

# How Hard is Your Head?

Wearing a helmet is an important part of horseback riding. Choosing the proper design and build of a helmet is key to riding safely.

Unfortunately, equestrian accidents and falls can happen at any time. While these accidents are a part of the equestrian world there are pieces of equipment that can help prevent some of the injuries that make these accidents life changing, if not life threatening. In this case, we are talking about headgear designed specifically for the equestrian. And we are talking about accidents that can occur in every discipline, to riders who are youth, adult amateur, or professionals! No one is exempt from a potentially life changing incident.

As more and more medical communities, equestrian organizations, and local and national sports organizations become aware of the dangers of multiple injuries to an athlete's head, the safest methods of protecting the brain has become a science, an industry, and even a mandate. While no helmet can protect against every head injury, studies show a dramatic reduction in the severity of injuries when a properly fitted helmet is worn every time you ride a horse.

- In the United States, each year approximately 70,000 people are treated in emergency rooms because of equestrian related activities.
- 60% or more of horse-related deaths are caused by head injuries.
- Helmets can reduce this possibility by 70-80%.
- Equestrian head injuries were the leading cause for hospital admission in patients with equestrian-related injuries.

- Helmets that are not safety certified offer no protection whatsoever and are strictly for cosmetic purposes.
- ASTM/SEI approved helmets have reduced all riding-related head injuries by 30% and severe head injuries by 50%.

## Design

Helmets for each sport have design characteristics and safety features specifically for that activity. So, if you are riding horses, wear a helmet specifically designed for riding horses. You wouldn't wear figure skates to play hockey. The design of equestrian helmets protect a rider's head in two ways. First, your helmet cannot be pierced by sharp objects, such as sticks, jump cup pins, and other various materials found on trails or in the ring. The second way is through the combination of the helmet and the foam to cushion your head from hard impacts. These are the reason for safety standards and testing. Any model of ASTM/SEI approved equestrian helmet is tested in a lab to be sure they meet or exceed required standards of safety. Proof of this is the SEI seal inside the helmet.

Equestrian helmets have a unique design different from helmets from other sports. Made in various shapes and many different sizes, some of the differences are that they cover a broader area of the head, and they account for the potential differences of performance, such as the terrain, speed of travel, and the natural objects that may suddenly become an issue for the horse. While your bike or your skis do not have a mind of their own, your horse certainly does! Another feature is that the helmet is designed to slide across environmental objects like a broken log or sharp stick. The retention system (harness) is designed to secure the helmet to the rider, but the helmet should be light enough to not interfere with balance and abilities. Different styles of helmets have different retention systems. Be sure you read the instructions for adjustment of your helmet.

# Helmet Build

The foam in your helmet is designed to protect your head in the case of a serious fall or other forceful impact. Concussion against the helmet during impact can cause the foam to flatten. Unlike memory foam, this foam never recovers and may no longer be as protective as it was prior to impact. After a helmet has been in that situation it needs to be replaced! The integrity and structure have been compromised.

In addition to foam being compromised by a fall, glues, resins and additional materials used in creating the helmet also may break down through use and age. Residues from sweat, oily hair, and cosmetic products further contribute to deterioration. For these reasons it is recommended that a helmet should be replaced after 5 years. The date a helmet is manufactured can be found in the helmet, with the SEI seal.

You may find that some manufacturers will offer a new helmet at a reduced cost after the original has been deemed necessary to be replaced due to a fall or serious concussion against the helmet. If you have your user's manual, or tag from the helmet, that information can be found there. However, you may need your original receipt.

## Storage

- Helmet foam can be damaged by exposure to extreme heat, UV rays and chemicals. Therefore, helmets should not be stored anywhere that can be excessively warm, out in the sun, or near chemicals. This includes a hot car or a tack trunk/box that contains fly spray, bleach or other chemicals.

## Care

- To clean a helmet, use a mild detergent or, for a velvet helmet, use a brush.

# Proper Adjustment

A properly fitted helmet is essential when working with horses. Your brain controls your body, so your head is the most important thing to keep safe. A helmet that fits correctly fit is one that will also be more comfortable and more likely to be worn.

As you adjust your helmet, keep in mind that the retention straps or harness design are quite different on various makes and models of helmets. When you first get your new helmet, be sure to read the instructions for that helmet, regarding adjustment. When you are in the market for a helmet, whether buying a new one, or borrowing one from a friend, here are some tips for fit:

- Try it on and adjust it.
- Move front/back and side/side, with your hand on top of the helmet. Do your eyebrows move?
- Bend over from the waist. Does it stay on?
- Wear it for 15 minutes. Do you see forehead marks?

Fit has a direct impact on the effectiveness of a helmet. A comfortable helmet is also more likely to be used regularly. It is a good idea for a rider to try on many helmets before settling on one, as each model fits a little differently.



# use your head

## DO THE FIVE-POINT SAFETY CHECK

when selecting your riding helmet.

### 1. FRONT

The helmet should sit firmly in place about an inch above the eyebrows.

More than 1" = too small.  
Less than 1" = too big.

### 2. SIDE

The straps on the side should meet just below and in front of your earlobes.

### 3. BACK

A snug-fitting helmet is best. The harness on the back should prevent the helmet from moving forward. Avoid using your hair to create a proper fit.

### 4. THROAT

The strap under your chin should be snug but not tight. Tilt your chin up and down to ensure a proper fit.

### 5. TEST

Grasp the helmet with two hands and rock it back and forth. The skin and eyebrows should move with the helmet.



Always choose to wear a certified riding helmet.



No helmet can protect against every head injury. However, studies show a dramatic reduction in the severity of injuries when a properly fitted helmet is worn every time you ride a horse. Replace your helmet every five years or immediately after a direct impact from a fall.

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# What does ASTM/SEI Mean?

The **ASTM (American Society for Testing and Materials) Certification** Program covers products (including materials, processes, and services) and personnel for industries that desire an independent third-party demonstration of compliance to standards and/or are facing regulatory pressures to prove compliance to standards. The ASTM standard is widely used internationally as a basis for the standards developed in other countries.

**SEI**, (Safety Equipment Institute) a Global Leader in Certification, is a subsidiary of ASTM International, which certifies protective equipment, including head protective products. Any product bearing the SEI mark is manufactured to stringent requirements. In the case of equestrian helmets, every helmet bearing the SEI mark must be able to satisfy the impact and retention requirements of the ASTM standard, which is proven to reduce the risk of head injuries in equestrian activities.

So, give it some thought. How much is your head worth? Many top professionals in all disciplines are on the bandwagon to see that all equestrians wear a helmet so they may continue to enjoy their passion safely!

## Resources

- Children's Safety Network
- National Ag Safety Database
- American Medical Equestrian Association
- Centers for Disease Control and Prevention (CDC)
- CHA-Julie Goodnight
- ASTM International
- Alberta Agriculture and Forestry