

# Goat Care

Goats are clever, inquisitive, sweet, and endlessly entertaining. Their natural curiosity and intelligence can sometimes make them challenging to keep as pets, but a little extra knowledge (and proper fencing!) will help you and your goats live harmoniously together. Read on for more information about how to keep your goats happy and healthy.



## Basics

The average life span of a goat is about 12-14 years and their normal body temperature ranges from 101-102°F. Size and weight vary broadly depending on breed and sex. The females of larger goat breeds (e.g. Alpine, LaMancha, Nubian, Saanen) range in weight from 125-175lbs, while males typically weigh between 150-225lbs. Females of smaller breeds (e.g. Nigerian dwarf, pygmy) weigh between 40-80lbs, while males range in weight from 60-90lbs.

## Behavior

Goats are herd animals and require the company of other goats to be happy and healthy. By nature, goats are browsers, meaning that they tend to eat high-growing vegetation. This, combined with their innate curiosity and inclination to climb means that, if given the chance, goats will chew your trees, trample your garden, and dance on your car! Keep this in mind when determining how you'll keep your goats in their space and out of yours.



## Space

Your goat herd will need an enclosed space that offers protection from the elements and predators, as well as room to run, jump, climb, play, and browse. Shelter structures should be waterproof (most goats hate getting wet!), well ventilated but free from drafts, and provide 15-20 square feet of space per goat. Your

herd's outdoor area should provide at least 30 square feet of space per goat and be securely enclosed. Goats are adept at climbing, jumping, and squeezing through surprisingly narrow openings, so be sure to fortify your standard post-and-plank fencing with strong wire mesh to prevent escapes. Yards should also provide shade, and if at all possible, elevated structures for climbing and play. The more space the better, obviously!

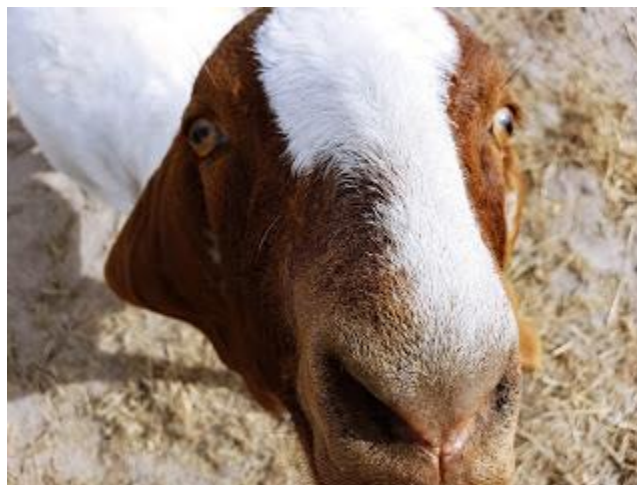
## **Diet**

Goats are ruminants, meaning that instead of one simple stomach, they have four stomach chambers – the rumen, reticulum, omasum, and abomasum – each of which has a specialized purpose. The rumen is the largest chamber and fills virtually the entire left side of the body cavity. The rumen and reticulum together act as a fermentation vat where microbes start the digestive process. When a goat eats, partially chewed material is swallowed and sent to the rumen where it ferments. The goat then burps this material (“cud”) back into the mouth to chew and swallow it again. This process is repeated until the microbes in the rumen and reticulum have digested the material enough for it to pass to the omasum. The omasum further breaks down food particles and absorbs water and other nutrients. The abomasum is the final chamber, where digestive enzymes are produced and help prepare nutrients for absorption in the intestines.

The microbes in your goats' guts require the cellulose fiber found in forage (i.e. browse, grass, and hay). We do not recommend commercial goat feeds because they often include corn and grain – these ferment faster than forage and disrupt normal digestive function (which can result in death). Access to adequate pasture and/or good quality grass hays such as timothy will help keep your goat happy and healthy (alfalfa and other high-protein hays can lead to health problems).

Goats also require mineral supplements which come loose or in block form, and can be free-fed. Note that mineral supplements formulated specifically for goats contain levels of copper toxic to sheep; if you house goats and sheep together, a multi-species formula without copper should be provided, but you'll want to watch your goats for signs of copper deficiency and supplement them as needed.

Any changes to your goats' diet should be made gradually over time, as a sudden switch can cause serious digestive issues. Clean, fresh water should always be available to your goats.



## **Health care and maintenance**

Consult your local large animal veterinarian to determine the correct vaccines and vaccination schedule for your goat herd. Common vaccinations will protect against clostridium, tetanus, and rabies.

Internal parasites are common in goats, but some are more dangerous than others, especially in young, old, or sick individuals. Watch your herd for signs of parasitic infestation including anemia, diarrhea, fever, and weight loss. Work with your vet to establish a deworming schedule, and have fecal samples tested quarterly to monitor parasite load.

Hoof maintenance is simple, but very important. A vet can show you how to properly trim your goat's hooves, and it should be done every four to six weeks to prevent infections (including hoof rot) and lameness.

We recommend castrating male goats in order to avoid the undesirable behaviors (and smells!) associated with amorous intact males. However, castration stops the development of the urinary tract and can leave males vulnerable to blockages caused by urinary calculi (bladder stones). Therefore, it is best to wait until your goat is at least a few months old before having them castrated.

Perform regular health checks on your goats! Start when they are young, so they get used to being handled and having all parts of their body touched. At Charlie's Acres we check our goats head to tail once a month. Here's what we look for:

<b>Eyes</b>	discharge, excessive tearing, foreign bodies
<b>Ears</b>	discharge (some wax is normal!), foreign bodies, odors
<b>Nose</b>	discharge, foreign bodies, sores
<b>Mouth</b>	cracked/missing teeth, odors, scabs/sores
<b>Abdomen/udders</b>	lumps/masses, fluid build-up, sensitivity, tautness, discharge/heat/swelling around teats
<b>Penis/vulva</b>	discharge, lumps/masses, discoloration, swelling, odors
<b>Butt/tail</b>	cleanliness, lumps/masses, discoloration
<b>Legs</b>	heat, swelling, joint enlargement/stiffness, sores
<b>Hooves</b>	cracks, heat, debris between toes, sores/wounds, odors, overgrown hooves

## Common ailments

The ruminant digestive system supports a delicate balance of microbial life which can be easily upset. Bloat (also called grain poisoning) is a potentially fatal condition caused by overeating rich grain or new pasture. Prevention is key. Take time to gradually adjust your goats to new food including lush spring pastures, and especially those that are wet with dew, or growing alfalfa or clover. Be careful to store feed securely out of your goats' reach as they will gorge themselves if given the opportunity. Signs of bloat include distention of the left side of the abdomen (indicating a buildup of gas in the rumen) and obvious discomfort – e.g. calling or crying, grinding teeth, kicking at the abdomen, salivation. Call your vet at the first indication of bloat, as it can kill animals quickly. Talk to your vet about bloat remedies that you can keep on hand in case help is not immediately available.

Caprine Arthritis and Encephalitis (CAE) is a retrovirus usually transmitted vertically from mother to offspring, although it can also be transmitted horizontally among herd-mates through contact with infected bodily secretions such as blood or feces. CAE can manifest with very serious symptoms, but many infected goats can live their entire lives without showing signs. When symptoms are present, they can take many forms. The arthritic form is the most common. There can be an acute onset of symptoms – typically in older goats – including joint soreness, stiffness, and swelling, but more often the arthritis is chronic and

progressive. The encephalitic form is less common and most often affects kids under six months of age. Neurological deficiencies may result in poor coordination, head tilt, tremors, twitches, and blindness. Progressive nerve damage leads to muscle weakness and then paralysis. The encephalitic form of CAE is fatal. CAE can also present as pneumonia including a chronic cough, rapid breathing, rough lung sounds, and enlarged lymph nodes. The mammary form of CAE presents as mastitis, where the udders become hard and unable to express milk. Goats infected with CAE will often exhibit slow progressive weight loss. Blood tests can determine whether or not your goat has CAE, and other tests can be performed to determine the specific form. Except in the encephalitic form, which is fatal, symptoms and any associated pain can be managed; discuss a treatment plan with your vet.

Caseous lymphadenitis (CL) is a contagious disease that causes large pus-filled abscess on the skin and/or lymph nodes and organs. The external abscesses are usually not painful to the affected goat, but if they burst or are ruptured, the pus can spread the disease to other members of the herd. The internal form of the disease can affect a goat's lymphatic function and other organ systems. If you notice that one of your goats has an abscess you should isolate the individual and have a vet culture the pus, which can be tested for CL. Work with a goat-savvy veterinarian to put together a strategic treatment plan.

Polioencephalomalacia (PEM) is also known as cerebrocortical necrosis (CCN) and is a relatively common nutritional deficiency in sheep and goats. A common name for this disease is "polio"; however, it is not related at all to the infectious viral disease found in humans (poliomyelitis). PEM can be successfully treated if detected early, making recognition of early symptoms critical. The most common cause of PEM is thiamine deficiency. Symptoms to look out for include an outstretched tilted head, sudden blindness, dilated pupils, excessive tearing in the eyes, and an unusual gait or locked legs. Contact your veterinarian immediately if you notice these symptoms.