

# Disaster Relief

## *Emergency Treatment and Management of Horses under Hurricane Conditions*

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Horses are often at greater risk for traumatic injury than humans when natural disasters strike because of the conditions under which horses are normally maintained. Stabling may be destroyed or horses may escape from their normal confinements, resulting in traumatic injury.

When these emergency situations arise, veterinarians unfamiliar with equine practice may be asked to help capture and give the horses emergency treatment. The following information serves as a quick reference for those veterinarians.

### **Containment**

Frequently, free-running horses are found in groups because horses are herd animals by nature. This can complicate the capture process, often forcing you to build a corral or other fenced enclosure where you can drive the animals into or entice with feed.

Occasionally you can catch individual animals within the group and lead them to the stabling facility, followed by other single members of the group.

Horses you can't catch may have to be sedated with intramuscular tranquilizers administered with a dart gun. Most city and county animal control departments have dart guns available for this purpose. After you capture any intact male animals (other than unweaned foals), keep them separate from the group.

### **Housing and Feeding**

A stall for each animal is the best housing situation, but this isn't usually possible after a hurricane. You must build pens from available materials.

You can build safe fences from electrical fencing, using thin gauge wire and a battery-powered electrical source and available materials. If you use wire fencing, tie strips of cloth along the each wire strand at 4- to 6-foot intervals for better demarcation of the fence.

Remember, the smaller the group, the more manageable individual animals are. Closely observe the horses immediately after they are confined. If you notice individual animals with aggressive behavior,

put them in a separate corral or with a different group of horses. Put severely injured horses in an individual stall if possible.

When horses are stabled in large groups, certain animals may become territorial, denying others access to feed or water if only one source is available. At least two water sources and several feed sources should be available in every corral containing multiple horses.

The horses' diet will depend upon the availability of feed after the disaster. The feedstuff of choice would be a grass hay, such as coastal bermuda, orchard grass, oat, or timothy, fed at 10 lb of hay per 450 kg of body-weight or equivalent to approximately 1/5 of a bale/ horse/day. Unless there are juvenile animals, lactating mares or severely underweight animals, grain is not necessary and may predispose the horses to laminitis and/or colic.

### **Animal Identification**

Check every horse brought into a central holding facility to see if it carries some form of permanent identification, such as a brand or tattoo. Brands may be located anywhere on the horse, but breeds of horses, such as Arabians, may be branded under the mane. Horses that have been on the racetrack will have a tattoo on the inside of their upper lip. If any lack this identification, clip a number into the hair or drill it into the hoof wall as soon as possible.

Keep on file a Polaroid picture of each animal with a matching identification number. Make close-up photographs of any wound or other disaster-related injuries as well as one showing the whole animal.

### **Management of Traumatic Injuries**

Any horse with an injury that has broken the skin should be given both tetanus antitoxin and tetanus toxoid injections. Superficial traumatic injuries respond well to cleansing with a mild disinfectant, such as dilute povidone iodine solution and application of a topical antibiotic dressing.

Wounds heal with less exuberant granulation tissue if you leave them unbandaged, unless they are in an area of excessive motion or tension. Explore deeper wounds and puncture wounds to determine the extent of the wound and to preclude the presence of a foreign body. Evaluate the vascular integrity of the wound area. A loss of local blood supply may impede healing and predispose the wound to infection. Lavage the wound with a sterile saline or dilute povidone iodine solution daily until filled with granulation tissue.

If you suspect a fracture, immobilize the affected limb as well as possible with a multilayer tight wrap of padded material or blankets (such as Robert-Jones splint) until you can get radiographs. Apply a support wrap to the opposite limb. Keep accurate records of all medical treatments and surgical manipulations.

## Medication Doses

### Antibiotics

- Procaine G Penicillin: 20,000 to 50,000 IU/kg IM, BID or SID
- Trimethoprim-sulfa: 15 to 30 mg/kg PO, BID
- Gentamicin: 2.2 mg/kg, IV or IM TID or QID
- Metronidazole: 7.5 to 15 mg/kg PO, QID, or TID
- Ceftiofur: 2.2 to 4.4 mg/kg IM or IV, BID, or TID

### Sedatives

- Xylazine: 0.25 to 1.0 mg/kg IV or IM
- Detomidine: 0.01 to 0.02 mg/kg IV or IM
- Butorphanol: 0.05 to 1.0 mg/kg IV or IM
- Acepromazine: 0.02 to 0.06 mg/kg IV or IM
- Ketamine: 2.2 mg/kg IV after xylazine

### Anti-inflammatory Drugs

- Phenylbutazone: 2.2 to 4.4 mg/kg PO or IV, BID or SID
- Flunixin meglumine: 0.25 to 1.0 mg/kg IV or IM, SID to TID
- Dexamethasone: 0.02 to 0.2 mg/kg Im or IV or PO, SID
- DMSO: 0.5 to 1.0 mg/kg as a 10% soln IV, BID
- Prednisone: 0.02 to 1.0 mg/kg PO, BID

### Miscellaneous

- Furosemide: 1 to 3 mg/kg IV or IM, SID or BID
- Tetanus antitoxin: 1500 units IM
- Tetanus toxoid: 1 ml IM
- Pentobarbital: 100 mg/kg IV for euthanasia

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Reviewed by **Dr. Stanley Robertson**, Associate Professor, Mississippi State University College of Veterinary Medicine Pathobiology/Population Medicine.

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