



Emergency Treatment and Management of Horses under Hurricane Conditions

The horse population is often at greater risk for traumatic injury than the human population 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 requested to assist with the capture and emergency treatment of horses. These guidelines are designed to serve as a quick reference for those veterinarians.

Containment

Frequently, free-running horses will be found in groups because horses are herd animals by nature. This can complicate the capture process, often necessitating that a corral or other fenced enclosure be constructed into which the animals can be either driven or enticed with feed. Occasionally individual animals within the group can be caught and led to the stabling facility, followed by other more fractious members of the group.

Horses that cannot be caught may have to be sedated with intramuscular tranquilizers administered with a dart gun. Most city and county animal control departments will have dart guns available for such purposes. After capture any intact male animals (other than unweaned foals) should be separated from the group. Anyone handling a tranquilized horse should always remain alert. A horse's "fight or flight" reaction may cause it to "fight" the tranquilizer if frightened enough. All it takes is a split second for a horse to kick out in fear and injure an unwary handler.

Horses with EIA (equine infectious anemia) identification should be quarantined at least 400 yards from other horses until they can be reunited with other quarantined EIA horses.

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Housing and Feeding

A stall for each individual animal would be the optimal housing situation; however, such conditions rarely exist in the aftermath of a hurricane. Pens must be constructed from available materials.

Safe fences can be constructed from electrical fencing using thin gauge smooth wire and a battery-powered electrical source. Non-electric smooth wire or board fence is also acceptable and may be produced from available materials. If wire fencing is used, light-colored strips of cloth should be tied along the individual wire strands at 4 to 6 foot intervals to allow better demarcation of the fence.

Remember, the smaller the group, the more manageable individual animals will be. The horses should be closely observed immediately after being confined. Individual animals with aggressive behavior should be noted, and placed in a separate corral or with a different group of horses. Severely injured horses should be provided with an individual stall if possible. Most stallions will need to be provided with an individual stall or pen. Additionally, stallions that must be placed in pens or stalls located immediately next to mares will need to be separated by a solid barrier. If a stallion must be housed anywhere near mares, a menthol ointment, such as Vick's VapoRub, may be liberally applied to the stallion's nostrils often. This may help to keep him from smelling the mares.

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 made available in every corral containing multiple horses.

The horses' diet will depend upon the availability of feed in the area following the disaster. The feedstuff of choice would be a grass hay such as timothy, fed at 10 lb of hay per 450 kg of bodyweight or equivalent to approximately one fifth of a bale/horse/day. (Use grasses such as coastal bermudagrass pangola only if no other grass is available.) Unless there are juvenile animals, lactating mares or severely underweight animals, do not feed grain; it may predispose the horses to laminitis and/or colic.

Animal Identification

Every horse brought into a central holding facility should be checked to see if it carries some form of permanent identification such as a brand or tattoo. Brands may be located anywhere on the horse; however, certain breeds of horses such as Arabians may be branded underneath their mane. Horses which have been on the race track will have a tattoo on the inside of their upper lip. Those without such identification should have a number clipped into their hair.

A Polaroid picture of each animal with a matching identification number should be kept on file; close-up photographs of any wound or other disaster-related injuries should be taken as well as one showing the entire animal.

Management of Traumatic Injuries

Any horse with an injury that has broken the skin should be given a tetanus toxoid injection. 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 left unbandaged, unless they are located in an area

of excessive motion or tension. Deeper wounds and puncture wounds should be explored to determine the extent of the wound and to make sure there is not a foreign body present.

The vascular integrity of the wound area should be evaluated. A loss of local blood supply may impede healing and predispose the wound to infection. The wound should be lavaged with a sterile saline or dilute povidone iodine solution daily until filled with granulation tissue. The wound should be cleaned twice a day with hydrotherapy followed by lavage with sterile saline.

If a fracture is suspected, the joint above and below the fracture should be immobilized as well as possible with a Robert-Jones bandage until radiographs can be obtained. A support wrap should be applied to the opposite limb. Accurate records of all medical treatments and surgical manipulations should be kept.

Medication Doses

Antibiotics

- Procaine G Penicillin: 25,000 to 40,000 IU/kg IM, BID or SID
- Trimethoprim-sulfa: 20 to 30 mg/kg PO, BID
- Gentamicin: 6.6 mg/kg, IV or IM d 24 hrs
- Metronidazole: 15 mg/kg PO, TID
- Ceftiofur: 2.2 to 4.4 mg/kg IM or IV, BID

Sedatives

- Xylazine: 0.25 to 1.0 mg/kg IV or IM
- Detomidine: 0.01 to 0.02 mg/kg IV or IM
- Butorphanol: 0.01 to 0.03 mg/kg IV or 0.03 to 0.1 mg/kg IM
- Acepromazine: 0.02 to 0.06 mg/kg IV or IM
- Ketamine: 2.2 mg/kg IV after xylazine (for anesthesia)

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 or BID
- 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

Miscellaneous

- Furosemide: 1 to 3 mg/kg IV or IM, SID or BID (Administer to horses that have never been vaccinated for tetanus.)
- Tetanus antitoxin: 1500 units IM
- Tetanus toxoid: 1 ml IM
- Pentobarbital (Beuthanasia-D): 1 ml for each 10 lbs body weight IV for euthanasia

