

Chinchilla Basics

Heidi L. Hoefler, DVM, DABVP

**West Hills Animal Hospital,
Huntington, New York**

Copyright© Heidi L. Hoefler, 2003

The chinchilla (*Chinchilla lanigera*) is a small rodent originating from the Andes mountains of South America. They were first bred in California in 1923 in an attempt to establish ranch-breeding for the fur industry. Chinchillas have been trapped to near extinction in their native countries. In the U.S., there is estimated to be over 3,000 ranchers and a growing population of pet chinchillas.

Chinchillas are generally nocturnal and prefer a quiet environment during the day. Their lifespan is much longer than most rodent species averaging 10 years with 18-20 years possible in some individuals. The male averages 400-500 grams in body weight and the female is slightly larger at 500-600 grams. They are clean, odorless, and inquisitive animals that are relatively easy to care for.

HOUSING

Chinchillas are active and require a fair amount of space. They like to jump and climb and a large multilevel cage is recommended. A wire mesh cage is better than wood because they like to gnaw. The mesh must be small enough to prevent foot and limb injury and part of the floor should be solid. A hiding/sleep box is recommended.

Chinchillas are fastidious groomers and require dust as part of their daily bathing. The dust is a fine mixture of Fuller's earth and silver sand (1:9) and is placed in a container large enough for the chinchilla to roll around in. These baths need to be kept clean and free of feces and should be removed when not in use. Overuse of the dust bath can lead to an irritative conjunctivitis in some chins.

The chinchillas native habitat provides low humidity and sharp variations between daytime and evening temperatures. High temperatures and high humidity must be avoided year-round. Chinchillas are comfortable at cooler temperatures (>32oF) and can suffer heat stroke if the environmental temperature climbs above 80oF, especially when coupled with high humidity.

DIET

Free-ranging chinchillas survived on a diet of grasses, cactus fruit, leaves, and the bark of small shrubs and bushes. Captive chins need a diet high in fiber to prevent enteric problems. The basic chinchilla diet consists of a good quality grass hay (timothy or orchard grass) and a small amount of chinchilla pellets. Because the diet must be high in fiber, the sole feeding of pellets must be avoided. Limit pellets to 1-2 tablespoons per day. Small amounts of greens, and fruit can be offered as treats. Any change in diet should be done gradually and fecal output should be monitored periodically.

REPRODUCTION

The female has a vaginal closure membrane that is only open during estrus and parturition. She expels a waxy plug from the vaginal opening during estrus. She also expels a plug following successful mating. They are seasonally polyestrous from November to May with an estrous cycle of about 40 days. Gestation period is long at 111 days. The female has a cone-shaped clitoris that at quick glance may resemble a penis. The male has testes that are located inguinally without a true scrotal sac. Puberty for both sexes usually occurs at 10-12 months of age in the fall.

RESTRAINT

Chinchillas are usually easy to handle and rarely bite. However, they can be shy and nervous and reluctant to stay still for prolonged periods. The best approach is to gently hold the animal around the thorax. Alternatively, the tail can be held at the base as long as the body is supported. Do not grasp the skin roughly; it may result in a dropped patch of fur in a frightened animal ("fur-slip").

ANTIBIOTIC ADMINISTRATION

Chinchillas rely on a complex balance of microorganisms in the digestive tract to ferment non-digestible fiber. Any disruption in this system can change pH, interfere with motility, and promote bacterial overgrowth. Gram-negative bacteria and clostridial overgrowths can lead to diarrhea, enterotoxemia, and death. There are only certain antibiotics that can be given safely to chins. Avoid the penicillins and cephalosporins, clindamycin, lincomycin, and erythromycins.

GASTROINTESTINAL DISEASE

GASTROINTESTINAL DISEASE is the most medical problem we see in chinchillas. Herein is a brief review of GI conditions in the chinchilla:

The chinchilla originates from an area of the Andes mountains where vegetation is tough and fibrous and low in energy content. As a result, a large amount of food is eaten and a lot of chewing takes place. This results in the normal wear of the cheek teeth which are open rooted and grow continuously to compensate for this wear. The dental formula is 1/1 incisors; 0/0 canines; 1/1 premolars; 3/3 molars. The incisors are yellow and grow 2-3 inches (5.5-6.5 cm) per year. The oral cavity is small and narrow and largely filled by the tongue.

Dental Disease or "Slobbers". Improper dental wear can result in overgrown teeth and sharp edges in both the incisors and cheek teeth. Clinical signs include weight loss, inappetance or anorexia, and drooling or "slobbers". Some chinchillas present with eye tearing on the affected side. Diagnosis is based on clinical signs and a thorough oral examination. Sedation may be needed to fully examine the cheek teeth. Skull radiographs are important to examine the crown surfaces as well as the roots.

Treatment involves trimming of the sharp edges or overgrown teeth. The cheek teeth need to be done under sedation. Antibiotics are needed for tooth root abscesses and carries a very guarded prognosis for full return to function. Owners should be aware of the likelihood of recurrence and the need for regular dental care.

Tooth root elongation is a problem seen in some chinchillas on a low roughage diet. Pellets, grains, and most vegetation do not provide adequate chewing to wear down the cheek teeth properly and root extension can occur. The roots form palpable "bumps" on the mandible and are readily seen on radiographs. Oral examination may show a somewhat normal occlusal surface and lack of points or ulcerations. This condition is irreversible and may result in chronic weight loss and painful mastications. These individuals are usually on syringe feedings indefinitely, which exacerbates the lack of wear on the crowns. Euthanasia is often recommended for these chronically painful individuals.

Lower gastrointestinal disease is a common problem seen in chinchillas. Chinchillas are hind-gut fermenters with a relatively long gastrointestinal tract. The stomach and cecum are large and often full of food. High fiber, low energy diets are the driving force behind this herbivores' digestive physiology. Disruption in the system results in anorexia, painful abdomen, diarrhea, hair and fecal impaction, intussusception (telescoping of intestines), mucoid enteritis, ileus, bloat, and rectal prolapse. Hepatic lipidosis (fatty liver) is a common sequelae to prolonged anorexia.

Predisposing factors include abrupt diet change, inappropriate antibiotic use, overcrowding and stress, and diets too low in fiber, and too high in fat and protein. Changes in enteric pH or normal gut flora results in bacterial overgrowth and can lead to enterotoxemia. Clostridium, E. coli, Proteus, and Pseudomonas are common bacterial isolates. Clostridial enterotoxemia (C. perfringens) causes severe diarrhea, shock, and acute death.

Diagnosis is based on clinical signs and history. Anorexia and decreased fecal output are early warning signs. Whole body radiographs are taken to assess both body cavities.

Treatment for the painful abdomen includes aggressive supportive care (injectable fluids, temperature regulation), anti-inflammatories or analgesics and antibiotics. Human OTC pediatric anti-gas preparations (e.g., Phazyme®) may be helpful to decrease gas production. Keep in mind that a sick chinchilla is a poor surgical candidate and medical management may be the only viable option. Blood testing is recommended in some individuals (CBC and plasma chemistry). A few words about some other important conditions in the chinchilla...

HEAT STROKE

Because chinchillas are adapted to low environmental temperatures, prolonged exposure to temperatures above 80°F can result in heat prostration. Affected animals are recumbent, panting, and hyperthermic. Treatment consists of cool water baths and intravenous fluids in advanced cases. Remember not to place chinchilla cages near radiators or sunny windows.

ORTHOPEDICS

Traumatic fractures of the tibia are most common in the author's practice. The tibia is a long straight bone in the chinchilla with very little soft tissue covering. Tibial fractures tend to be short spiral or transverse. Soft padded bandages and lateral splints can be applied but may not provide adequate stabilization for the active chinchilla. Surgical repair can be difficult due to the long, thin nature of the bone. External fixators (KE apparatus) can be applied and have been used with success. Soft padded bandages may have a better success rate for forelimb fractures. Because chinchillas can be very active nonunions are possible. Strict cage rest without climbing or jumping room for a minimum of 4 weeks is essential.

MISCELLANEOUS CONDITIONS

There is relatively little information available in the literature on diseases of pet chinchillas. Much of what we know is based on personal experiences and anecdotal information from veterinarians and breeders. Thorough workups are recommended whenever possible.