

# THE HEALTH OF THE GOAT

Scottish Goatkeepers' Federation Leaflet



## NORMAL PHYSIOLOGICAL DATA

Temperature: 101.5 - 103.5 °C (38.6 – 39.7 °C)

Heart Rate: 70 – 80 beats per minute (higher in kids)

Respiration: 12 – 25 per minute (kids will be higher)

Oestrus cycle: 18 – 23 days      Length of oestrus: 12 -72 hours

Length of gestation: 148 – 152 days

## WORMING

There are very few wormers licenced for goats but goat keepers are generally not restricted as to which they can use. Goat and sheep wormers are recommended. There are several 'families' of wormers with several products in each family. It is important to rotate the families (not the products). A full list of wormers is available from [www.scops.org.uk](http://www.scops.org.uk)

Using the correct dosage is extremely important as under-dosing can encourage resistance. Doses should be accurately calculated, as sheep doses are not sufficient, e.g. Levamisole is 7.5mg/kg for sheep but 12mg/kg for goats. Your vet should be able to give advice on dosage. It is recommended to dose your animals to the heaviest in each age group, from Spring (kidding time) and then every three-four weeks.

To administer wormer, you can use an old, sterilized syringe (without the needle!). With one hand open the goat's mouth and place your thumb over the tongue, slide the syringe in at the corner of the mouth, and when well in, slowly depress the plunger. Hold the goats head in a vertical position until the mixture has been swallowed.

If dosing a milking goat, the milk must be withdrawn from human consumption for the length of time as dictated. Different wormers have different withdrawal times.

## FOOT TRIMMING

All goats should have their feet trimmed approximately every six weeks – more often if there are specific problems (e.g. laminitis, foot rot). Stand the goat against a wall, to prevent it from swinging round and lift each foot to trim it (like you would with a horse) in turn. NEVER attempt to turn a goat over into a sitting position.

**Laminitis** causes lameness, abnormal hoof growth, heat in the feet, pain in the coronary band, and a reluctance in the goat to stand - to name a few. It can be caused by over-eating or sudden access to concentrates, high-grain and low roughage diets or high protein diets. It can also develop as a complication of mastitis, metritis or pneumonia, especially after kidding. Prompt action is required if laminitis is suspected and advice from your vet sought.

**Foot rot** is an infection in the foot, often seen in-between the toes and generally causes lameness. There are many variants some of which are contagious, so it's important to regularly check feet for dampness, pink sticky skin and an unpleasant smell. Most cases, if caught early, can be successfully treated with antibiotic sprays. Wet, muddy conditions and dirty, moist bedding can be contributory factors to foot rot.

Some goats suffer from 'scabby heels' where there is hair loss and crusty scabs, above the hoof at the back of the foot, caused by a mite. After cleaning and drying the area, the application of zinc and castor oil cream can be effective and also Coopers Spot-on.

## VACCINATIONS

Goats ought to be vaccinated to prevent diseases and infections such as Tetanus, Pulpy Kidney, Enterotoxaemia, Pasteurella etc. There are conflicting opinions as to which vaccines are best for goats. It has been suggested that the 8 in 1 Heptavac P is too much for a goat's immune system, although it is still widely and effectively used, especially in areas where the additional cover offered by Heptavac is required.

Lambivac/Ovipast combination or Ovivac P are recommended by many. The 'P' in vaccines represents Pasteurella which is an often, fatal strain of pneumonia and should always be included. It is recommended to consult your vet about which vaccine would be most suitable.

Vaccinations are administered sub-cutaneously (i.e. under the skin), a good site is near the armpit, behind the front leg. Pinch the skin and direct the needle in sideways, be careful it doesn't come out the other side. Do not vaccinate into wet or dirty skin and always use a sterilized needle for each goat. Small lumps may occur at vaccination sites.

**COCCIDIOSIS** is a parasitic disease of the intestinal tract, caused by coccidian protozoa. It is more commonly seen in kids as adults can build up a resistance to it. Animals with coccidiosis may have poor appetite, fail to thrive and suffer diarrhoea. It is host specific which means that cross-contamination with other animals e.g. sheep to chickens, is not possible. It is treatable and you should consult your vet. The only exception is *Toxoplasma gondii* which causes toxoplasmosis in cats and can cause abortions in goats. **Warning:** Toxoplasmosis can be passed on to humans so it is advised that pregnant women avoid contact with goats at kidding time.

**FLUKE** occurs in wet areas as they require standing water to survive. Adult flukes live in the bile ducts of the liver where they mate and lay eggs. The eggs are passed through the bile to the intestine where they are passed out in the dung. Larvae hatch and enter snails which are the intermediate hosts. A complex life cycle takes place in the snail, including multiplication, so many worms (3rd stage larvae) leave the snail and swim about in the water. They attach to water plants and form a protective cyst which is eaten by the animal or swallowed with the water. The larvae reach the small intestine, migrate through the abdominal cavity and penetrate the liver, eventually reaching the bile duct where they mature into adults. It can take only 4 – 6 weeks from the larva being ingested to an egg-producing adult in the bile duct. The adult feeds on the lining of the bile duct and sucks blood. Symptoms may include progressive weight loss, weakness and anaemia. Combination treatments for worms and liver fluke are not recommended because of the higher dosage needed for worming.

**LICE** may trouble your goats, particularly in winter, even in the cleanest of sheds. If you notice your goats nibbling or scratching themselves more than usual, they may have lice. If you part the hair you may be able to see the pale brown creatures crawling about as they are just visible to the naked eye. There are natural louse powders available which are very effective e.g. Barrier Louse Powder or veterinary products such as Coopers Spot-on.

**MANGE** is caused by mites that burrow under the skin. There are three types of mange – Sarcoptic (around the head and neck), Chorioptic (on the legs) and Demodectic (small lumps all over the body). If you suspect any of these, consult your vet.

**PREGNANCY TOXEMIA** (also known as hypoglycaemia or twin lamb disease in sheep) can occur in the late stages of pregnancy, especially if there are multiple kids. The kids compress the rumen and limit the amount of feed intake resulting in a lack of nutrition which can lead to low blood sugar. It can also be brought on by stressful situations. Symptoms can include loss of appetite, unsteadiness and vision impairment. A glucose drench or injectable glucose can be administered to raise the blood sugar levels. It is sometimes advisable to induce kidding. Animals that are too fat can be at higher risk than those that are thin. Too much forage can limit the room available for high energy concentrates which are essential especially in the last two months of pregnancy.

**HYPOCALCEMIA** (also known as milk fever) is most likely to affect goats in the last weeks of pregnancy and in the first month of lactation, though as it can also occur at any time in healthy lactating animals especially if they have been subjected to stressful situations (e.g. during transportation, worrying by dogs). It is caused by a deficiency in calcium. Symptoms can include weakness, muscle trembling and a staggering gait. A range of injectable products containing calcium borogluconate will increase tissue calcium levels or your vet can administer a calcium supplement directly into the bloodstream.

**METRITIS** is an infection of the womb after kidding. A vaginal discharge is common after kidding but if there is infection present you may notice a strong, unpleasant smell and the goat may be showing signs of general illness.

**MASTITIS** is the term used to describe inflammation of the mammary glands, which may be caused by a number of different micro-organisms, mostly bacteria, but also viruses (e.g. caprine arthritis encephalitis), fungi, and can also be caused by injury. Symptoms include reduced milk yield, clots in the milk, lumps in the udder and, if untreated, complications such as loss of part or all of the udder, septicaemia and death. Mild cases may respond to a localized treatment using an intra-mammary preparation of antibiotic into the infected teat, after it has been stripped out. More severe cases will undoubtedly require more aggressive treatment and you should consult your vet.

**LISTERIOSIS** (also known as circling disease) is caused by a bacterium found in many sources including soil, sometimes in the goat's digestive tract, water and notably, silage. Symptoms include depression, leaning or stumbling and circling. If detected early, treatment may be effective with antibiotics.

**ORF** (also known as contagious pustular dermatitis) is a very contagious virus and causes scabs and sores on and around the nose and face. It can also affect the coronary band, leading to strawberry footrot. It can be passed between different species of animals through direct contact and via infected surfaces. **Warning:** Orf can also be passed on to humans so extreme caution should be taken if handling infected animals. Treatment is usually by antibiotic sprays and/or injection

**PNEUMONIA/CHILLS.** Goats can easily catch a chill, even from just a change of environment or cold draughts. They may go off their food, look unwell, have a fluffed-up coat and have a raised temperature. Keep them warm (use a rug) and offer tasty treats and warm water. If they deteriorate don't waste time, contact your vet. A chill can develop into pneumonia quickly and antibiotics will probably be needed.

**JOHNE'S DISEASE** (pronounced yoh-nees) is also known as paratuberculosis. The infection happens in the first few months of a goat's life but symptoms of disease may not show up for many months to years later. This infection is contagious, which means it can spread from one goat to another, and from one species to another and can affect all ruminant animals. There really are only two clinical signs of Johne's disease: rapid weight loss and diarrhoea. In goats, diarrhoea is less common than in cattle. Despite continuing to eat well, adult goats become emaciated and weak. Since the signs of Johne's disease are similar to those for several other diseases, laboratory tests are needed to confirm a diagnosis. If a case of Johne's disease occurs, it is very likely that other infected goats (who may still appear healthy) are in the herd. There is no known cure.

**CAE (CAPRINE ARTHRITIC ENCEPHALITIS)** is a contagious viral disease of goats. The disease is typically spread from mother to kid through the ingestion of colostrum or milk. CAE virus may also be spread among adult goats through contact with body secretions including blood, saliva and faeces of infected goats. There are 5 major forms of CAE in goats: arthritis, encephalitis (inflammation of the brain), pneumonia, mastitis, and chronic wasting. The arthritic form of the disease is most common in adult goats, while the encephalitic form is most common in kids. The chronic wasting form of the disease can occur either separately or in addition to any other form of CAE. Most breeders voluntarily have their goats blood tested for CAE and most shows are closed to untested goats.

**SCHMALLEMBERG VIRUS** is a livestock disease that was first discovered in 2011 and has been detected in a number of European countries. It is spread by insect vectors, probably *Culicoides* midges. It is not possible to be specific about the clinical signs of the disease, but it may cause late abortion or abnormalities in new born goats. Animals exposed to the disease seem to develop immunity, making it likely that disease will die out in areas where the disease has been present. This is a relatively low impact disease. However, in a small number of flocks and herds it can have a significant impact.

**NOTIFIABLE DISEASES (It must be reported to the Animal & Plant Health Agency)**  
**FOOT AND MOUTH DISEASE (FMD)** is an infectious disease affecting cloven hoofed animals. Symptoms include sudden, severe lameness, tendency to lie down, sores and blisters on the feet, in the mouth or tongue – symptoms can be hard to spot. Outbreaks are contained by compulsory slaughter.

**SCRAPIE** is a fatal brain disease. General changes in temperament and behaviour are noticed before clinical signs appear. Other symptoms include skin irritation, head trembling, lack of co-ordination and weight loss. Diagnosis can only be made from the brain tissue of a deceased animal.

**BLUE TONGUE** is a notifiable insect-borne viral disease that affects all ruminants, such as cattle, goats, deer and more severely sheep. It cannot be spread directly between animals and relies on the midge as a vector for transmission.

**CONTACTS/INFORMATION:** [www.scottishgoatkeepersfederation.com](http://www.scottishgoatkeepersfederation.com)

Twitter: @ScottishGoats Facebook: Scottish Goatkeeper's Federation

[www2.gov.scot/Topics/farmingrural/Agriculture](http://www2.gov.scot/Topics/farmingrural/Agriculture)

**BOOKS:** Goat Health and Welfare by David Harwood

The Goatkeeper's Veterinary Book by Peter Dunn.

Diseases of the Goat by John Matthews