



Wound Management in Horses

Proper wound management requires a diligent, organized approach in order to provide the best possible functional and cosmetic outcome. Initially the diagnosis is made and first aid is performed. Once the wound has been properly assessed a prognosis and treatment plan may be formulated.

Prognosis for wounds ranges from excellent for full return to function or grave for survival depending upon location and depth. For example, a wound over the rump has an excellent prognosis vs. a wound extending into a joint, which may be career or life threatening.

The goal of wound management is to return damaged tissues to the best possible function and appearance through manipulation of the healing process. There are four phases to wound healing: Hemostasis, Inflammation, Repair and Remodeling. As the phases are reviewed it is important to remember that these phases overlap considerably throughout healing.

During hemostasis, platelets help seal damaged vessels, release growth factors and fibrin is deposited in the wound. This phase is generally thought to occur within the first 24 – 48 hours of injury. During the inflammatory stage white blood cells (neutrophils, macrophages and lymphocytes) are brought in to remove damaged tissue and bacteria and release growth factors. This phase is generally thought to last for 3 – 5 days. The repair phase is where fibroplasia (scar tissue) occurs with the maximum collagen production occurring within approximately 1 – 2 weeks. Endothelial and epithelial proliferation occurs as well as an influx of myofibroblasts. The remodeling phase is responsible for fibrocyte production and re-arrangement of the cross-linking of collagen deposited during the repair phase.

Wound healing can be a long-term process. An open wound is diminished in a centripetal fashion. Myofibroblasts provide contraction, which stops when skin tension is greater than the ability of the myofibroblasts to contract. Epithelialization (skin covering) begins as early as 24 hours after injury and is responsible for the final covering of the wound.



First Aid for Wounds:

1. Prevent further injury (remove horse from wire, etc)
2. Hemostasis and prevention of contamination (bandage application)
3. Keep horse quiet until help arrives or until you can get him to your veterinarian

There are many different options for wound management depending upon the severity and chronicity of the wound. Your veterinarian will be able to decide which option is best upon assessment of the wound. These include primary closure (sutures), delayed primary closure (sutures in a few days), secondary closure (suture after granulation tissue has formed) and second intention healing (no sutures).

Wounds over the lower limb are often difficult to manage and tend to be time consuming and expensive due to the lack of soft tissue covering and blood supply. Some wounds may require skin grafts, casts or even surgery for the best chance at return to function. It is very important to talk to your veterinarian before putting any “potions” on the wound. Many of these “potions, pastes and powders” appear harmless but most are, at the very least, irritating and toxic to cells. Read the labels, most contain an alcohol base (not very friendly to tissues and can be painful).

It is also important to remember that even small wounds, if in the right spot, can be life threatening. It is always best to call your veterinarian for advice.

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