

WOUND FIRST AID

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Wounds are an inescapable part of horse ownership. With the best care in the world, horses can find a way of harming themselves and often, they don't have to try hard. Whilst some wounds heal excellently, others heal badly and slowly at vast expense; others tragically fail to heal when all the money comes to an end. The treatment wounds receive in the first few hours is the single most positive step toward rapid and successful healing. Ironically, treatment like this is seldom under veterinary direction, rather by concerned owners wanting to help. Other wound types don't get treated at all, with similarly disastrous results. You, therefore, have quite a responsibility. In this article I propose to outline some of the types of wound horses get and to cover the major points of wound first aid.

Types of wound

The type of trauma involved is classified as blunt or sharp, whilst wounds can be abrasions, lacerations or punctures depending on depth and surface area involved. Abrasions are the most superficial types of wound, akin to 'grazes' in man. An example of this is shown in Fig. 1. These types of wound should be cleaned with salt water and a light antiseptic cream can be applied; these creams are fairly cheap and tend to last for ever. Make sure you get appropriate ones by following your vet's advice and better, getting it directly from them.

Lacerations are the most common type of wound in horses. Lacerations tend to heal more rapidly with stitching, but those over the body can heal very satisfactorily without. Those in the lower limb are more prone to infection due to contamination. They also tend to have more tension due to lack of spare skin; they often break open again after stitching due to movement. These wound can be placed in casts, but your vet will advise you on this.

Puncture wounds can be more disastrous due to the potential for being missed and for the unseen damage in deeper tissues. Lacerations tend to occur following specific types of trauma and at specific anatomic locations. Degloving wounds are those where the skin of the lower limb is peeled back and away from the underlying structures, supposedly like removing a glove. One of the most common sites of degloving wounds are those sustained over the hind cannon and hock, most commonly from electric fencing and barbed wire. An example of this type of wound is shown in Fig. 2. Of course, prevention is better than cure; avoiding electric and barbed wire for horses could save many hundreds of thousands of pounds worth of wounds each year.

Puncture wounds can cause major damage beneath the skin, seeding mud and other foreign material deep into underlying tissues and allowing infection to develop. By their nature, they can be very difficult to see and you should be especially vigilant for them after muddy winter rides or hunting. Historically, heavily contaminated wounds of this type most often resulted in tetanus due to infection with *Clostridium tetani*, which only grows without oxygen present. Fig. 3 shows just such a wound in a horse demonstrating signs of tetanus. Puncture wounds can be just as disastrous when they occur over joints. Once penetration of a joint occurs, infection rapidly follows and the only method of treatment is joint flushing. This can sometimes be done standing using needles, but better results are achieved using endoscopes to inspect and to flush saline through the joint with the patient under general anaesthesia (Fig 4). The longer infection is present within the joint cavity the poorer the prognosis for survival after treatment. The exact length of the 'golden period', when flushing successfully resolves signs of infection, is debated. Most vets regard 24 hours as the outside limit of this period; the sooner the joint is flushed the more chance of success. Around 8 out of 10 horses and 6 out of 10 foals with infected joints survive and return to normal. However, these are the animals treated within the first 24 hours. Fig 4 shows the outline of the horse with all joint cavities marked. As you can see, not many areas of the horses' lower leg are 'safe' from possible wound involvement. Wounds in any of these areas should be examined by a vet as a matter of urgency.

First Aid

Calling the vet for advice and to arrange a visit is important, but first aid often comes beforehand. You should have three aims in performing first aid of wounds in horses.

1. Prevent further damage: If safe for you to do so, the horse should be moved to a safe position, away from the object which caused the damage, or where further damage or wounds may occur *e.g.* traffic. The decision to remove large embedded foreign bodies is difficult to summarise here *e.g.* nail in foot, wooden stake in chest. In these instances, ask the advice of the vet when you first call for assistance.
2. Limit bleeding: Almost all bleeding can be stopped by applying a clean dry dressing under moderate tension. Probably the most freely available is a clean nappy, or Gamgee. Other dressings can be used, but unless you are familiar with the different types, these are best avoided.
3. Limit contamination: Mud and dirt dramatically increase risk of infection, which stops healing. Contamination can be removed by tap water hosing, but a maximum of 5 minutes of hosing should be performed. Longer than this increases risk of infection because fresh water is drawn into the tissues, resulting in oedema and inhibiting natural defences.

These three steps represent the cornerstones of wound first aid and will give any attending veterinary surgeon the best chance of achieving successful wound healing. On no account should any antiseptics, wound powders or other 'beneficial' wound chemicals be applied.

Summary

Horses can sustain a number of different kinds of wounds. Abrasions do not generally require veterinary attention, but should be kept clean. Lacerations and punctures require veterinary investigation and sometimes, many months of hard work, bandaging and expense. Prevention is better than cure, but if wounding occurs, speed of healing is dramatically improved by supplying appropriate first aid.

Fig 1



Fig 3



Fig 2



Fig 4

