## First Aid and Wound Care

### Best advice is to be prepared, stay cool



Initial handling of an injury may make a difference in how quickly a horse heals

he Thoroughbred horse is a refined and elegant animal, endowed with natural speed and strength along with an engaging personality. Athletic ability makes this breed a stellar competitor in many equestrian pursuits, with many occasions to incur sports-related injuries. The Thoroughbred's curious temperament also often leads him to stick his nose (or body) into potentially harmful situations. Whether at work in training and competition or lounging around in paddock or pasture on the farm, horses can get into trouble, sometimes acquiring distressing injuries. As an owner, trainer, or farm manager, you can take charge of the situation to affect the outcome. Initial handling of an emergency injury may make a difference in how quickly a horse heals.

#### Lacerations

Dr. Jennifer Feiner responds to many emergencies as part of her veterinary work at Hagyard Equine Medical Institute in Lexington. She noted, "Most common first aid situations seen on Thoroughbred farms are lacerations and puncture wounds." When faced with a wound, you can take steps to gather information

about its significance and severity until your vet arrives. Some injuries may appear as wide-open lacerations; others, as only a small hole through the skin without the ability to gauge its depth. Even a large laceration might hide some deeper penetration into significant structures.

First off, with any wound, check your vaccination records, and be sure your horse's prophylactic tetanus status is up-to-date.

Puncture wounds occur not just from penetrating objects but also from blunt trauma, such as a kick from another horse—tissues separate to produce a tunnel (or tract) beneath the area of impact. An open wound or a puncture into a joint or tendon sheath needs immediate, urgent veterinary care. In the meantime, you should strive to protect the wound from further trauma and contamination by cleaning and covering the area.

Feiner recommends cleansing the wound with cold, running water to assess the extent of the injury better. It also keeps injured tissue viable and moist until the vet arrives. If the horse won't allow cold hosing or if it appears the wound is so deep that water immersion may be a disadvantage, then clean it as best as possible with salt water ( $\frac{1}{2}$  tablespoon salt per quart of water)

and antiseptic scrub (povidone iodine or chlorhexidine). Rinse well, dry, and then apply a bandage.

#### **Bandaging Particulars**

While thorough scrubbing and cleansing of a wound have far greater impact on minimizing the risk of infection than do topical wound dressings, salves and creams keep tissue supple and moist while providing some slight therapeutic advantage. "Povidone-iodide gel or silver sulfadiazine cream are excellent wound dressings," Feiner said. "Both are antimicrobial and keep the area soft and pliable without promoting the growth of proud flesh. I tend to stay away from nitrofurazone not only because it is believed to be carcinogenic (must be applied with gloves), but it is also known to stimulate the growth of proud flesh."

Triple antibiotic ointment is another useful topical treatment to apply to equine wounds. Whatever medication you decide to put on a wound, water-soluble wound dressings are best as they are easily washed away in case your veterinarian decides to suture the laceration; petroleumbased ointments and salves adhere to the tissue, making it challenging for stitches to hold.



As with any wound, check your vet records first to be sure your horses' tetanus status is up to date

Once the wound is cleaned and dressed, cover it with a sterile, non-stick, absorbent dressing (such as a Telfa pad) and then appropriate bandaging materials layered over that. Feiner emphasized, "If you're uncomfortable with placing a bandage or are unfamiliar with proper bandaging

technique, don't put it on! A poorly applied bandage is much worse than no bandage at all."

Feiner prefers combine cotton for bandage padding and Vetwrap or flannels for the outer layers. If Vetwrap is used, it is best to apply sufficient padding beneath





it, or instead use elastic, adhesive bandage material (such as Elastikon), which tends not to overtighten.

Feiner instructs on bandaging particulars:

"Be sure to use firm, even pressure, always tightening the bandage by pulling toward you across the cannon bone and then laying it down evenly along the tendons coursing down the back of the leg—don't pull as you wrap over the tendons. Even pressure is a key feature to good bandaging. To make sure that this is achieved,

flick the finished bandage with your fingers to check that it makes the same sound from top to bottom," she said.

As to length, Feiner recommends a proper stable bandage fits from just beneath the knee to the ergot located at the bottom of the fetlock joint. She points out an improper bandaging technique that is restrictively tight can lead to devastating injuries, such as tendon bows or tendon ruptures. "On the other hand, if a bandage is placed too loosely," said Feiner, "there is a possibility it could slip down or partially off, inadvertently tightening like a tourniquet lower on the limb or tangling in a

horse's legs to create panic."

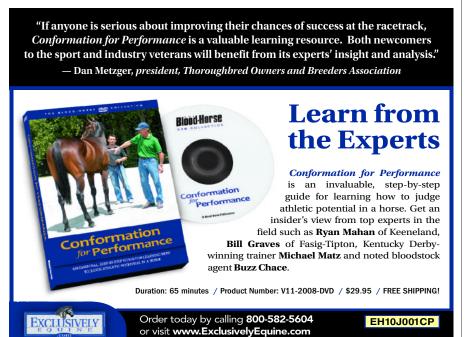
#### **Hemorrhage Control**

Some lacerations sever veins and various-sized arteries and just won't stop bleeding. In such cases, Feiner recommends, hosing the area well and applying a clean, firm-fitting bandage until the vet arrives. In many cases the pressure itself will stop the bleeding. Hosing with cold water reduces the initial inflammation, and cleaning the area removes contamination, which reduces the chance of infection.

The big trick with applying bandage pressure to control hemorrhage is to avoid the temptation to peek at the wound to see if the bleeding has stopped. Each time you move the bandage, you disturb the clots, thereby having to staunch the flow of blood again. Patience is key—in most cases, it takes at least 12 minutes for bleeding to cease in a small arterial bleeder and could take as long as an hour. Application of an ice pack around the bandaged wound also slows the bleeding as the cold encourages blood vessels to constrict. Elevating the injured limb onto a stump or mounting block also helps to stem the flow, if the horse allows it.

#### **Hoof Puncture**

Puncture wounds occur in any location, not just on the torso, face, or limbs. Stray nails or wires can make their way into soft hoof structures like the sole or frog. Feiner offers some strong recommendations about a hoof puncture: "If a nail is evident in the foot, do not remove it! Instead, place a heavily padded hoof pack and perhaps even a block of wood around the nail to



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256 370 7555 800 624 1873 www.LifeDataLabs.com cservice@LifeDataLabs.com keep it from travelling further into the tissue in the event the horse places pressure on its foot. Then, with the puncturing object in place, the veterinarian can radiograph the foot to determine the depth and severity of the tract. Removal of the foreign object may preclude exact determination of the extent of damage," she said

However, if it is absolutely necessary to remove the penetrating object before the vet arrives, circle the area with indelible ink to delineate the location of the puncture. Before removing the object, it might also help to take a photo with your digital camera or cell phone to show to the vet. Once the puncturing object is removed, clean away all dirt and debris and scrub the entire hoof well with antiseptic soap. Rinse and dry, and then pack it in a bandage or a synthetic boot to keep the hoof clean until your veterinarian arrives. This keeps contaminating material from migrating farther into the puncture hole.

#### **Fractures**

The sheer strength of a horse on relatively spindly legs makes bone fractures a potential risk. These may be incurred during athletic activities or from self-inflicted trauma or kicking confrontations with others. Feiner reports that common fractures are related to the splint bone nestled along the cannon bone.

"These usually present as a plaque of edema or discrete swelling along the side of the leg around the fractured splint. Often the horse is not particularly lame, but the swelling is painful when manipulated or probed," she said,

Applying ice is invaluable to minimize inflammation and swelling—ice the area for 30-60 minutes and then apply a support bandage. Feiner suggests using a dry stable bandage or a poultice to control the swelling until your veterinarian can examine the injury.

If you suspect a lower limb fracture of a large bone (short or long pastern bones or cannon bone), apply a thick, supportive bandage, and then further stabilize the area by applying wooden staves or PVC pipe (cut in half lengthwise) laid vertically along the well-padded limb. Be sure to extend the length of these supports to include the joints above and below the suspected fracture area. Feiner advised, "In general, with lower limb fractures, the most important thing is to stabilize the limb as best as possible and keep the horse quiet until emergency care arrives."

#### Colic

Horses, being horses, are prone to episodes of colic, often for no apparent reason. When faced with a horse in abdominal distress, Feiner recommends keeping him as quiet as possible and getting an

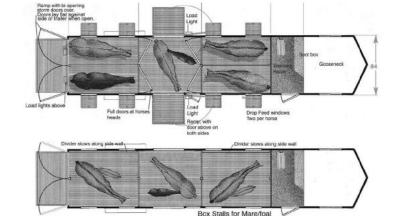


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accurate temperature, pulse, and respiration rate, provided the horse isn't behaving too violently. She states that the heart rate (or pulse) and the rectal temperature are

the most important parameters to obtain, and this information should be conveyed to your veterinarian. Color of the mucous membranes of the gums is also helpful information for guiding an owner and the veterinarian about the urgency of the colic—a pink color such as that seen beneath your fingernail has a better prognosis than a pale or muddy hue. And, if you have a stethoscope, use it to assess quantity of gut sounds in both flanks. Learn all you can about what is normal under normal circumstances so you are able to compare these findings during an abnormal health crisis.

Feiner also advises removing hay and feed from the colicky horse's proximity. It is best to wait until your veterinarian has a chance to evaluate the horse properly before letting the horse eat in case a colic episode ends up requiring surgery.

Some horse owners and caretakers are tempted to medicate a colicky horse with flunixin meglumine (Banamine), but beware that this can confuse physical exam findings. This non-steroidal anti-inflammatory drug (NSAID), particularly when given at the full-label dose, may mask clinical signs often used to differentiate between a medical or surgical colic condition. Under the influence of an NSAID, a horse may appear to feel better, thereby delaying appropriate care. In addition, if this drug is given orally or intramuscu-

larly rather than intravenously, there is a significant lag time before it exerts its pain-relieving effects. It is better to wait until your veterinarian can examine the horse, make a diagnosis, and then give an appropriate intravenous dose of NSAID in conjunction with other relevant medical treatment.

#### Administration of Medications

While many owners and trainers feel they are adept at administering intravenous medications, Feiner urges caution when giving IV medications.

"Always check first that the medication is labeled to be administered IV! For example, procaine penicillin G is extremely dangerous and potentially fatal to both horse and handler if given in the vein. Secondly, consider the rate for administration of an injection—potassium penicillin should be administered slowly over five minutes to prevent a dangerous potassium imbalance." she said.

Feiner notes that another important consideration of some drugs is that they can be extremely harmful if accidentally administered outside the vein where they cause a caustic reaction to surrounding tissue—examples of such drugs are phenylbutazone ("bute") and tetracycline.

Feiner offered some practical tips for IV injections: "When giving an IV injection, use the upper third of the neck and hold the vein off well below where you are injecting. Insert the needle at a 45-degree angle with the bevel end facing you, without the syringe attached." Venous blood oozes through the needle whereas arterial blood spurts—nothing should ever be administered into the carotid ar-



### First Aid Kit



Confer with your veterinarian about the best supplies to stock in your first aid kit so you are prepared for most situations. Other items you may wish to include a few doses of oral antibiotics and a syringe for administration, eye ointment, and disposable razors to remove hair surrounding a wound, gauze sponges for wound scrubbing, bandage scissors, and a hoof boot.

Feiner recommends the following if she could only have a dozen items in a first aid kit:

- Thermometer preferably a quick-reading digital
- Stethoscope to obtain accurate heart rate and listen to gut sounds
- Flashlight for examining eyes and wounds
- Flunixin meglumine (Banamine) paste
- Phenylbutazone (Bute) paste
- Povidone iodine (Betadine) or chlorhexidine (Nolvasan®) scrub
- Non-stick sterile wound dressing (Telfa pad)
- Wound ointment or salve povidone-iodine, silver sulfadiazine, or triple antibiotic
- Bandage padding combine pad, gamgee, or cotton
- Vet wrap or Elastikon for bandaging
- Animalintex –poultice pad good for managing foot abscesses or leg wounds
- Duct tape

tery as this could cause seizures and/or be fatal. Once you are certain you are in the vein, it is safe to attach the syringe. She continued, "Be sure to draw back on the syringe until you see blood entering the syringe—this 'flash' assures you that you're in the blood vessel. Give half the dose and draw back again to check for blood before administering the rest of the medication. If the horse moves during administration, detach the syringe to make sure you're in the vein and not the artery, and then always be sure to draw back on the syringe and again check for a 'flash'

before administering more of the drug."

Similar precautions should be taken with any intramuscular medication—in this case, check that no blood is coming through the needle to ensure that it is placed in the depths of a muscle and not into a blood vessel. Inadvertent intravenous administration of intramuscular medications or vaccines can be fatal.

Keep in mind that an insured horse may not be covered by the insurance agency in the event of a fatality or medical emergency caused by non-veterinarian administration of any pharmaceutical product, particularly if given intravenously.

#### Take Home Message

When facing an equine emergency, it helps to be prepared and to keep a cool head. Assess the extent of the crisis, place a call to your veterinarian to gather advice as to what to do while waiting for him or her to arrive. With a well-supplied first aid kit and some basic knowledge of how to proceed, you can attend to the most urgent requirements of preventing further damage while easing a horse's discomfort and distress.

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# *letters* > 2



#### Time Not On Racing's Side

I was sitting in the grandstand at Saratoga for the sixth consecutive day last week and it suddenly hit me right between the eyes: the No. 1 thing horse racing could do to attract new fans is to cut down on the amount of time between races. For years, my wife had complained about how bored she was sitting in the grandstand on Saturday afternoons at Laurel. I had chalked it up to her not being real interested in the races. After six consecutive days of playing only the live Saratoga card, I realized what she had been talking about. I was bored.

All other sports are concerned with the length of their event. All of them have some sort of shot clock, play clock, time limit in between pitches, etc., with the goal of getting the game completed in under three hours; the closer to two, the better. I was sitting there realizing for the first time that most people do not have six hours to devote to an entire horse racing card on any afternoon, let alone a weekend. All week I had arrived at Saratoga at 11:30 a.m. and left after the last race, which on a 10-race program was close to 6 p.m. That's two entire games of any other sport, maybe three. Who has the time to devote to this other than a deranged horseplayer like myself?

The answer is no one.

There was a time when I needed every second of the 25-30 minutes between races to pick a winner, but now with the Internet, serious players do the bulk of their work long before arriving at the track. The novice does not need 25-30 minutes between races. In fact, my wife normally has her winners for all 10 races picked by the third race. Naturally, the lengthy time between races would still be needed on those days where long wagering lines exist, but you can count the number of those days on one hand for an entire year (Triple Crown, Breeders' Cup, Travers).

The quicker turn around would make it more difficult to play multiple tracks at the same time, but perhaps we would see staggered starts. Laurel may start at noon and be done by three; Belmont could start at three and be done by six. The enthusiast would still be able to play all the races they always played, and maybe the shorter three-hour time commitment would lure some new fans out to the track.

The naysayer tracks will claim that they need every second of the present time between races to get those wagering dollars in because so much money is bet in the last minute. The truth is that most of us are holding out until post time to place our bets. It doesn't matter to us whether that post time is 25 minutes after the previous race or 15. There are some legitimate logistical issues to deal with, but they all can be overcome with the proper organization.

Jody Bloomquist Bristow, Va.

#### **Cost Conscious**

With great surprise I read in the Sept. 4 issue of *The Blood-Horse* that Stacy V. Bearse, the president and CEO of Blood-Horse Publications, is retiring after 20 years of excellent service (page 2537). It is sad to see that the industry is losing great members at this time of difficulty and financial problems. The Thoroughbred industry is the most sophisticated sport and that's why it is called "the Sport of Kings."

Racing is going through one of the most challenging times and we need changes, better planning, and lower costs so the common people can buy, race, and bet on the horses. On Aug. 23, 2008, *The Blood-Horse* published an article which I believe was very remarkable about the vets' bills and general expenses regarding the racehorses, and to which I made a comment on your editorial page weeks later.

We should be practical, competitive with other sports, try to keep the good workers and the people with lots of experience, and lower the cost of maintaining the horses.

Dr. Ed Reveiz, Des Moines, Iowa

#### Have a Seat

I just read the article on BloodHorse.com stating ticket sales for the Breeders' Cup at Churchill Downs are ahead of last year's figures for Santa Anita. Numbers can support whatever someone wants, but Churchill Downs has no apron standing room available. If you want to be able to see the horses run and not just watch a monitor, you have to have a reserved seat.

Santa Anita has a huge apron and good viewing that, for the last two years, was crowded with fans watching the races live. After attending all the Breeders' Cup events in person, I have come to the conclusion that Churchill has been set up to maximize revenue on Kentucky Derby/Oaks days and now the Breeders' Cup, too, hence the mediocre skinny aluminum benches and poor sight lines due to the shallow pitch of the apron that they pass off as reserved "seating."

Don't be so fast to tout the increase in presold tickets over last year. It's not an "apples to apples" comparison.

> Darrel Whynot Barrington Hills, Ill.

Letters may be edited for publication and must include the author's name, address and daytime telephone number (for verification).

