

Recognizing the Signs of Calf Dehydration

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Recognizing Calf Dehydration

Oral rehydration solutions, or electrolytes, are an effective way to replenish fluids lost during the course of dehydration in calves with diarrhea or heat stress. However, are we recognizing the signs of dehydration early enough?

There are some quick and simple ways to evaluate dehydration levels of scouring or heat stressed calves by examining skin tenting, gum condition, attitude, and ability to stand or suckle. For example, a calf with diarrhea but no other clinical signs and a strong suckling reflex could be 5-6% dehydrated. Calves showing mild depression, weakness and sunken eyes but still sucking is 6-8% dehydrated. A calf that will not stand and has cool extremities is in serious condition with a dehydration level of 10-14%. Death usually occurs at 14% dehydration.

Skin tenting is a quick way to evaluate hydration. Pinch a fold of skin on the neck and count the number of seconds it takes to flatten. If the skin flattens in less than 2 seconds, this indicates normal hydration. If the skin takes 2-6 seconds to flatten, the calf is about 8% dehydrated. Over 6 seconds would indicate severe dehydration over 10%. Gum color and moisture can also be evaluated. Normal gums will be pink and damp while white and dry gums indicate dehydration.

Finally, calf attitude is often the best indicator even if they are showing no other signs. If calves need encouragement to get up or drink, monitor them closely for scouring or other illnesses.

Calves receiving electrolytes still need milk or milk replacer to supply energy and protein. The University of Illinois studied the following milk and electrolyte therapies: 1) electrolytes only for two days, with slow incorporation of milk for 7 days; 2) partial removal of milk during therapy; 3) full feeding of milk and electrolytes for 7 days. Fecal scores did not differ between treatment groups, although bodyweights were higher for treatments that included milk in some way. Calves benefited the most when full milk feeding was followed by daily electrolyte therapy.

It is nearly impossible to feed the calf too much electrolytes, but feeding too little is quite common. To determine the amount of electrolytes to feed, multiply weight of calf by the percent dehydration, and then divide by 2 to get quarts of liquid needed. For example, if a 100-lb calf is dehydrated 8% (100×0.08), 8 lbs of liquid divided by 2 equals 4 quarts needed per day in addition to normal feeding of milk.

These calculations are affected by the summer heat. When temperatures are over 90 degrees, increase the amount above by 50%. If temperatures are over 100 degrees, double the amount. Severely sick calves under heat stress can sometimes require up to 20 quarts of water daily to replace the total amount lost, so don't be afraid to be generous with the fluids! Healthy calves under heat stress will drink between 6 and 12 quarts of water daily just to maintain normal hydration.

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