

# Summer Scour in calves

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## What is Summer Scour Syndrome?

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Summer Scour Syndrome is a relatively new condition and has not yet been widely researched. It is a collection of clinical signs, characterised by scour and rapid weight loss, lethargy, lack of rumination and weakness which can progress to profound weakness and death. Some calves may develop oral and oesophageal ulceration or ulceration of the muzzle. Other infections or infestations that cause similar signs in calves at grass have been ruled out before a diagnosis can be made. These include coccidiosis, a high worm burden, mineral issues such as molybdenum toxicity (with or without concurrent copper deficiency) and copper toxicity, rumen acidosis (from heavy concentrate feeding), salmonellosis and BVD. Your veterinary practitioner can distinguish between these diseases and summer scour.

Not all calves in the group are affected and severity can vary from year to year and farm to farm. It typically occurs in dairy calves within a month of turnout to grass and up to 12 months of age.

## What causes Summer Scour Syndrome?

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The cause is not definitively known and several theories exist as to what the most likely risk factors are. An infectious cause has not yet been identified and the disease is thought to relate to nutritional issues, such as when the rumen is insufficiently developed to digest forage, as the one factor common to all cases is a grazing diet (exclusively or partially) in the calves' first year.

Summer Scour Syndrome is more common in calves grazing 'lush' pastures, typically with a high crude protein (greater than 20%) and low fibre (less than 40%) content per kg of dry matter ingested. It is suspected that if the rumen has not developed properly, it makes it difficult for calves to deal with a fresh grass diet. Calves are selective grazers and preferentially consume the top, leafier parts of the grass, which contain more nitrates and non-protein nitrogen (NPN). The consumption of large quantities of nitrates and NPN by young calves with an immature rumen might lead to an excessive build-up of ammonia in the rumen. Inadequate rumen development may also lead to an unstable pH for rumen bacteria to function properly, which may potentially contribute to the syndrome.

## How to prevent Summer Scour Syndrome in calves

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- Discuss with your veterinary practitioner and farm advisors if your calf rearing strategy is optimal. Gradual weaning ensures a smooth transition from a milk diet to a forage diet. Concentrates should be introduced to calves from the first week in life to allow the rumen to develop properly because when the calf is born the rumen is not functioning at all. Begin weaning up to 4 weeks before removing milk completely and calves should be consistently eating at least 1kg of concentrate daily before weaning. Avoid making other dietary changes at weaning as these will increase stress and take longer for the calf to adjust. For farms with Summer Scour Syndrome it may be worthwhile delaying the weaning age or retaining calves indoors on a concentrate and high fibre diet for at least one week after weaning before turn out to pasture. See AHI leaflet on Early Nutrition and Weaning for more detail.
- On farms with Summer Scour Syndrome, ensure calves have access to high levels of fibre from stemmy grass or older swards when first turned out to pasture and an extra source of fibre (straw or hay) may be required. Avoid grazing reseeded pastures, or leafy (lush) grass for at least 2 months after turnout. Strip graze calves to encourage consumption of both the leaf and stem of the grass. Avoid pastures that have had slurry or nitrogen applied recently.
- The most important aspect is to monitor dairy calves closely for evidence of diarrhoea and weight loss during their first 4 to 6 weeks post turnout to grass.

## How can I treat calves with Summer Scour Syndrome?

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Treatment options should be discussed with your veterinary practitioner, as there is no cure that works in all cases and it is important to begin symptomatic treatment as quickly as possible after diagnosis. Affected animals are immunosuppressed and may have concurrent disease (e.g. respiratory disease) which would also require treatment. The affected calves are usually unresponsive to conventional treatments, only responding to removal from grass.

If, following a discussion with your veterinary practitioner, Summer Scour Syndrome is suspected, then affected calves should be removed from grass immediately. Housed calves should be fed good quality forage such as hay, silage or straw along with a good quality calf concentrate and have ad-lib access to water. Following a period of 4-6 weeks, if calves are recovered sufficiently, they can be returned to a non-lush pasture as described above, with access to extra fibre and good quality concentrates.