PennState Extension

Proper Care for Non-ambulatory Dairy Animals

Producers are encouraged to have a written protocol for non-ambulatory animals and treat them as a medical emergency.

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Photo credit Daniela Roland, Penn State Extension

Dairy animals are at greater risk of becoming non-ambulatory around the transition period before and after calving. Causes for a cow to become non-ambulatory include metabolic illnesses such as ketosis and hypocalcemia, infectious diseases such as mastitis and metritis, and other disorders like dystocia or hoof and leg injuries The added stress on the animal at the beginning of lactation makes her more prone to health issues that could result in her becoming non-ambulatory. Studies have shown that one-third of dairy cows may be affected by some form of metabolic or infectious disease in early lactation (LeBlanc, 2010).

All cows must stand now and then to restore normal blood flow in their leg muscles. When a cow is unable to rise for an extended period of time, she is likely to experience permanent muscle damage. Cows that remain recumbent or down for greater than 24 hours are prone to secondary tissue damage. This can include pressure damage to nerves in the fore limbs and hind limbs, and induced necrosis in the hind limb muscles (Merck, 2022). As a result, even if the primary cause for the animal to be non-ambulatory is resolved, the animal may remain involuntarily recumbent due to this tissue damage (Merck, 2022). The pressure-induced tissue damage can be exacerbated if the animal remains lying on a hard surface such as concrete or pavement.

If an animal becomes non-ambulatory, prompt diagnosis should be made in consultation with the herd veterinarian to determine why the animal is unable to stand, and whether the animal should receive additional care or should be humanely euthanized. When treatment is given, but the animal is unable to sit up without assistance and refuses to eat or drink for more than 24 hours, humane euthanasia should be considered (Green, 2008).

How to Properly Move a Down Cow

If an animal must be moved to another location, special equipment large enough to move a cow safely and humanely should be used. This can include equipment such as a sled made from a sheet of plywood, rubber matting, or a large skid loader bucket. Never drag a cow (FARM, 2022).

The animal should be moved to a separate pen or area away from other animals. Once the animal is moved, provide safe shelter from the elements, and separation from other animals. Immediately roll the animal up onto its chest so it is sitting up sternally. Large straw or hay bales could be placed against the animal to help provide stability and to help the animal remain upright. When a cow lies flat on her side for an extended period of time, she can bloat, which can be fatal. This position also causes muscle and nerve damage to the legs on the downside, which reduces the chances of recovery.

Deep bedding should be provided, ideally six inches deep. Sand bedding is best but if that is not available, any other clean, dry bedding material such as straw or shavings can be used. The down animal should not be put on pavement or concrete as this surface is too hard and the animal will not have adequate grip or footing if it tries to stand up. If the animal has bedding with concrete underneath, a barn grip could be used to provide additional traction as the animal tries to stand up.

Fresh feed and water should be provided and should be checked at least twice daily. The feed and water should be placed in shallow tubs with low sides, so they do not easily tip over and are within easy reach for the animal.

Methods for Physical Therapy

Providing additional physical therapy can help increase the animal's chance for recovery. After an initial physical exam and treatment, a cow should be assisted to stand if they:

- Are alert and bright-eyed
- Are not severely trembling or twitching
- Show no evidence of severe disease
- Do not appear severely weak
- Appear to have normal and functioning limbs (FARM 2022).

There are four common methods to help relieve pressure on the animal's limbs and to promote standing up.

One common method is rolling a cow from side to side periodically. A down cow should be rolled every few hours, alternating between the right and left sides, to prevent secondary muscle and nerve damage (Green, 2008).

Hip lifts are another method to lift the animal to encourage it to stand on its own. A hip lift should only be used to lift a cow that can support its front weight. Never use a hip lift to move a cow to a different location. Slings are another option to help with recovery and are specially designed to provide support for large animals.

Flotation tanks are also used to aid in recovery and are ideal for animals that have musculoskeletal or nerve injuries. Flotation therapy involves filling a specialized tank with body-temperature water until the cow stands chin-deep in the water. After the flotation therapy of about 8 to 12 hours, the tank is drained and the animal walks out or is moved to a pen. This process can be repeated several times until the cow stands. Research has shown that cows with flotation therapy were more likely to recover if they were treated at an early stage of recumbency and if proper care was provided while the animal was down (Stojkov, 2016).

Written Protocols for Non-Ambulatory Animals

In most cases, a non-ambulatory animal should be treated as a medical emergency. Dairy producers are encouraged to have a written non-ambulatory protocol. According to the Farmers Assuring Responsible Management (FARM) Animal Care program, written protocols for non-ambulatory animals should list the following details:

- Non-ambulatory animals are moved using proper methods, including the use of special equipment.
- Non-ambulatory animals are provided with prompt medical care.
- Non-ambulatory animals are provided with access to feed, water, protection from the elements for typical climatic conditions, isolation from other ambulatory animals, and protection from predators.
- Facilities are designed to have a location to segregate injured, sick, or weak animals.
- The location for weak, sick, or injured animals provides animals with feed, water, protection from heat and cold for typical climatic conditions, isolation from other ambulatory animals and protection from predators.
- The written herd health plan has a written protocol for non-ambulatory animal management that includes language specific to areas of non-ambulatory animal management.

A non-ambulatory animal can be frustrating and difficult to manage. If a producer has a down cow, working with their veterinarian to properly diagnose and provide early treatment is important. Down cows require immediate attention and when a cow is non-ambulatory, giving the animal the proper care will give it the best chance to recover.

References

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