

## **Downer Cows - What Can Be Done?**

Dr. Sherri Christie

Down cows on the farm are extremely expensive, time consuming, and a welfare concern for both producers and consumers. Dairy cows go down for many reasons, once down lack of movement and compression of muscles in their hind limbs can lead to severe muscle and nerve damage, which in turn can lead to widespread organ damage. Therefore, down cows are an emergency and should be tended to immediately.

The first step is to discover the reason why the cow is down. Assessing the history of the events leading to the cow going down and doing a complete physical exam are critical. Veterinary exam and/or bloodwork may be necessary in some situations. Once the cause is established, treatment should begin immediately. Goals of treatment are to correct the primary reason the cow is down, prevent additional nerve and muscle damage, and prevent suffering. Euthanasia should be considered if prognosis for recovery is poor.

The down cow needs a safe environment away from danger such as other cows, gutters, electric fences, and alley scrapers. The cow should not be moved if her location is adequate; avoid moving cows in labour. Cows should be properly supported to be moved ie. some form of sled, cart, large sling (not small straps) or large loader bucket. Cows should not be moved with hip lifters alone, or dragged by the head or limbs. The cow should be supported to stay lying upright (in sternal) and not be allowed to lie flat out on her side. Ensure the cow's hind legs are tucked in to her flank and she is supported to stay upright (eg. against a bale). Bedding should be at least 40 cm deep and good footing must be provided (sand or grit can help if slippery surface below loose bedding). The cow can not lie on a hard surface as muscle and nerve damage can begin to occur in less than an hour or two. Bedding needs to be kept free of manure and urine to decrease the chances of mastitis and skin or joint infections. Cows should be nursed in a location where they can be supervised easily and provided with shelter from the sun, rain, extreme cold, or heat.

Once the cow is located in an appropriate location start nursing care right away. Move the cow by rolling her from side to side every two hours initially. Provide water in a container that will not spill and feed that is easily consumed. If the down cow is lactating, milk her as much as possible to relieve udder pressure. Encourage her to stand regularly on her own or with assistance. Lifting a cow may help some uncertain cows to stand and may help with an initial assessment of injury. However, lifting cows carries the risk of further injury to the cow and can be dangerous for people. Strongly consider consulting a veterinarian prior to attempting to lift a cow. When lifting a cow, ensure adequate personnel are present to minimize the trauma to the cow as she is lifted and lowered. If cows are unable to support their weight after lifting, they should be lowered immediately to prevent trauma to hips, muscles and nerves. While lifting the cow monitor her closely for joint, muscle or subcutaneous swelling, dislocated hips, muscle, tendon or nerve damage, pressure sores or pain.

Records should be kept of every down animal, the cause and the outcome, so changes can be made to prevent future cases. If a transition issue such as hypocalcemia (milk fever), has caused a down cow then the transition cow program should be reviewed (nutrition, cow health monitoring, pen moves, peri-parturient stressors, etc). If the cause is mastitis, a review of cow cleanliness, environmental cleanliness, milking procedures, milking equipment, and vaccine status should occur. Difficulties due to calving injury should lead to a review of management before, at, and immediately after calving. Close monitoring of calving pens, proper staff training, and prompt intervention when needed during calving are important.

The occurrence of downer cows due to injury should lead to an investigation of the physical facilities for cow housing and cow management. Slippery or uneven floors, poor lighting, steps, tight turns, narrow alleys, overcrowding, etc. should all be addressed to make the cow facility safe. All farm staff must be trained in careful and quiet low risk handling. Review training of animal handling frequently (1-2x/year) to avoid the development of poor habits and ensure consistent staff behavior around the cows. Set up farm routines to avoid pressure on staff to rush the movement of cows.

Use extra care when moving high risk (lame, weak, peri-parturient) cattle. Provide additional grit material (sand, limestone, kitty litter) on surfaces to improve footing if needed, limit competition, and decrease distances these animals need to travel. Grit material can also be used to manage high risk areas in the barn when a long-term solution can't be immediately implemented. Recognize and treat lame or weak cows as soon as they occur to decrease severity and continue to work on lameness/weak cow prevention. Design barns to allow proper cow flow. Minimize dead ends to allow escape routes for subordinate cows. Segregate cows in active heat (estrus) from the rest of the herd to avoid injury. House them temporarily where they have good footing.

Down cows are extremely costly and risky to the reputation of the dairy industry. Good management and extra care with prevention will minimize the risk of occurrence of downer cows.

The Ontario Association of Bovine Practitioners (OABP) is working with Dairy Farmers of Ontario (DFO) to develop a comprehensive guideline to help veterinarians and dairy producers prevent and care for downer cows.