

Equine Wound Care

Because of their size and nature, horses are prone to minor and major scrapes, cuts, and lacerations

Overview

Horses are naturally inquisitive creatures with well-developed flight responses. Because of their size, horses tend to be accident prone, making both minor and major wounds common occurrences.¹ The severity of a horse's wound(s) can be deceiving. Large wounds accompanied by profuse bleeding often appear worse than they are, particularly if they involve only superficial structures. In contrast, small wounds occurring on or near a joint or tendon might not present a dramatic flow of blood or shreds of tissue initially but could ultimately prove to be more serious, intensive, and expensive to manage due to the potential for underlying structures to become infected.²

Common types of wounds that affect a horse's soft tissues include penetrating or puncture wounds, lacerations, and abrasions.

Be Prepared

Effectively providing first aid to an injured horse requires having easy access to a fully-stocked first-aid kit. Kits can either be purchased pre-assembled or custom made. Essential first-aid kit items can include:¹

- Clean towels to stop a wound from becoming more contaminated and to apply pressure to stop bleeding;
- Flexible, self-adhesive bandages (e.g., Vet Wrap) or stable wraps to hold the towels in place;
- A flashlight to closely examine a wound;
- Bandage scissors;
- Digital thermometer and stethoscope (to monitor horse's vital signs); and
- Your veterinarian's phone number.

Up-to-date vaccination records for all horses in the barn should also be readily accessible, particularly the tetanus vaccine status. Tetanus is a potentially fatal neurologic disease caused by toxins produced by the bacterium *Clostridium tetani*. According to the American Association of



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Small wounds occurring near a joint or tendon might not present a dramatic blood flow, but could ultimately prove to be serious and expensive to manage.

Equine Practitioners, tetanus is a core vaccine that should be administered annually.³ In some cases (e.g., unknown vaccination history, puncture wounds, or other high-risk injuries) veterinarians will recommend boosting the tetanus vaccine.

Be familiar with your horse's normal behavior and heart and respiratory rates so you can readily recognize when something is wrong.^{1,4} Also consider taking an owner education seminar on wound management or first aid. Try contacting a local Cooperative Extension System Office (www.csrees.usda.gov/Extension) for more information and to learn about available courses. Alternatively, there are many books available about equine first aid.

Immediate First Aid

In an emergency it is paramount to remain calm. Place your horse in a quiet, well-lit area to assess the extent of the injury and to prevent further injury or pain.¹ Be cautious around your horse as pain and fear can cause even the quietest animal to behave in unpredictable ways. Apply direct

pressure to wounds that are pulsating or bleeding profusely using clean or sterile towels to stop or slow blood flow.

Avoid wiping blood repeatedly from the area as this can cause additional trauma to the tissues and might contaminate the wound with foreign materials (e.g., grass, dirt, manure). Avoid using cotton or wool products or applying liquids, sprays, powders, "second skin" products, antiseptics, ointments, etc. It is also not advisable to apply tourniquets or cold hose the wounds. The latter intervention in particular can increase wound contamination and force foreign material further into the wound, which ultimately delays healing. In most cases, less is more. Simply wrap the wound to minimize additional contamination, apply steady pressure to slow or stop the bleeding, and try to keep your horse quiet.

Once the bleeding is under control, quickly examine your horse to locate the exact anatomic location of his wounds. Some other and potentially more serious wounds can easily be missed during your initial, perfunctory examination.

Call Your Veterinarian

A frantic call to your veterinarian is generally not indicated, but most wounds will benefit from a professional evaluation (preferably sooner than later). This is particularly true for wounds that are:

- Penetrated through the entire skin;
- Near a joint;
- Severely contaminated with debris and foreign materials;
- A result of a puncture; and/or
- Involve the lower limb below the knee or hock.¹

Profuse bleeding is another indication that your horse requires immediate veterinary attention. Horses have approximately 10 gallons of blood in their bodies and can lose about 4 gallons and still survive (with aggressive treatment).

Not all wounds require suturing, but

those that do need to be examined within a few hours of injury or sutures will no longer be an option (infection risk is too high).

Wound Management

In general, veterinarians take a standardized approach to wound management. Wounds are first cleaned of foreign material and dead tissues. Contaminated wounds heal more slowly than clean wounds and are associated with more complications. If necessary, the wound is subsequently sutured. Finally, the wound is bandaged to keep it clean. A variety of bandaging material is available, and selection will depend on the type and location of the wound. A common bandage is a three-layer bandage—a special type of bandage is placed directly on the wound, held in place with a layer of cotton followed by a layer of flexible, self-adhesive, conforming bandage. Specialty dressings are also available. These include products that contain maltodextrin, calcium aginate, polyethylene glycol, chitin, hydrogels, silver chloride, charcoal, antibiotics, collagen, extracellular matrix, among others.⁵ Platelet-rich

plasma also has been advocated in wound management.^{5,6}

Systemic antibiotic therapy, exercise restrictions, and daily or near-daily assessment of the wound for signs of infection, excessive scar tissue (also called proud flesh) development, prolonged healing, persistent lameness, etc., are typically included in post-wound management plans. Pain management also is indicated in most cases. A veterinarian should prescribe all medications used, including topical dressings.

Additional Tools

Serious wounds often necessitate advanced management as recently described by Ted Stashak, DVM, MS, Dipl. ACVS.⁵ Some horses need to be referred to a local clinic to explore the depth or extent of the wound margins under general anesthesia. If the wound involves a joint, tendon, or tendon sheath, surgical repair or lavage (washing) of the wound is likely needed. In these cases veterinarians could recommend radiographs (X rays) or ultrasonography to help assess the integrity of nearby

structures, to rule out fractures and tendon injuries, or to locate foreign bodies (e.g., pieces of wood).

Prevention

While you can't prevent all injuries, routinely inspecting your horse's environment, tack, and equipment for potential hazards minimizes his chances of injury! 🐾

KEY REFERENCES

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5. Stashak T. Current concepts in wound management in horses. Chile Veterinary Conference 2006. www.dragpharma.cl/pdfs/apuntes2.pdf
6. Oke S. Platelet-Rich Plasma: Healing Skin Wounds in Horses. www.TheHorse.com/14850

Further reading and free horse health e-newsletters: www.TheHorse.com/wound-care

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