding and horse handling safety is from an experienced instructor. But horseback riding safety books are another option to supplement your learning. Many of the books can be found in libraries and all can be purchased inexpensively as used books in used book stores or online. Some examples of good reading include:

### Early publications

*Kauffman's Manual of Riding Safety*, Sandra Kauffman, 1978

*Walter Farley's How to Stay Out of Trouble with Your Horse*, Walter Farley, 1981

*Riding and Stable Safety*, Ann Brock, 1983

### More recent publications

*Safe Horse Safe Rider*, Jessie Haas, 1994

*The Horse, Safety and the Law*, Vanessa Britton, 1994

*Happy Trails*, Les Sellnow, 2004

*101 Trail Riding Tips*, Dan Aadland, 2005

*Equine Emergency Bible*, Karen Combe, 2007

*Horsemanship Composite Manual*, Certified Horsemanship Association, 2008

### For children

*Safety*, Toni Webber, 2004

*Horse Safety*, Elizabeth Moyer, 2008

Be sure to check out the resources below for more in-depth information about horse-related injuries and how to prevent them from occurring.

## Other Equestrian Safety-Related Resources

### American Riding Instructors Association

Promotes safe, knowledgeable riding instruction and certifies training for teaching.

[www.riding-instructor.com](http://www.riding-instructor.com)

### Centers for Disease Control & Prevention

Offers fact sheets, videos and podcasts on adult and child safety for horseback riding and horse handling.

[www.cdc.gov](http://www.cdc.gov)

### Equestrian Medical Safety Association

Provides education, research and resources to protect riders and improve safety within equestrian sports.

[www.emsaonline.net](http://www.emsaonline.net)

### Pegasus Helmets

Offers videos on fitting a helmet and a toll-free number for advice.

[www.pegasushelmets.com](http://www.pegasushelmets.com)

### Troxel Safety Center

This helmet manufacturer's site contains useful tips from professionals in the field.

[www.troxelhelmets.com/safety](http://www.troxelhelmets.com/safety)



## ACKNOWLEDGEMENTS

Saddle Up SAFELY acknowledges the assistance of the following individuals and organizations for their contributions to this booklet.

**Ron Friedson**  
**Pegasus Helmets**  
95 Bayberry Lane  
Westport, CT 06880

**Troxel Helmets**  
San Diego, CA 92121  
[www.troxelhelmets.com/safety](http://www.troxelhelmets.com/safety)

**Bari Lee Mattingly, RN**  
UK Level I Trauma Center  
800 Rose St.  
Lexington, KY 40536

**Scott Livingston, PhD, PT, ATC, SCS**  
University of Kentucky  
College of Health Sciences  
Lexington, KY 40536

**Daniel Nahum, MD**  
UK Psychiatry  
3470 Blazer Parkway  
Lexington, KY 40509

**Staff of Cardinal Hill Rehabilitation Hospital**  
2050 Versailles Road  
Lexington, KY 40504

**Gin Preston**  
Equestrian  
Lexington, Ky.

**Stephanie Church**  
Editor-in-Chief  
TheHorse.com  
Lexington, Ky.



**UK Ag Equine Program within  
UK's College of Agriculture  
offers world class research,  
undergraduate and graduate  
opportunities and year-round  
activities and educational  
materials for horse owners,  
farm managers and  
equine professionals.**

Go to [saddleupSAFELY.org](http://saddleupSAFELY.org) and share your tips on how you have avoided/reduced injuries while riding or handling your horse and you could be eligible for prizes. Any submission used on the UK HealthCare Saddle Up Safely website is eligible to win prizes including helmets.

## SADDLE UP SAFELY PARTNER ORGANIZATIONS

Alltech	Medtronics Inc.
Ariat International Inc.	Mid-East Kentucky Quarter Horse Association
Brain Injury Alliance of Kentucky	National Thoroughbred Racing Alliance
Brumfield Hay and Grain Co.	North American Racing Academy
Buffalo Trace Mounted Patrol	Northern Kentucky Horse Network LLC
Cardinal Hill Healthcare System	Ohio Quarter Horse Association
Certified Horsemanship Association	Pegasus Helmets
CMD Health	PHI Air Medical of Kentucky
DiscoverHorses.com	Point Two Air Jackets USA
Equine Guelph	Red Bay Group LLC
Equestrian Medical Safety Association	Rood & Riddle Equine Hospital
Folck Insurance	Safe Kids Fayette County
TheHorse.com	Troxel Helmets
Jockey's Guild	UK College of Agriculture Equine Initiative
Junior League of Lexington	UK College of Public Health
Keeneland	UK Physical Medicine & Rehabilitation
Kentucky 4-H Horse Program	UK Psychiatry
Kentucky Department for Public Health	UK HealthCare
Kentucky Equine Education Project	UK Spinal Cord and Brain Injury Research Center (SCoBIRC)
Kentucky Horse Council	United States Pony Club Inc.
Kentucky Horse Park	United States Dressage Federation
Kentucky Horseshoeing School	United States Equestrian Federation
Kentucky Injury Prevention and Research Center	US Rider Equestrian Motor Plan
The Lane Report	Welch Printing Company
Lexington Herald-Leader	

## Purpose of Saddle Up SAFELY

Saddle Up SAFELY is a coalition of 40-plus medical, public health, educational, retail and horse organizations from the United States and Canada led by University of Kentucky's UK HealthCare and UK College of Agriculture Equine Initiative. SUS is actively supported by the U.S Pony Clubs, Certified Horsemanship Association and the Kentucky 4H Horse Clubs. Saddle Up SAFELY goals are to: 1) raise awareness and understanding of rider/handler safety; 2) reduce the number and severity of horse-related injuries; and 3) encourage injured riders to return to the sport safely.

## Resources available

Saddle Up SAFELY offers a number of brochures on its website at [saddleupsafely.org](http://saddleupsafely.org). In addition, you can find an online safety quiz, expert columns and safety blog by Dr. Fernanda Camargo. You can also find us on Facebook. Perhaps the most valuable resource is the collection of more than 300 safety tips offered by our website visitors. We encourage anyone who has been injured to share their story and the advice they would give others to avoid or reduce the severity of a similar accident or injury.



If you have been injured or have caught a disease from being around horses, tell us about how it happened and how it might have been prevented by going to **saddleupSAFELY.org** and using the advice/tip registry.

Brochures available online at **SaddleUpSAFELY.org**  
or call **859-257-1000** or toll-free **1-800-333-8874**.

## How to reach us

**Saddle Up SAFELY**  
2333 Alumni Park Plaza, Suite 300  
Lexington KY 40517

Email Us: [saddleup@uky.edu](mailto:saddleup@uky.edu)  
Facebook us: [www.facebook.com/pages/saddleupsafely](http://www.facebook.com/pages/saddleupsafely)  
Phone: **859-257-1000** or toll-free **1-800-333-8874** / Fax: **859-257-5509**

*Information in this booklet developed by*

University of Kentucky

---

UK HealthCare

---

UK College of Agriculture  
Equine Initiative

---

UK College of Medicine

---

UK College of Public Health



**saddleupSAFELY.org**