

Caring for Your Rat

By Mark Burgess, DVM

Rats are friendly, social, intelligent animals who rarely bite when raised with people. They make excellent pets, and are large enough for most older children to handle without injuring them. They may be hurt by toddlers and small children, though, who may be too rough or may step or fall on the pet.

Rats are easily cared for, and they become very attached to their people. Of all the rodents, rats probably make the most consistently good pets. They are very bright and often learn tricks. Female rats are more active and inquisitive, while male rats are more sedentary. Use caution if you have dogs or cats, since they may attack a rat. With good care, most rats will live two to three years.



If you're thinking about getting a rat, please adopt from a rescue group rather than buying from a pet store or breeder. There are many wonderful rats out there just waiting to be adopted. To find a rat rescue, do a search for "rat rescue" on the Internet. Or, check out the "small and furry" category on www.petfinder.com.

Housing

Rats should be securely housed in a spacious cage (at least 18 x 24 inches for one rat). They are escape artists and, if allowed to roam unobserved, they can get into trouble, such as gnawing on electrical cords or furniture. Wire cages are well ventilated but they can be drafty, so keep them in a warm area away from windows. Glass aquariums are less drafty, but they are poorly ventilated and must be kept very clean. Urine buildup in the bedding causes ammonia fumes, which damage the rat's lungs.

The cage bottom should have a thick (1 1/2 inch minimum) layer of soft bedding; the best type is the ground-up paper bedding that is widely sold for rodents. You can also use hardwood shavings made from birch, aspen or alder (but not cedar or pine, which contain toxic oils). You can provide a wood or cardboard box for the rat to make a nest in, and toys such as cardboard tubes. Kleenex tissues make great nest-box material; the rat will shred them to make a soft nest.

Do not provide hardwood for your rat to chew on; no gnawing is required to wear down the teeth, and hard objects may harm the teeth. Your rat should be let out daily for exercise, play, and human bonding. Some rats will use an exercise wheel.

Feeding

The majority of your rat's diet should be pelleted rat food, which comes in the shape of a large pellet (as wide as your finger). Oxbow also makes a heart-shaped kibble that is very good. Rat kibbles are very nutritious – containing about 15 percent protein and 5 percent fat. Avoid seed and nut-mix diets, since they often cause obesity. Rats can also

have small amounts of treats, including fruits and veggies, cheese, occasional nuts, and unsweetened cereals. Keep the high-calorie treats to a minimum.

Store the food in a dry location where no wild mice can get into it; wild rodents carry diseases that can infect your rat and also infect humans. Salt licks are not needed if your rat is on a good diet, and most rats ignore them. When given daily throughout life, chromium picolinate, a human health supplement, has been shown to extend rats' life expectancy up to one year beyond normal. The dose is 410-500 micrograms per kilogram of body weight, given once a day.

Fresh water, of course, should always be available. The best system is a ball-valve water bottle. Change the water every two days, and be sure the bottle doesn't leak or clog. Remember to clean your rat's cage, food bowls and water sources regularly.

Spay/Neuter

Rats reach breeding age within the first few months, so if you get more than one, have their genders verified to avoid accidental breeding. Rats can usually be housed in groups if they grow up together. Spaying and neutering should be done to prevent breeding, and to minimize diseases such as uterine and mammary tumors.

Common Diseases

Mammary tumors. These are very common, and appear on female rats as a soft lump under the skin. They can occur nearly anywhere on the body. Although benign, they grow extremely fast and can become larger than the rat. They are fatal if they grow large enough, but are nearly always removable. Early spaying may reduce the likelihood of these tumors. Male rats rarely get mammary tumors, but they occasionally develop a more malignant tumor called fibrosarcomas. Seek veterinary attention whenever you see a lump on your rat.

Respiratory infections. Common in rats, these infections can be caused by various microbes. The most common is *Mycoplasma*, which most rats carry from birth. It may produce no symptoms at first, but many rats gradually become ill with age. Mild signs include sneezing, or red discharge from the eyes or nose (this is red tears, not blood). If pneumonia develops, you may hear a wheeze or squeak as the rat breathes. Normal rats make no noises unless they are hurt. Normal rats breathe very rapidly except at rest; if a rat has slow, pumping respirations (i.e., one or two per second), then pneumonia is likely.

Rats infected with more than one type of respiratory disease may become ill early in life. Risk factors include dirty housing (urine buildup causes ammonia fumes, damaging the lungs); cold, drafty conditions; poor nutrition (using seed and nut mixes); or other diseases that weaken the immune system. Treatment is mainly antibiotics, which are usually reserved for rats with moderate to severe symptoms, or for weak elderly rats. Since most cases cannot be cured, only controlled, the medications may be used long-term.

One exception to this is an acute bacterial pneumonia, where the rat is suddenly having difficulty breathing and is very ill; this form of pneumonia is often quite curable with a few weeks of antibiotics. Usually the rat still carries a *Mycoplasma* infection after treatment, but it may not be causing enough disease to require long-term therapy.

Inner-ear infections. These are often caused by the same microbes that cause respiratory disease; sometimes the respiratory infection spreads to the inner ear, causing a sudden head tilt and loss of balance. Antibiotics usually cure the ear infection (but not the respiratory infection). The loss of balance improves rapidly, but mild head tilt may persist for weeks or months after treatment, slowly improving over time. Keep the affected rats in secure housing with soft bedding, and prevent them from climbing; dizzy rats often fall, and they can bang themselves on sharp or hard objects. Diseases with similar signs include encephalitis and pituitary tumors; these may not respond as well to treatment.

Uterine disease. Female rats often develop infections or cancers of the uterus. Signs may include blood or pus from the vaginal opening (between the anal and urinary openings), though it is often missed because rats clean themselves off. Weight loss or a swollen belly may occur. Treatment is antibiotics and spaying; early spaying can prevent this disease. There is no way to cure an infected or cancerous uterus except by removal. Uterine cancer may spread and be fatal.

Skin parasites (mites and lice). Both of these are very common in rats, but they don't usually occur together. They cannot infect dogs, cats, or humans; in rare instances, a person can get a temporary rash from the mites. Mites are microscopic creatures that burrow into the skin. Young rats may carry these without symptoms, but with age the rat's resistance weakens, especially if the rat is ill, and the mites also reproduce and become more numerous. Eventually, you may see signs of itching and tiny scabs on the rat's head and shoulders. A rat with a severe case may have hair loss and large sores.

Diagnosis is via skin scrapes to find the mites, but they are easily missed and treatment is often based on symptoms. Treatment is with ivermectin (oral or injectable) weekly for six to eight weeks. Lyme sulfur dip can also be used weekly for six to eight weeks. You should also clean the rat's bedding regularly. A bird anti-mite disc can be hung near (but not in) the cage; the fumes from the disc may kill some mites in the bedding and on the rat.

Lice are larger than mites and live on the skin surface, where they attach and suck blood. They are visible to the eye with close inspection, usually along the mid-line of the back and neck. Nits (louse eggs) may be seen as rows of tiny, shiny beads on the rat's hairs. Signs include mild itching and mild hair loss. Diagnosis is via seeing the lice and nits. Treatment is with ivermectin weekly for 6-8 weeks, or bird lice spray on the skin weekly for 6-8 weeks. Lice are killed more easily than mites, but the eggs persist and hatch later; failure to cure lice is usually due to stopping treatment too soon.

Veterinary Care

No vaccines are given to rats, but regular exams are recommended for early disease detection. Have an exam done when you get your rat, then at one year old, then every six months after that. With good care, your rat can be a happy and lovable pet!

Dr. Mark Burgess is owner of Southwest Animal Hospital/The Exotic Animal Practice in Beaverton, Oregon. Ninety-five percent of his practice is small exotic pets, including ferrets, rabbits, rodents, reptiles, hedgehogs, marsupials, and some wildlife. He lectures at conferences and has published articles on exotic pet disease in medical journals.