

The Downer Cow Syndrome Dec 2018

We often get called out to attend a 'down cow', but there is a subtle difference between the presentation of the acute down cow and of the cow suffering from '**downer cow syndrome**'.

Any cow that has been unable to rise and been down for more than 24 hours falls under the clinical term 'Downer Cow', irrespective of the initial cause of her recumbency. The primary reasons for her situation generally fall into one of three categories – **T.M.T.**

Toxic **Metabolic** **Traumatic**

These need to be addressed as a matter of urgency, but if not responding to treatment then the situation starts to become gloomier.

Once down for over 24 hours they develop significant secondary health problems, specifically: 'a pressure induced ischemic muscular necrosis' – in other words muscular and nerve damage to the larger muscles of the back legs, leading to an ever-reducing ability to rise and recover successfully.

Pathology of Muscular Necrosis

The muscles of the hindlimb are compressed by the weight of the cow leading to a reduction in lymphatic and venous drainage, while arterial pressure and flow is maintained. Interstitial fluid volume and pressure within the tissues increases leading to 'compartment syndrome'. The severity of pressure-induced damage is dependent on anatomy, duration of compression and surface on which cow is lying. Larger, heavier cows on concrete do worse than smaller, lighter heifers on straw beds. The level of nursing care and attention to the animal's needs will directly influence the outcome and success of treatment.

Primary Causes for Recumbency

40% of all 'downer cows' have **Metabolic**, generally hypocalcaemia, as their primary cause for recumbency. Also consider magnesium, phosphorous, ketosis and acidosis.

Toxic causes include mastitis, metritis, dead decomposing foetus, traumatic reticuloperitonitis

(wire disease), RDA/volvulus/intussusception (twisted gut), peritonitis or overwhelming abdominal catastrophe.

Traumatic causes include pelvic or limb fracture, sacroiliac luxation (hip dysplasia), stifle injury/patellar luxation and calving/dystocia related issues, such as twisted uterus and obturator, sciatic or peripheral nerve damage. Other less common reasons for recumbency may include infection and pyrexia (high temp), tetanus or botulism and even severe lameness/foot injury.

Examination

A full and careful clinical examination is needed to identify the primary cause of recumbency and level (if any) of response to treatment.

- Calving history – when, any intervention/complications...
- Length of recumbency so far and what attempts have been made to move or lift. Any response...
- Any treatment given. What, when and how much?
- Bloods – Calcium, Magnesium, Phosphorus, ketones (energy levels).

The impact of prolonged recumbency and muscular damage can then be assessed, and a treatment plan and prognosis given.

Treatment

Move cow onto soft, clean bedding. Deep straw, deep sand (20cm minimum) or ideally out to grass if weather allows.

Provide ad lib good quality feed and clean fresh water at all times.

Roll, turn or lift cow every 3-4 hours to prevent, or at least reduce, the onset of tissue damage.

A hip hoist can be a useful tool to lift 'downer' cows in order to prevent them from suffering pressure related injury.



Criteria for use are as follows:

- The cow must be free from injury such as broken leg, dislocated hip or other joint damage. If uncertain, please call us.
- The cow should be checked for signs of illness or metabolic disease e.g. toxic mastitis, milk fever and treated accordingly.
- Whenever possible, only lift cows over a soft surface e.g. straw bed or pasture.
- Ensure adequate height over the cow for her to be safely lifted using a loader.
- Attach the hip hoist firmly around the tuber coxae as indicated by the red area in the diagram:

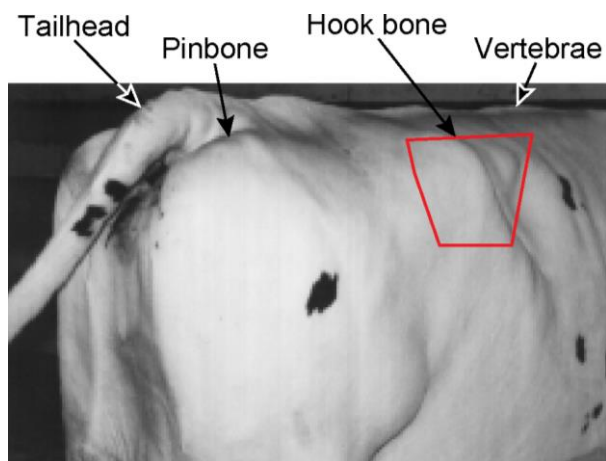


Dairy cows will require milking twice daily. There is obviously an increased risk of mastitis, so attention to detail is paramount. Ensure the primary cause of recumbency has been rectified or is under an effective treatment regime.

Use of non-steroidal anti-inflammatories, such as Metacam (2.5ml per 100kg s/c) or Rimadyl (1ml per 35kg s/c) is indicated.

Prognosis

If down for over 48 hours, then a guarded prognosis is given. Once down for 4-5 days then a poor prognosis should be given. Ongoing assessment should be made throughout. If the cow is bright, alert, responsive, eating, drinking and attempting to rise then recovery is possible. However, if the cow becomes listless, stops eating/drinking and is losing condition, then welfare considerations may dictate euthanasia.



- Lift the cow slowly with a loader or tractor as vertically as possible until in a normal weight bearing position. The idea is just to help the cow to stand, not to lift her up in the air.
- If the cow will stand, leave her with the hoist on for 15-20 mins. If she won't bear weight, lower her down again after 2-3 mins.
- Don't remove the hoist from the cow in a standing position unless you are certain she is fully weight bearing and there is no risk of her staggering onto concrete.

Wishing you all a very Merry Christmas and best wishes for the New Year.



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Christmas opening times:

The Farm Office and Dispensary will be closed:

***From 3pm on Christmas Eve
Christmas Day and Boxing Day
From 4pm New Year's Eve
New Year's Day***

The rest of the period we will be open as normal.

