

Te Korito Alpacas

Alpaca Health

For your reference, a pdf file of this [Alpaca Health and Illness page](#) (correct at 27/09/2022) can be downloaded.

If you cannot find what you are looking for in this page, I would really appreciate [a note to tell me](#) so that I can write on the subject for you and future visitors.

Worms and other parasites affecting alpacas are now found [on this page](#).

Health and Illness.

With appropriate care, alpacas maintain very good health. As with all livestock, occasional health issues are found and this page may help the reader to recognise these.

Please note: this information is provided only as a guide to the commoner illnesses in alpacas. If an owner cannot quickly determine the cause of any abnormal symptoms or behaviour by an animal, veterinary assistance must be sought. Nothing provided here is a substitute for veterinary consultation.

It is very important that alpaca owners know the normal behaviours of each of their animals. Alpacas are stoic, meaning that they will try to hide the symptoms of any injury or illness. Knowing what is normal makes diagnosis of illness or injury far easier. Sudden and rapid weight loss is often indicative of health issues so [condition scoring](#) or weighing your alpacas on a regular basis is valuable. Moreover, visual clues such as lack of energy, spending more time recumbent and reluctance to stand can indicate illness.

Notable in the treatment of alpacas is that very few (if any) drugs are approved for use in camelids by any national medicines regulatory body. Although a range of safe and effective drugs has now been established for use in alpacas, they are used "off label", that is, not specifically tested on them. Vets tend to approximate alpaca dosage rates based on those for sheep.

Following are some of the commoner and relevant conditions affecting alpacas in New Zealand.

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• **Poisonous Plants**

Alpacas will graze a wide variety of plants but a surprising number found growing in New Zealand paddocks and gardens are poisonous to most livestock and must be removed if within reach. There is a saying of "if in doubt, pull it out" for good reason. Crias are most at risk as they will try plants that the adults avoid. The list of toxic plants is extensive but perhaps the most likely encountered in New Zealand would be Oleander, Foxglove, Hemlock, all Nightshade members, Laburnum, Iris, Jerusalem cherry, Rhododendron and Azalea, Ragwort and Box hedging. Of these, hemlock and rhododendron/azalea are the most dangerous as they are relatively common and ingestion of even small quantities of any parts of the plant can be fatal. Should an owner believe that an animal has eaten any of these, veterinary help must be obtained immediately.

[This page shows a photograph gallery](#) of toxic plants that grow in New Zealand and other countries.

• **Rickets (Hypovitaminosis D)**

Vitamin D is synthesised in the skin through a chemical reaction caused by ultra-violet (UV) radiation. As alpacas evolved at high altitude where they are exposed to high intensities of UV radiation, when they are kept at low altitudes, the amount of UV radiation received is lower and they may become vitamin D deficient. Alpacas younger than 2 years old along with pregnant or lactating females are most at risk of deficiency. Low sunshine hours and animals in full fleece are at particular risk.

Vitamin D is responsible for the effective absorption of calcium, magnesium and phosphate and is also involved in the regulation of calcium levels in the bloodstream. Any deficiency will therefore affect the growth or/and calcification of bones. The deficiency condition is called rickets in young animals but osteomalacia/osteoporosis in adults. Rickets is commoner in crias unpacked later in the year and to darker fleeced animals. Symptoms may include lethargy, being reluctant to walk and when moving show a splay-legged gait, have a hunched back and bowed fore-limbs. Veterinary consultation is vital as failure to treat will result in permanent deformation of the bones. As always, prevention is the best course and is discussed in this section on [injection schedules](#). Osteomalacia involves removal of calcium and phosphate from the long bones. Symptoms are similar to rickets and can also be treated under veterinary supervision with vitamin D and phosphate supplements.

- **Dermatophilus**

This skin condition is familiar to many livestock owners and is known by many names: 'cutaneous streptothrichosis' (cattle, goats, and horses), 'rain-scald', 'mud rash' or 'mud fever' (horses), 'lumpy wool' (sheep), 'strawberry foot rot' (sheep and cattle) and is a causative factor in 'pastern dermatitis' (horses). It is caused by the bacterium *Dermatophilus congolensis* and can result in severe skin infections indicated by the formation of crusty scabs containing the microorganism. In alpacas, these lesions are most common on the back and wet, clumped wool may be found that is removable in clumps. The underlying skin is often reddened and weeping.

The bacterium exists in two forms: filamentous and motile zoospores. The zoospore is resistant to heat and being dried out and as it is the dormant phase, it can survive in infected scabs for months. Transmission between animals is known to occur by direct contact but contaminated environments may also be an indirect means.

Veterinary consultation is essential as the treatment will include antibiotics - fortunately the bacterium is sensitive a wide range. Povidone iodine shampoos or chlorhexidine solutions are also useful in clearing up the disease.

- **Ryegrass staggers.**

This is a condition caused by the endophyte fungus *Epichloë festucae* (var. *lolii*) which is found in the leaf sheath of perennial ryegrass pastures. The endophyte is a deliberate addition to the ryegrass seeds to deter insects, particularly the Argentine Stem Weevil, and increase grass growth rates. The condition is particularly common in New Zealand, possibly to the combination of endophyte-infected ryegrass and the practice of monoculture. This fungus produces several mycotoxins including lolitrem-B, peramine and ergovaline, which when ingested cause neurological symptoms [5]. The disease usually occurs in mid/late summer and autumn or after a drought when new grass is growing quickly. This condition mainly affects animals under 2 years of age but only some are affected, suggesting a genetic predisposition and may be permanently at risk.

In its mildest form, there are slight head tremors or head wobbling but the animal will often appear normal until it becomes excited or agitated. If left untreated, the condition progresses to head shaking, showing a high-stepping gait and a stiffness that can lead to poorly coordinated walking (ataxia). Later there may be complete loss of limb control and the animal will be prone to falling over. Once removed from the pasture, most animals will recover with no apparent residual effects. To achieve this, the patient should be stabled with another alpaca and provided with alternative feedstuffs such as hay, chaff and kibble. The recovery time is between one and three weeks. Veterinary treatment may include an injection with vitamin B₁ to eliminate the possibility of polioencephalomalacia (thiamine deficiency), which exhibits similar symptoms.

- **Tuberculosis (Tb).**

Tuberculosis is an infectious disease caused by the bacterium *Mycobacterium bovis*. It can affect a wide range of animals in New Zealand but cattle and deer are most at risk of contracting the disease. The common brushtail possum (*Trichosurus vulpecula*) is the main wildlife vector (carrier) of bovine Tb in New Zealand. This animal was introduced from Australia for the production of its fine fur. However, it is now endemic and estimates of numbers are certainly greater than 50 million. This possum is also responsible for significant damage to forests and the killing of native wildlife. The usual route of Tb infection is through the inhalation of droplets expelled from the lungs of an infected vector.

The TBfree programme (through [OSPRI](#)) aims to eradicate bovine Tb from New Zealand through targeted control. As part of the process, the country is divided into [Tb control areas](#) with each having a specific testing frequency and movement control measures, depending on the risk of Tb transmission from an infected vector.

As it is now established that camelids are susceptible (if resistant) to this disease, the [AANZ](#) has set up a procedure for testing and reporting of camelid herd Tb status. The scheme is voluntary but all owners are strongly recommended to take part. Moreover, it is currently a condition of attendance at A&P shows that alpacas are tested and have valid certificates. All herd members over 6 months old must be tested to gain a "Whole Herd" status.

The single tuberculin test (STT) is approved for use as a primary Tb test for alpacas. An accredited vet will need to apply the test to an area of skin either at the neck site (about level with the animal's back) or behind the foreleg. The neck site is the [AANZ](#) preferred and recommended site. Examination of the test site is made two or three days later for any skin reaction.

A detailed [Tb reference card](#) from the [AANZ](#) archive can be downloaded.

- **Johne's disease (ParaTB).**

Johne's disease is one of global significance. From an economic loss standpoint, it is prominent among ruminant species, cattle, sheep, deer and goats with many herds having infected animals. Furthermore, the range of species that can be infected can be illustrated by a review of published data on affected zoo animal species [50], which included alpacas and llamas.

The disease is caused by the bacterium *Mycobacterium avium* ssp *paratuberculosis* and results in a very gradual thickening and inflammation of the intestinal wall (enteritis) which eventually prevents the absorption of nutrients. Infection most commonly occurs at a young age through ingestion of the bacteria but symptoms are not seen for some years. The shedding of bacteria in the faeces starts before there are any clinical signs thus is the main source of transmission between animals. The bacterium survives for long periods in the paddock.

Clinically, Johne's disease is characterised by slower growth rates in younger animals but as the disease advances there will be weight loss and often profuse

diarrhoea. Affected animals eventually die. A diagnosis may be confirmed by various testing methods. Growth of *M. avium* bacteria from faecal samples is possible but a slow process due to the slow growth rate of the organism. There is currently no treatment for Johne's disease.

In New Zealand, the [Johne's Advisory Group](#) facilitates collaboration and coordination across the various livestock sectors for the control and management of Johne's disease. A [vaccine](#) is available for sheep and goats but not cattle due to the interference of the vaccine with TB testing. This would also be an issue with alpacas being taken to shows as a clear TB status is currently required.

- **Ulcerative Pododermatitis.**

Alpacas kept in damp or even wet paddocks may develop pododermatitis. This can be seen as blisters and sloughing from the footpads and often there are infections caused by anaerobic bacteria, frequently *Fusobacterium necrophorum* [34]. Veterinary treatment involves the removal of damaged tissue, antiseptics and possible use of foot protection to allow healing. Antibiotics are often given. Growth of new tissue on the footpad may take many weeks and is helped by keeping the animal in a dry environment.

- **Constipation (Faecal Impaction).**

Given their high fibre diet, it might seem counter-intuitive that alpacas can suffer from constipation. The cause may be unclear but possibilities are a sudden change of diet, drinking too little water or even stress. Symptoms include an increased frequency of rolling, increased vocalisation, laying on one side and kicking at the stomach, all of which suggest abdominal pain.

Veterinary assistance is needed as treatment may include Buscopan (smooth muscle relaxant), Flunixin (Banamine) for pain relief and mineral oil administered either orally or rectally. Walking the alpaca on a halter and lead will assist the action of the oil. Faecal material is usually expelled after a few hours and often as large masses. Normal defecation resumes within 24 hours.

- **Diarrhoea.**

Most alpaca owners will have seen an alpaca with diarrhoea at some point. Unfortunately there are many causes and detective work can eliminate some possibilities before the arrival of the vet. Diarrhoea must be taken seriously as the alpaca can lose significant amounts of water and electrolyte as a result. Following are a number of possibilities:

- Parasites: Coccidia, giardia and *Cryptosporidium* are common causes of diarrhoea in alpacas, depending on locale. These can be present in contaminated feed or water and may cause damage to the alpaca's intestinal lining. Symptoms can include loose or watery stools, weight loss and loss of condition. Diagnosis is typically made through faecal testing and treatment may involve anti-parasitic drugs.
- Bacterial infections: Bacteria such as *E. coli*, *Salmonella*, and *Clostridium perfringens* can also cause diarrhoea in alpacas. These bacteria may be present in contaminated feed or water and can be transmitted from other animals. Symptoms may also include fever, lethargy and dehydration. Diagnosis is typically made through faecal testing and treatment may involve antibiotics, fluids and supportive care.
- Viral infections: These include rotavirus and coronavirus as a cause. These viruses can be spread from animal to animal and through contaminated feed or water. Symptoms may also include fever, and lethargy. Treatment is typically supportive as there are no specific antiviral medications available for alpacas.
- Consumption of toxic plants: Many of the seriously toxic plants in New Zealand are shown on [this page](#). Besides these, a variety of other plants that are irritating to the bowel can cause diarrhoea if enough is eaten. Treatment is simply to move the alpaca to another paddock not containing the offending plant. Recovery may take some days as the alpaca adjusts to the new forage.
- Diet: A sudden change in diet or consuming spoiled or contaminated food. This can occur when alpacas are moved to a new location or when there is a change in their feed or hay. Symptoms may also include bloating and abdominal discomfort. Treatment can involve removing the offending food or gradually transitioning the alpaca to a new diet.
- Stress: Stressful situations such as transportation or changes in their environment, for example, when alpacas are moved to a new location or when they are exposed to loud noises or other environmental stresses. Symptoms may include diarrhoea, lethargy and decreased appetite. Treatment should involve moving the alpacas to calmer surroundings or providing supportive care.
- Antibiotic use: Antibiotics can disrupt the natural balance of bacteria in the alpaca's gut so leading to diarrhoea. This can occur when antibiotics are given to treat a bacterial infection or as a preventative measure. Abdominal discomfort and bloating may also occur. Treatment may involve stopping the antibiotic or providing supportive care.
- Other medical conditions: Some medical conditions, such as liver or pancreatic disease, can cause diarrhoea in alpacas. These conditions can affect the alpaca's ability to digest food properly. Symptoms may include diarrhoea, weight loss and poor fleece condition. Diagnosis is typically made through blood work and other diagnostic tests and treatment may involve medications and dietary changes.

- **Heat Stress.**

The ability of alpacas to survive and thrive at altitude and at temperatures between -15°C and 40°C make them versatile animals from the human perspective. However, higher temperatures and humidities can be an issue if the alpaca is in full fleece, a situation made worse if it obese. Heat Stress is less likely in New Zealand but a significant risk in many other countries that alpacas are now raised in.

Symptoms may include abnormally rapid breathing through an open mouth, shaking and foaming at the mouth. The body core temperature is significantly raised. Should these symptoms be seen, veterinary help should be called in but the animal should have its body fleece removed immediately. Water can then be used to cool the alpaca but other measures can be used by the veterinarian.

As always, prevention is far better than cure and there are basic things that can be done:

- Shearing - This is absolutely essential before the hottest time of the year.
- Shade - Easily provided under trees, bushes or even through access to [constructed shelters](#).
- Cooling - Water can be used in a variety of ways. At its simplest, pools for the alpacas to splash their legs or kush in can be provided. Sprays creating fine water droplets can effect a significant temperature drop through evaporative cooling and many alpacas are very happy to 'kush in the mist'.

- **Choke.**

Choke in alpacas is often associated with the rapid consumption of pellets (kibble). Symptoms may include abnormal regurgitation sounds, copious salivation/drooling and saliva/pellet mixture being expelled from the mouth (see image). Rapid pellet consumption may be due to an animal gaining access to a feed bag of the kibble, a dominant animal eating multiple portions or a low-ranking animal quickly grabbing and swallowing what they can get.

The blockage can occur anywhere along the length of the oesophagus. Some alpacas will clear the blockage themselves though in milder blockage cases, gentle upward massaging of the oesophagus may relieve the obstruction. However, should the blockage not clear quickly, veterinary help must be obtained as other treatment methods are available but these may require sedation. Critically, any alpaca that has completely blocked the oesophagus will start to bloat as it cannot expel gasses from its rumen fermentation.

Choke is completely preventable by mixing the kibble in with chaff. Doing this makes the alpaca search for the kibble pieces and because its eating is slowed, enough saliva is produced to lubricate the chewed kibble down the oesophagus.

References.

Most of the literature below can be accessed by clicking on the highlighted link. Some links will access the appropriate web page from which the article can be downloaded but others will immediately start downloading the full reference.

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