

## Tips for Detecting Disease or Injury in Sheep and Goats

*Richard Brzozowski PhD, Anne Lichtenwalner DVM PhD, and Jim Weber DVM PhD, Cooperative Extension and School of Food and Agriculture, University of Maine*

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As a sheep or goat producer, you know that the health of your animals is essential for optimum performance and profitability. You will likely use 4 of your 5 senses (sight, smell, touch, and hearing) in detecting disease or injury of your livestock. Building skills and knowledge to quickly identify signs of poor health of your livestock can help in their early treatment and recovery. Some individuals have the innate ability to interpret signs and symptoms of animals while other people have to work at mastering the interpretation of different situations. Take notes or photos of normal and abnormal animal conditions as these could help you improve your skills and abilities. Organize this information to help remember past circumstances and treatments. Several tips to help you interpret normal and abnormal health conditions of sheep and goats are listed below for your possible use. This list may be helpful when discussing sick animals with your veterinarian over the phone.



**Animal Movement** — Is the animal moving with ease? Does the animal struggle, limp or stay back from the group? Does the animal walk straight or does it tend to veer to one side? Is the animal on its knees when feeding or grazing? Upon inspection of the animal's feet, is one hoof warmer in temperature than the others or is there injury? Check for twine or poly wire as these materials can easily get wrapped around a foot or dewclaw and cause severe damage and pain. Does the animal resist your attempts to handle that foot? Act quickly to diagnose and remedy the situation.

**Feet** — Check hooves of all animals on a regular basis. Watch for animals that kneel when grazing. Kneeling can be a sign of sore feet.

Upon inspection of the animal's feet, is one hoof warmer in temperature than the others? Is there visible injury? Check for twine or poly wire as these materials can easily get wrapped around a foot or dewclaw and cause severe damage and pain. Does the animal resist your attempts to handle that foot?

Some checking can be performed while the animal is standing, while a more detailed inspection requires "tipping" the animal or lifting the foot. As you inspect the hooves, look for excessive growth and cracking, or for redness/swelling or rotting of the skin between the toes. Trim and treat feet immediately when problems are found.

Is there a putrid or rotten smell to any foot? Isolate animals with footrot from the remainder of the flock or herd. Treat the feet of these animals with zinc sulfate immediately, and repeat weekly for a month. Keep infected animals away from areas (pens, pastures and alleyways) where healthy animals will walk.

**Stretching** — Does the animal stretch when it stands up from a laying down position? Stretching (by newborns, young stock, and adults) can be a sign of normal health.

**Appetite** — Healthy animals are usually hungry. Does the animal come to the feeder (hay or grain) and does it eat its fill? Does the animal at pasture graze or browse with eagerness?

**Rumination** — After eating, does the sheep or goat ruminate (regurgitate, then chew its cud)? The healthy act of ruminating will occur when they are lying down or standing. Watch and listen. A stethoscope is a handy tool for listening to rumination; practice listening to healthy animals.

**Droppings** — What do the feces look like? Are there fresh droppings in the pen or in the field? Are there distinct, firm pellets, or is the manure soft or loose? Is the rear end of the animal stained or caked with manure? Is the top line of the back fairly straight or does the animal show a humped back stance (strain) when defecating? Make a habit of inspecting droppings in the barn and at pasture for animals of all ages, and observing animals defecate. Check for blood or mucus in feces. Small white or cream-colored segments in the stools may be a sign of tapeworm. If feces are abnormal, have a fecal sample checked for parasites.

**Urination** — Does the female animal arch its back and squat when urinating? In females, this position is normal. Does the male animal arch its back or strain to urinate? In males, arching the back during urination is abnormal. Urinary problems in male sheep and goats are common, so keep an eye on urinary behaviors. As well, observe for reddish urine, which can be a sign of trouble.

**Body temperature** — The normal body temperature of sheep and goats is 101.5 to 103.5 F. Purchase and learn to use a digital rectal thermometer; these are the most accurate types of thermometers. Are the ears hot or cold to the touch? Sometimes the ears can help you quickly assess core temperature. The body temperature of a down or sick animal is likely one of the first questions your veterinarian will want to know when you call them.

**Hydration** — You can pinch the loose skin of the upper eyelid to estimate hydration status. Practice this procedure (gently) on normal animals. Does the skin return to normal position after “tenting” or does the skin stay in the “pinched” position? Have you seen the animal drink? Is water in the drinking buckets being used up regularly? Is the water source clean and free of debris, dead birds, scum or manure? Have you checked for stray voltage around automatic watering systems? Make sure animals have access to fresh water 24/7. Have electrolyte (and, if possible, a stomach tube) available for use in dehydrated animals.

**Body smoothness and bumps** — Are there any visible abscesses or bumps under the skin? Is there any oozing or discharge from abscesses? Use your hands to feel body parts as you check for abscesses. If abscesses are draining, wear examination gloves, and also isolate the animal from others, in case there is a contagious cause of the abscess. Check especially in the body areas where lymph nodes exist (on the sides of the face and jaws, in front of the shoulders, in the axilla [“armpit”] and the inguinal area [“flank”]). In addition to checking for lumps, check for bloat. Are the flanks of the animal soft and pliable, or is the abdomen distended and tense?

**Face** — Does the animal’s face look normal? Are parts of the face swollen? Is there swelling on both sides of the face or is only one side affected? Symmetrical, soft swelling between the lower jaws might be “bottle jaw,” a sign of parasitism or low protein. Swelling on the side of the face could be an abscess, tumor or just a “stuck cud.” Be careful when palpating these swellings: it’s good to wear examination gloves, because abscesses may rupture and release bacteria in the discharge. If you decide to feel inside the mouth, beware the cheek teeth: you may cut yourself on these sharp teeth, or may be bitten.

**Ears** — Are the ears in their natural position, or do they droop abnormally? Are they hot or cold to the touch? Typically ears of sheep and goats should be warm to the touch. Is the ear tag causing a problem? Is there a discharge from the inside of the ear?

**Eyes** — Are the eyes bright and clear? Is one eye “squinting”? Is there a discharge from the eyes? What color and

thickness is the discharge? Are flies stirring about the face? Are the eyes sunken into their sockets (another sign of dehydration)? Gently pull the lower lid down to check the inner lining (conjunctiva). Is the lining of the eyelid white (possibly anemic), a healthy pink, dark pink or red? Red eyes can be a sign of infection or of poor ventilation. Learn to use FAMACHA® as part of your parasite assessment system.

**Mouth** — Is the animal drooling or frothing from the mouth? Check the mouth for missing teeth (broken mouth) by sight and feel. Do the jaws line up correctly? If swelling or lumps are present near jaw area, check for tooth abscess. Are there sores around the mouth and lips? Use examination gloves in handling animals with sores around the mouth. These can be due to a disease that can also affect humans (a “zoonotic disease”; contagious ecthyma or “orf”).

**Bloodstains** — Do you detect any blood on the animal's hair or wool? Check for punctures or wounds caused by sharp protrusions or predators. If possible, find and fix the source of the problem (broken boards, protruding nails, doorways, old equipment, etc). If you think predators attacked the sheep, remember that rabies is sometimes present in the saliva of predators. Sheep can be vaccinated for rabies. Consult your veterinarian if there has been a predator attack on your sheep to discuss the possibility of rabies.

**Area under the tail (perineum)** — Is the tail held upright, or is it flattened and tense? Is the perineal area clean or matted and dirty (signs of diarrhea, or possible urinary/reproductive problems). Does the perineal area look normal, or is anything extending outside the body (rectal or vaginal prolapse)? Be prepared to clean and replace the organ, or to seek veterinary help. Keep the animal calm, and in a clean place till the problem is solved.

**Udder** — Visually inspect the udders when ewes are up to the feed bunk or hay rack. Check for uniformity of shape, and color. If lop-sided or discolored udders are detected, palpate for hardness, excessive warmth and tenderness (pain). Severe mastitis may require treatment and possibly veterinary attention.

**Scrotum** — Visually inspect the scrotum of rams regularly. Palpate for symmetry, swelling of epididymis, heat or other abnormalities. Semen evaluation can be performed as a veterinary service, and can help you avoid “wasting” a breeding season by using an infertile ram.

**Sheath** — When handling rams, check this area (also call the “pizzle”) for any graininess. Urine “stones” may start as small crystals that you can detect by examining the end of the urethra. Observe each ram when he is urinating for normal posture, for free flow of the urine, and for urine color (pale to straw colored).

**Sounds** — Train yourself to get used to normal sounds, such as vocalizations, breathing, chewing, regurgitation of the cud, etc. Are vocalizations normal in pitch and volume? Ewes may bleat to their offspring if separated, at feeding time, during estrus and at breeding. Take time to listen when you are with your animals.

**Smell** — Does the barn or area have an earthy smell, or do you smell rotting flesh, diarrhea, or other bad smells? Flies can be telltale signs of diarrhea or decay. Do your eyes sting inside the barn? If so, the level of ammonia is likely too high. Be sure you check for the ammonia level at the level of the animal's nose. Make sure there is a good exchange of air for proper ventilation to avoid ammonia toxicity. Individual animals may give off unusual or bad odors with conditions such as diarrhea, ketosis, tooth or other abscesses, or footrot. Get used to the normal smells of your healthy animals.

**Loss of hair or wool** — Are there patches of missing hair or wool? Are some animals spending much of their time rubbing themselves? Inspect the animal for keds (wingless flies), lice, mites, maggots or other external parasites. Hair or wool loss can signify external parasites, trauma, stress or a recent fever. Persistent unexplained rubbing may also be a sign of scrapie, a rare but fatal disease that attacks the nervous system. Be observant for tufts of wool or hair on the ground or hanging on fencing, feeders, walls, gates or passageways, etc. Remember that some hair sheep breeds or hair sheep breed crosses naturally shed their hair. Some breeds, such as Icelandic sheep, seasonally shed their fleeces in the spring.

**Flocking behavior** — Does the animal mix with others or does it stay by itself? Animals typically want to be together as a group. This instinct is a method of protection from predators. Separation of animals should elicit some distress vocalization.

**Breathing** — Does the animal have a normal breathing rate? Normal respiration rate for sheep and goats is 12-15 breaths/minute (20-25 kids). Does rattling occur when the animal breathes? Is the tongue inside the mouth, or is the animal “panting”? Learn to use a stethoscope to monitor breathing and heart rates, as well as checking for dullness or rattles in the chest.

**Coughing / Choking** — Can the animal swallow feed, cud or water? Is an animal coughing or wheezing? Try to determine the cause of coughing or wheezing: are you feeding dusty hay? Is there adequate ventilation? Any new animals added to the flock recently? Persistent unexplained coughing, especially in lambs, may be an early sign of infectious pneumonia.

**General behavior** — Is the animal acting like the rest of the individuals in the group? Is one animal dull and unresponsive, or abnormally anxious? Abnormal behavior might include cribbing, circling, head pressing, grinding of teeth, etc.

**Conclusion:** As a producer of sheep or goats, you will use nearly all of your senses in detecting disease or injury in your livestock. Your skills will likely increase with time and experience. A notebook or diary can prove to be a useful tool in keeping track of abnormalities as well as for recording preventative measures like vaccinations and drenching in your flock or herd. Know your limits: there is usually a point when you need expert advice and help. Veterinarians are trained to assist you in dealing with livestock health issues. Develop and maintain a working relationship with a local veterinarian. He/she could become a valuable team member in small ruminant production.

**Producers: if you have other tips or suggestions for this list, please contact:**

Richard Brzozowski  
75 Clearwater Drive, Suite 104  
Falmouth, Maine 04105  
Phone: 207.781.6099  
[richard.brzozowski@maine.edu](mailto:richard.brzozowski@maine.edu)

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