Milk fever (post parturient hypocalcaemia, parturient paresis)

is a disease mostly seen in dairy cows, but suckler cows can be affected as well. It is most common in the first few days of lactation. It can also occur just before calving.
In mild cases, the animal seems quite normal, but has difficulty standing. In typical cases, the cow is down with its head flexed to one side. In advanced cases, the cow will lie on its side, apparently dead.

Subclinical milk fever can cause problems further on in the lactation. It interferes with dry matter intake and plays a role in the occurrence of displaced abomasums, mastitis and others.

Incidence and costs

Clinical milk fever still affects about 8% of dairy cows in the UK at an estimated cost to the industry of £6000 per 100-cow herd per annum

Subclinical milk fever could be costing producers as much as 1ppl.

Disease mechanism

At or near the time of parturition, the onset of lactation results in the sudden loss of calcium into milk. Calcium requirement increases by 3-5 times and blood calcium levels decline rapidly around calving.
A whole range of the cow's body mechanisms will try to bring the calcium levels back to normal but that will unfortunately not always be enough to prevent milk fever.

Low blood calcium levels interfere with muscle function throughout the body, causing general weakness, loss of appetite, and eventually heart failure

Amongst the predisposing factors for cows to develop milk fever are high energy diets, high sodium and potassium grass silage and high calcium diets in the dry period.

Treatment

Mild cases can sometimes be treated with calcium under the skin or oral supplementation with pastes or boluses. However most of the time it will be preferable to treat cows with milk fever with one bottle in the vein and one under the skin and/or oral calcium.
Additional treatment can sometimes be indicated such as painkillers, phosphorous injections or steroids depending on the individual case.
Always provide soft bedding with plenty of grip to make sure the down cow doesn't damage herself and can get up easily.

Always check that the animal is not toxic from a mastitis or metritis or had a traumatic injury before treating for milk fever

Prevention

Avoid cows gaining weight in the dry period by feeding for maintenance. Exercise can help prevent cows getting too fat so don't house your dry cows in a small dark shed.
If you feed to your dry cows grass silage, 3rd and 4th cuts are preferable.
Partial or complete DCAB diets are a very good way to prevent milk fever but need good monitoring.
Alternatively, partial DCAB can be achieved by adding anionic Mag-Cloride flakes to the drinking water.

Never feed high calcium diets to dry cows.