

Animal Handling and Injuries

Our topics for this week are:

- Handling Conditions
- Risks of Injury

Outcomes of handling and restraint of animals can be affected by health of the animal, the time of day, lighting, ambient temperature, setting and facilities, personnel, and duration.

Pre-Handling Considerations

An unhealthy animal can have an altered temperament requiring special handling techniques or elevated risk of injury from being handled due to illness or previous injury. Before handling any animal, it and its surroundings should be visually inspected. The animals should be observed for signs of possible injury or disease, which could alter the means appropriate for handling the animal. Knowledge of the animals' normal posture, movement, and activities, including how and how often it lays down is important. The animals' normal vocalizations should also be known. The area of containment (stall, pen, cage, run, etc.) should be examined for urine and feces. Handlers should be familiar with the normal amount, consistency, odor, and color of feces for the type of animal to be handled, since it varies considerably among different species. If food or water has been present, evidence of whether or not the animal has been eating or drinking should be investigated. The containment area should be assessed for safety, i.e., absence of protruding nails, especially those with hair on them, or other objects that could injure the animal and whether blood is evident in the area of confinement.

The animal's attitude should be observed for signs of depression or aggressiveness. Its ambulation and/or other movements should be screened for lameness or other impaired movements. The respiration rate and depth should be monitored. Impaired respiration can make any handling method particularly dangerous to the animal.

Pre-Restraint Considerations

Restraint, if needed, must be applied effectively on first attempt or the animal will learn to escape the restraint in the future. Pre-restraint considerations are to formulate a plan, consider the effects on the animals, and what safety precautions are appropriate.

Although a plan for restraint should be designed to be successful on first attempt, a contingency plan should be formulated in case circumstances are unexpected and inappropriate for the initial plan. A plan needs to first include a check of equipment. If others will assist, everyone must be physically capable and trained to handle animals, and they must know the current plan thoroughly. When dealing with large or otherwise dangerous or potentially aggressive animals, an escape should be planned in advance in case it becomes needed. Chemical restraint should be ready for some animals in advance of attempted physical restraint so that if chemical restraint becomes necessary, it can be administered without delay.

Effects on Animals

The effects of handling and restraint on animal safety should be considered. What will be the lesson that will be learned by the animal? Gordon Wright, circa 1930, famous cavalry instructor in horsemanship said, "Every time you ride, you're either teaching or unteaching your horse." The same principle applies to any handling of any type of animal. To yield the best lesson that might be learned by the animal, a handler should use the minimum needed restraint, maintain a calm environment, and carefully manage the final release to be perceived that the release was the handler's choice, not the animal's.

If adverse effects occur when handling or restraining an animal, the animal will associate events, people, and objects that immediately preceded the handling and occurred during the animal's handling. They may respond with signs of stress or fear when exposed to similar handler clothing, locations (cage, pens, etc.), and other sounds on re-exposure. This displayed distress may seem inexplicable to a new handler.

Poor handling of dairy cattle can reduce milk production and increase the incidence of lameness. Bad handling experiences can cause reduced reproductive function and impaired growth and wool production in sheep and smaller litters, decreased growth rate, and delayed age of first estrus in sows.

Surroundings and Conditions

The time of day or amount of light can affect animal handling. Nocturnal (night active) animals are more docile when handled in bright light. Diurnal (daytime active) animals are more docile when handled in subdued light.

Livestock and horses (prey animals) avoid shadows and darken areas and will move more willingly to well-lit areas, but not if the light is glaring, impairing vision. The same intensity of light, or moderately brighter light, than present in their present surroundings should be provided wherever diurnal animals are supposed to move.

Ambient temperature affects animal handling. Pigs and sheep are particularly susceptible to heat stress and should be handled early in the cooler part of the day. Fans and water spray on legs and lower abdomen should be applied, when needed. Cool, brisk temperature enlivens horses, making handling more difficult. Hot weather makes them more tractable.

The setting for handling animals should be optimal for the current situation. When handling small animals, room doors and windows should be closed, and all counter tops cleared. Before working cattle in chutes, a check of all chutes, alleyways, and stalls should be conducted. Stalls and stocks should be inspected for potential hazards to horses before their use. Areas for casting a large animal (laying an animal down) should be checked for hazards where the animal could get its legs caught underneath a nearby structure.

Personnel

If an assistant is present to help a primary handler, it is the primary handler's responsibility to make sure that the assistant is knowledgeable in proper animal handling and is fully aware of the handling or restraint plan. An assistant should also be behaviorally mature and physically strong enough to carry out the needed assistance. Otherwise, if the assistant or the animal is injured, the primary handler can be liable for damages.

Duration

The duration of animal handling or restraint should be as short as possible to complete the task. Longer durations cause unnecessary stress to the animal and exhausts their patience to tolerate the handling. Pre-handling preparation is absolutely essential to minimize the duration of handling and restraint.

Risks of Injury: General Risks

Few domestic animals are naturally aggressive toward humans. When fearful or stressed, most animals' first reaction is to attempt to flee. When fleeing is not an option, they will resort to their means of offense or defense, which may involve teeth or beaks that bite; hooves that kick, stomp, or strike; claws that puncture or scratch; heads that butt or crush; or horns that gore or a combination of these.

More than four million dog bites are estimated to occur annually in the U.S. About one-sixth of these require medical attention, and 10 to 20 deaths occur each year. Children, the elderly, and letter carriers, in that order, are at highest risk of dog bites. Five percent of all emergency room visits are caused by dog bites. Dogs that receive inadequate early socialization with humans and continued gentle handling, as well as those that are tethered for long periods, are the most likely to bite. Bites from cats are common but less life-threatening than most dog bites. The risk of infection from cat bites is greater, and impairment of hand function is a significant risk.

Animals are responsible for approximately 1% of occupational fatalities in the U.S. One of six farm injuries are animal related, due to bites, kicks, and crushing. Male and elderly handlers are demographically at highest risk. Cattle, especially bulls, are responsible for 40% of deaths, horses for 27%, dogs for 3%, and hogs for 1%.

Cattle cause deaths in humans by mauling, charging, goring, kicking, or knocking down people. Most deaths are the result of attacks by bulls or cows with newborn calves. Beef cattle are handled less than dairy cattle and are more inherently dangerous than dairy breeds. However, dairy bulls are considered the most dangerous of all domesticated animals. Dairy handlers are most often injured during the milking process or treating mastitis, sustaining leg or facial injuries.

Most horse-related human deaths are associated with riding, such as falling off or being thrown off. Other people are killed by being crushed, trampled on, or kicked (particularly in the head) by horses. Brain and craniofacial injuries from animals are most often caused by horses. More than 100,000 people are admitted to an emergency room in the U.S. from horses each year. Approximately two-thirds of horse-related injuries are from riding, and more than 12,000 injured people have head injuries.

Animal-related physical injuries to humans can be intentional from the animal involving butting, goring, bites, and kicks from aggression or fear. In other cases, the injury may be unintentional such as crushing from falls, stepping on feet, and scratching while struggling to get free.

Human-related physical injuries to animals can be intentional from the inappropriate release of anger and sadistic injuries. Intentional mistreatment of dogs typically occurs with dogs

being trained for fighting. Unintentional injuries to animals can occur to those that are handled or restrained inappropriately. Many unintentional injuries of animals involve horses and caused by handlers without adequate training on the proper handling of horses.

Reactions of animals who are familiar with a particular handler are not the same as those of animals that have no prior experience with the handler. A perceived lack of handler confidence will elicit actions of social dominance or fear in animals. Equipment failure is an easily avoided but common cause for handler injury.

Now, let's recap the key points to remember from today's episode:

The causes for handler injuries are:

- Lack of animal handling experience
- Handler overconfidence or under-confidence
- Being rushed
- Becoming angered
- Error by an assistant
- Pain experienced by the animal
- Equipment failure

More information on animal handling is available in my book, *Animal Handling and Physical Restraint* published by CRC Press. It is also available on Amazon and from many other fine book supply sources.

Additional information is available at <https://www.betteranimalhandling.com>

Don't forget serious injury or death can result from handling and restraining some animals. Safe and effective handling and restraint requires experience and continual practice. Acquisition of the needed skills should be under the supervision of an experienced animal handler.