A Quick Guide Infectious Calf Scours

Scouring in calves is not something you can easily get away from and is often considered a normal part of having young animals in your care. I’ll be the first to admit that even the most diligent of people are unlikely to prevent scouring completely but I’m certain in a lot of cases could have been improved or avoided all together. This is a quick guide to refresh the memory or get you thinking about what problems you may be facing.

Basic Treatment (BT) for Diarrhoea

**Fluids & Rehydration:** Arguably the single most important treatment of a scouring calf. In an ideal world rehydration therapy can be added to milk so the calf is still feeding normally and being rehydrated. However, sometimes the calf will not be drinking more fluid than it is losing and the only option is to tube feed fluids or use IV fluid therapy with a vet.

**Nutrition & Energy:** Oral rehydration products can vary widely and it’s important to consider what’s actually in them. The best rehydration therapy will contain electrolytes (sodium/potassium) an energy source (glucose/glutamine), products to correct metabolic acidosis (e.g. bicarbonate) as well as agents to facilitate absorption (citrate, acetate, propionate or glycine). It may not be obvious if there is enough of each ingredient or what even is enough; if in doubt consult your vet or work out which product works best for you.

**Warmth:** If an animal has a high temperature that doesn’t mean it’s ok to leave it in a cold environment. Having a place a calf can keep warm if it needs to is essential. Once a calf’s temperature starts dropping, it may be a slippery slope that’s hard to come back from.

Infectious Causes of Diarrhoea

<table>
<thead>
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<th>Pathogen</th>
<th>Days</th>
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<tbody>
<tr>
<td>E. Coli</td>
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<tr>
<td>Rotavirus</td>
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<td>Coronavirus</td>
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<td>Crypto</td>
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<td>Salmonella</td>
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<td>Clostridium</td>
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<tr>
<td>Coccidiosis</td>
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*The chart shows the age in days at which a calf is most likely to become infected with a pathogen. Although clinical signs are more likely to be seen at certain ages (darker colours) disease can still occur outside this time period (lighter colours).*

**E. coli**

Sudden death, watery diarrhoea, weakness and rapid deterioration is common to see with E. Coli. When a calf is born it ingests faecal bacteria from the environment to form a normal gut flora, at the same time it can pick up E. Coli bacteria, which is why it is normally seen in a young age. Good hygiene and colostrum intake are a must to prevent infection.

**Treatment:** BT + Broad Spectrum Antibiotics
Rotavirus
The cause of a very high number of calf scours; it is a virus that is easily picked up from the environment and can live there for a long time. Infection is usually self-limiting so the most important thing is supportive therapy. Preventative vaccines are available.
**Treatment:** BT, anti-inflammatories, isolation, hygiene

Coronavirus
Very similar to rotavirus but can be more hostile and once again, supportive therapy is essential. Preventative vaccines are available.
**Treatment:** As for rotavirus

Cryptosporidium
A protozoa that can survive in the environment for a long time. Calves normally suffer most from emaciation as opposed to dehydration as they cannot absorb enough nutrients. The problem is perpetuated by infected calves that shed oocysts into pens. Because of this the problem can be worse where there is a variety of ages as the older calves pass infection to the younger naïve calves. Good environmental hygiene is essential if you are looking to control the infection.
**Treatment:** BT, plenty of energy/food, (Consider specific treatments)

Salmonella
There are 1000’s of different types some of which can have a very high mortality rate. Adequate colostrum is by far the best preventative measure as treatment can be very difficult. Although a bacteria, antibiotics are not always the solution due to the damage they do to healthy gut bacteria, often lengthening recovery times.
**Treatment:** BT, +/- Antibiotics, anti-endotoxin, anti-inflammatory

Coccidiosis
Normally seen in young and stressed animals (travel, weaning, other illness etc.) from 3 weeks of age. Even mild infections can cause permanent gut damage that can affect nutritional absorption. Signs of cocci can vary from mild scours to haemorrhagic diarrhoea to problems with the nervous system.
**Treatment:** BT, hygiene, anti-coccidiostat

**Conclusion**
There are always a number of factors that lead to calf diarrhoea and this is important to remember when trying to control any disease. The important thing to remember is to try and reduce the impact of an outbreak and take as many necessary steps as possible to prevent it happening again.

Contact your vet if you would like further information [www.westpointfarmvets.co.uk](http://www.westpointfarmvets.co.uk)

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Harry qualified from the Royal Veterinary College in 2016 before joining Westpoint on the internship programme at York. His main interests are in youngstock, nutrition and beef reproduction. In his spare time, Harry enjoys playing rugby and squash, doing DIY and relaxing with friends and family. Having grown up in Huddersfield, he is excited to start exploring a new area of Yorkshire.