



BEING PREPARED FOR SHOW LIVESTOCK INJURIES AND ILLNESSES

One of the most stressful events during the course of a youth livestock project can be the illness or injury of the show animal. While even the best livestock producer cannot prevent all illnesses or injuries from occurring, there are guidelines that all animal owners can follow to greatly reduce the risks and to be prepared for unexpected emergencies.

Prevention is the best medicine!

Many injuries and illnesses can be avoided by caring for animals properly. Providing adequate housing and a proper diet are the most important prevention strategies. Housing should be ready before the animal is purchased. The area should be the appropriate size for the species, clean, dry, and free of sharp and miscellaneous objects, which may cause injury to the animal. The animal should have protection from excessive heat, cold, and rain as well as access to fresh air and sunlight (Spaulding and Clay 1998). Bedding, such as straw, will provide insulation for the animal and aid in keeping the pen clean.

You should be knowledgeable about proper nutrition for the animal before it is brought home. All livestock are susceptible to illness when there is a sudden change in their diets. Contact the breeder or person you plan to buy the animal from to become familiar with the animal's current diet, and talk to your leader/advisor and review literature related to feeding the species. Store the animal's feed so that it is fresh and rodents are kept out of it, keep the feed bunks clean, and monitor the feed for mold and foreign objects. Having plenty of clean, fresh water is essential for health and survival of all animal species. Be prepared to provide clean water daily and the amount that your animal needs. Also pay attention to factors that affect the amount of water needed by the animal, such as extremely hot weather. More information on space requirements, feeding, and water consumption rates for livestock can be found in Arizona Cooperative Extension Publication #AZ1326 or AZ1328 (Cuneo et al. 2004). For detailed information on feeding management of show lambs, see Arizona Cooperative Extension Publication #AZ1053 (Sprinkle 1999), for show steers see Publication #AZ1054 (Sprinkle 1999), and for show swine see Publication #AZ1055 (Sprinkle 1998).

In addition to providing a healthy environment and diet for the animal, it is recommended that the animal be properly vaccinated. Consult a veterinarian to learn which vaccinations are appropriate for the species and the area in which you live. Illness is more likely to be prevented by making sure the animal is vaccinated and that the time necessary for the vaccines to be effective has passed before the animal is exposed to stressful events or other sick animals (Dr. Peder Cuneo, University of Arizona Extension Veterinarian, personal communication).

Keep a livestock first aid kit on hand

This kit can be assembled before the animal is purchased so that you will be prepared for unexpected illnesses or injuries. Examples of items for the kit include latex gloves, a rectal veterinary thermometer, a roll of cotton, cling wrap, gauze pads, sharp scissors, tape, hydrogen peroxide, anti-bacterial powder (make certain the powder is approved for the species and, if your animal is a market animal, be sure it is approved for food animals), bloat medication, a flashlight, and your veterinarian's phone number (American Association of Equine Practitioners 2002, Spaulding and Clay 1998). Consult your veterinarian when preparing your kit to see if different items are recommended. Storing these items together in a plastic container will keep them clean and make the first aid kit convenient for traveling to shows. If you decide to keep any medications in your first aid kit,

10/2005

AZ1373

THE UNIVERSITY OF ARIZONA
COLLEGE OF AGRICULTURE AND LIFE SCIENCES
TUCSON, ARIZONA 85721

LIZ DIDIER

*Agriculture, Natural Resources, and 4-H Youth
Development*

This information has been reviewed by university faculty.

cals.arizona.edu/pubs/animal/az1373.pdf



Figure 1. Notice how this healthy calf stands with his head and ears up and appears to be alert to his surroundings.

be sure to read the label and follow directions for proper storage. Otherwise, they may be ineffective when you need to use them. Items needed to safely restrain the animal should also be kept accessible.

Learn what is normal for your animal

If you know what is normal for your animal, you will be more likely to know when something is wrong. You can easily learn to measure the animal's vital signs (i.e., temperature, pulse, and respiration rate). These measurements will vary among individual animals, however, upper and lower limits of the normal range for each species have been identified (Table 1) (LeViness 2002). Take these measurements several times when the animal is healthy so you will learn what is normal for that animal. Keep a record of the measurements and store it with your first aid kit (American Association of Equine Practitioners 2002). Also observe other characteristics of the animal. How much does it normally eat and drink? What are the normal colors of its gums, nostrils, and eyes? What are the normal colors and amounts of the animal's feces and urine? How does the animal usually behave (what is its general personality like)? What is the normal posture and overall appearance of the animal? Healthy livestock

generally stand with their heads and ears up and are alert to their surroundings (Figure 1). Watch for changes in any of these characteristics, as they may indicate illness. Be aware if the animal stops eating, seems depressed, does not want to move, or has any swelling or bleeding. Performing a "daily check" of the animal should become one of your prevention strategies (Spaulding and Clay 1998).

Emergency treatment

Every emergency situation is different, and while there are general guidelines for livestock emergency response, you must evaluate each emergency and determine whether or not you can safely take action without causing injury to yourself, other people, or further injury to the animal. If you feel comfortable that you can safely take action when the animal is injured, first get someone to help you catch and calm the animal. Remaining calm yourself will help the animal stay calm. Take the animal to a safe area to evaluate the situation and administer treatment if possible.

Cuts and Wounds

If you can do so without getting injured, inspect the wound. If the injury seems serious, call your veterinarian for a recommendation. Your veterinarian may be more able to help you if you can provide information about the animal's vital signs (as described above). To avoid causing excessive bleeding or contamination, it is best to discuss the situation with your veterinarian before attempting to clean the wound (American Association of Equine Practitioners 2002).

If the wound seems minor or if a veterinarian is not readily available, you may attempt to stop the bleeding and clean the wound. First, wash the wound with water. To stop bleeding, use dry, sterile cloth to pack the wound. After 5-10 minutes, check to see if the bleeding has stopped. If the wound is spurting blood, you must contact a veterinarian. While waiting on the veterinarian to arrive, apply pressure to the wound or tie the dry, sterile cloth in place with gauze (Spaulding and Clay 1998).

Once the bleeding has stopped, wounds should be

Table 1. Normal ranges for livestock vital signs.

Species	Body Temperature	Pulse Rate (beats per minute)	Respiration Rate (inspirations per minute)
Cattle	100.4-103.1° F	40-70	10-30
Goats	102.2-104.9° F	60-90	12-20
Adult Horses	99.5-101.3° F	28-40	8-16
Sheep	102.2-104.9° F	60-90	12-20
Swine	100.4-104° F	60-100	8-18

(LeViness 2002)

cleaned. Trim hair away from the edges of the wound. Hair in or around a wound collects dirt and can cause infection. Pieces of hanging or ragged skin may also need to be removed. Wash the wound daily with warm, soapy water and apply an antibiotic powder or antiseptic. Fly control while the wound is healing is also important for preventing infection. Wounds often heal best if they are not covered with a bandage (Spaulding and Clay 1998).

Examples of when it is best to call a veterinarian are:

- Injury is obvious, but you are not able to safely get near the animal.
- “There is excessive bleeding.
- The entire skin thickness has been penetrated.
- The wound occurs near or over a joint.
- Any structures underlying the skin are visible.
- A puncture has occurred.
- The wound is severely contaminated” (American Association of Equine Practitioners 2002).

Injury to the leg of a livestock animal can be difficult to treat, especially if the wound occurs on or near a joint. Wrapping an animal’s leg is usually only recommended for horses and must be done properly. If the leg is wrapped incorrectly, blood circulation to the area could be impaired, causing permanent damage (Dr. Peder Cuneo, University of Arizona Extension Veterinarian, personal communication). If a serious injury to the leg occurs, try to stop or limit the animal’s movement and wait for the veterinarian to arrive.

Always monitor wounds for heat and swelling, as these could be signs of infection. A high body temperature may also indicate infection.

Digestive Illnesses

A common illness that affects ruminant livestock such as cattle, sheep, or goats is bloat. Bloat is a digestive illness that is caused when large amounts of gas form in the digestive system due to overeating or sudden changes in the animal’s diet. The abnormal amount of gas causes extreme pressure in the abdomen, compression of the heart and lungs, and can cause death by suffocation if the gas is not released (Duren and Miller 2002).

An animal may overeat if it breaks into the feed storage area or if it is fed when it is extremely hungry. Ruminants may also suffer from bloat if they are fed legumes, such as alfalfa hay, when they are not used to this type of feed in the diet. Bloat may also occur when livestock are fed high grain diets (Sprinkle 1999). It is important to keep your show livestock on a regular feeding schedule and to make changes to the diet gradually in order to prevent bloat.

When animals are bloated, they may stagger, have difficulty breathing, or they may collapse. Bloat is often treated by inserting a stomach tube to remove pockets of gas from the digestive system. Giving the animal a bloat

medication through the stomach tube or by mouth may also help. However, when giving the medication by mouth, there is a risk of the animal inhaling the liquid causing death or respiratory problems (Duren and Miller 2002). If you do not know how to properly use a stomach tube, do not attempt this procedure without a veterinarian.

Acidosis is digestive problem that commonly affects show steers. Acidosis can be caused when cattle eat too much grain too quickly. This causes acids to be rapidly produced and absorbed from the rumen. In severe cases, or acute acidosis, sudden death may occur. Less serious cases of subacute acidosis are quite common among cattle fed on a grain diet. Steers suffering from acidosis may stop eating or you may observe panting, excessive salivation, or diarrhea and abnormally colored feces. The steer may also kick at his belly or eat dirt in an effort to relieve the discomfort. Cattle normally recover from subacute acidosis without medical treatment. However, taking steps to prevent this condition will help your steer maintain a healthy diet, gain weight according to your goals, and reduce stress for the animal. Feed the steer a quality mixed ration at the same time each day. If possible, feed the steer at least twice a day or more often. At least 5 to 10 percent of the steer’s diet should be roughage (e.g., hay). When changes in the diet are necessary, for example, to start the steer on a finishing ration, make the changes gradually. Keep daily feed records so that you are aware of changes in the steer’s eating habits and can quickly respond to problems. Finally, keep feed bunks and water troughs clean. Extremely hot weather may cause steers to eat most of their feed at night, triggering acidosis. Shade and/or water sprinklers may provide your steer some relief from the heat and help him maintain normal eating habits (Stock and Britton 2002).

Respiratory Illnesses

A variety of respiratory diseases affect livestock, and because physical symptoms are the same for many respiratory illnesses, it is best to consult a veterinarian for proper diagnosis and treatment. Signs of respiratory disease may be coughing, nasal discharge, fever, poor appetite, loud noises during breathing, difficulty breathing and inactivity (*Figure 2*). A combination of stress and viral and bacterial infection is usually the cause of respiratory disease. A veterinarian can often prescribe antibiotics to treat the bacterial infection, while proper care and management is the most effective treatment for viral infection and stress (Bagley 2002).

To prevent respiratory disease among your livestock, isolate animals for two weeks after purchase and after travel to a show. Isolate sick livestock during illness and for two weeks after treatment to prevent disease spread to healthy animals. Properly vaccinate livestock for respiratory diseases according to instructions from your local veterinarian. Identify sources of stress and take action to reduce stress for your livestock (see information below on “Stress”) (Spaulding and Clay 1998).



Figure 2. While the sheep on the left appears healthy, nasal discharge from the sheep on the right may be a sign of respiratory illness.

Internal Parasites:

Internal parasites such as worms can be a common problem for cattle, sheep, and swine. Worms are less likely to cause problems with goats, because goats are “fussy-eaters” and do not feed as close to the ground as other species of livestock. There is a wide variety of worm species that affect cattle, sheep, and swine, and they are difficult to identify with the naked eye. If you suspect that your animal is infected with internal parasites, take a fecal sample to your veterinarian to have it analyzed. Using parasite control medication without knowing what kind of parasite you are trying to kill can be ineffective and may cause certain parasites to become resistant to medications. Your veterinarian may recommend routine worming, however, worming too often can be problematic.

Physical symptoms of worms include rough hair coats, poor appetite, weight loss or difficulty gaining weight, weakness, coughing, and a potbelly. To prevent parasites, keep pens dry and clean, supply fresh bedding, and regularly clean feed bunks and water troughs (Spaulding and Clay 1998).

Stress

Like with humans, stress can cause health problems for animals. When animals are stressed, their immune systems do not function properly and they become more susceptible to illness. Long term stress will also cause decreased weight gain in a show animal (Stull and Hansen 2002). Sources of stress for a show animal may be changes in the feeding schedule, improper or rough handling by their owner, travel to shows, or environmental factors such as heat or cold. You can reduce the amount of stress for your animal by following a few simple guidelines. You must first learn to observe the animal and identify signs of stress. Physical signs of stress include poor appetite, depressed attitude,

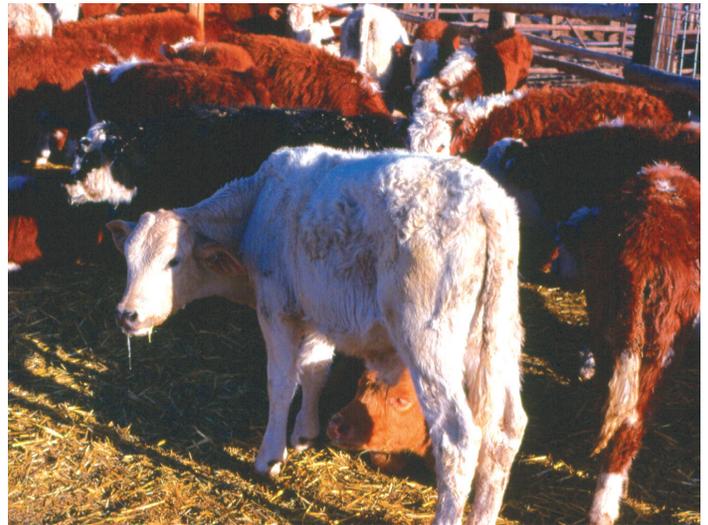


Figure 3. The abnormal posture of this steer with his head and ears lowered indicates that he is stressed by illness.

excitability or restlessness, lack of grooming, increased respiration rate, or abnormal posture (e.g., ears and/or head may be lowered) (Figure 3) (Stull and Hansen 2002). Help your animal learn what to expect. Do this by maintaining a regular feeding schedule and properly training your animal. Practice showing your animal regularly, so that your animal will know what to expect during a show. Always handle your animal gently and quietly. Groom your animal at home instead of the fairgrounds. Your animal will be less stressed by grooming if it is done in a familiar environment, and grooming your animal at the fairgrounds increases the risk of your animal being exposed to diseases from other animals. Giving your animal time to digest its food prior to traveling may help to prevent digestive problems. Also, pay attention to weather conditions and be sure to avoid hauling your animal during the heat of the day. Reduce stress and risk of illness caused by heat or cold by providing your animal proper housing, including shade and/or sprinkler systems and shelter from cold or wet weather.

Using medications for market livestock

Without instruction from a veterinarian, do not administer medications to the animal. If the animal is medicated, pay close attention to the withdrawal time (i.e., the time that it takes for the medication to be eliminated from the animal’s body) for the medication. Market animals cannot be slaughtered unless the withdrawal time has passed or the meat from the animal will be contaminated with drug residue. You should always document medical treatment of the animal. Record the treatment date, product administered, the amount of medication given, the method used to administer the medication, the withdrawal time, and the date the withdrawal will be completed. Provide these records to County Fair officials or to anyone purchasing your animal. Improper administration of medications or

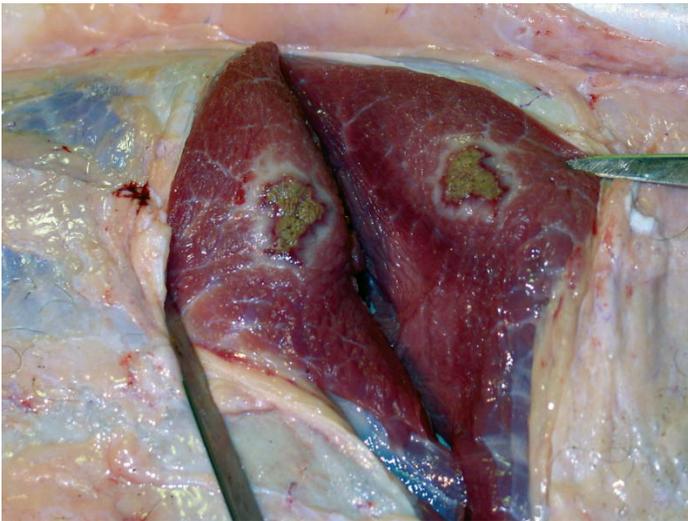


Figure 4. Improper administration of injections often results in damage to the animal's muscle tissue, as is obvious in this photograph of an injection site lesion.

injections to market livestock can cause damage to the muscle tissue and result in poor quality or harmful meat for the consumer (Figure 4). For more information, see Arizona Cooperative Extension Publication #AZ1326 or AZ1328 (Cuneo et al. 2004).

These guidelines may help you take quick action when an unexpected emergency occurs. Remember, many injuries and illnesses can be prevented by making the animal's environment clean and safe, feeding and watering properly, and performing a daily animal health check.

Literature Cited

- American Association of Equine Practitioners. 2002. Guidelines to follow during equine emergencies In: <http://MyHorseMatters.com>
- Bagley, C.V. 2002. Bovine Respiratory Disease. In Cow Calf Management Guide-Cattle Producers' Library, 2nd Ed. Publication #CL607. 3pp. Western Beef Resource Committee.
- Cuneo, P., J. English, D. Fish, T. Kock, J. Marchello, S. Pater, C. Peters, B. Peterson, and S. Short (Eds.). 2004. Arizona youth livestock quality assurance and food safety: Trainer's reference. University of Arizona Cooperative Extension Publication #AZ1326. 70 pp. Available for sale online at <http://cals.arizona.edu/pubs/animal/az1326>
- Cuneo, P., J. English, D. Fish, T. Kock, J. Marchello, S. Pater, C. Peters, B. Peterson, and S. Short (Eds.). 2004. Arizona youth livestock quality assurance and food safety: Youth manual. University of Arizona Cooperative Extension Publication #AZ1328. 31 pp. Available for sale online at <http://cals.arizona.edu/pubs/animal/az1328>
- Duren, E. and C.R. Miller. 2002. Bloat prevention and treatment. In Cow Calf Management Guide-Cattle Producers' Library, 2nd Ed. Publication #CL625. 3pp. Western Beef Resource Committee.
- LeViness, E.A. 2002. Vital signs in animals: What cattle producers should know about them. In Cow Calf Management Guide-Cattle Producers' Library, 2nd Ed. Publication #CL610. 3 pp. Western Beef Resource Committee.
- Spaulding, C.E. and J. Clay. 1998. Veterinary Guide Animal Owners. Rodale, Inc., Emmaus, PA. pp.13-15.
- Sprinkle, J.E. 1999. Feeding management for show lambs. University of Arizona Cooperative Extension Publication #AZ1053. 8 pp. Available at <http://cals.arizona.edu/pubs/animal/az1053.pdf>
- Sprinkle, J.E. 1999. Feeding management for show steers. University of Arizona Cooperative Extension Publication #AZ1054. 14 pp. Available at <http://cals.arizona.edu/pubs/animal/az1054.pdf>
- Sprinkle, J.E. 1998. Swine nutrition for show animals. University of Arizona Cooperative Extension Publication #AZ1055. 2 pp. Available at <http://cals.arizona.edu/pubs/animal/az1055.pdf>
- Stock, R. and R. Britton. 2002. Acidosis. In Cow-Calf Management Guide-Cattle Producers' Library, 2nd Ed. Publication #CL624. 4 pp. Western Beef Resource Committee.
- Stull, C.L. and D.H. Hansen. 2002. Identifying and minimizing stress in cow-calf operations. In Cow-Calf Management Guide-Cattle Producers' Library, 2nd Ed. Publication #CL601. 3 pp. Western Beef Resource Committee.

Any products, services, or organizations that are mentioned, shown, or indirectly implied in this publication do not imply endorsement by The University of Arizona.