

Caring for Rabbits

(*Oryctolagus cuniculus*)

Rabbits are gregarious, generally mild-tempered, active, and curious. They are easily frightened and will often flee when threatened, although a rabbit may aggressively defend its territory, such as a cage, against handlers and other intruders. Their long incisors can deliver a painful bite. When a rabbit is not securely held, it may kick with its strong rear limbs and inflict painful scratches with the toenails.

The rabbit's entire skeleton represents only 8% of its total body weight, compared to 13% for the cat. This fragility makes the rabbit prone to bone fractures and spine injuries, and care must be taken to prevent the animal from being dropped or improperly picked up. Rabbits may even break their own spine when allowed to kick forcefully with their rear limbs, such as when they are not well restrained.

Injuries to people and rabbits are frequently due to the lack of knowledge and skill to properly handle, transport, and restrain a rabbit. Training to work effectively and humanely with these animals is essential for the safety of people and rabbits. Although rabbits do make excellent pets, they may not be a good classroom animal in the lower elementary grades.

Housing Requirements

Rabbits should be housed in roomy wire cages with at least some solid floor area, such as a plexiglass sheet or washable towels, to provide relief from the constant contact with the wire floor. Rabbits should never be allowed unsupervised freedom in a room because they love to chew and can injure themselves by biting electrical cords and other materials found in the classroom or the home.

Rabbits are adept at escaping from unsecured cages. If housed outside on the ground, the cage should have a secure flooring (such as wire mesh) or else the rabbits may quickly dig and tunnel out from the enclosure.

Cages must be cleaned often, at least once every 2 weeks. Rabbit urine contains large amounts of minerals; dried urine

forms deposits that can be removed with an acid solution before washing the cage. Vinegar is a good acid to use for removing these urine deposits. Rabbits shed a lot, and the hair should be removed often from the cage and the room where the animal is kept. Male rabbits may direct a stream of urine out of the cage through the wire mesh, which should be taken into consideration when determining the location of the cage.

Rabbit urine appears milky and varies from white to yellowish white to clear red. Red-colored urine may be mistaken for blood and can create an incorrect impression that the animal has bled inside its cage. Additionally, rabbits produce a special type of stool called "night feces" which is very soft and covered with thick mucus. The animal eats this stool to recycle proteins, water, and B vitamins. Because this stool is consumed overnight, this behavior is seldom seen by caretakers but if observed should not cause concern.

Rabbits are sensitive to high environmental temperatures; the optimal room temperature for rabbits is 61–72°F.

Rabbits typically become bored in a simple cage environment that lacks the opportunity for exercise, play, exploration, and interaction. Rabbits enjoy gnawing, so small dog chew toys such as a nylon bone may be given. Other safe toys designed for rabbits are available from laboratory animal suppliers. To allow rabbits some options in how they use their cage space, cages can incorporate nest boxes for hiding, raised areas for climbing, and sufficient space to stretch out in recumbence or to hop about. Claws will require clipping periodically to prevent them from being torn when caught in fabric or wire mesh. Claw clipping should be done by a veterinarian or a person who has been trained in this procedure.



BIOLOGICAL INFORMATION

- Life span: 5–8 years
- Body weight: adult, 2–6 kg (4.5–13 lbs); newborn, 30–80 g (1–3 oz)
- Sexual maturity: Females: 4–6 months
- Estrous cycle: No regular cycle; females usually receptive to breeding at 4–6 day intervals
- Gestation: 29–35 days
- Litter size: 4–10 kits
- Weaning age: 4–6 weeks
- Adult daily food intake: About 150 g (5 oz)

Food and Water

Rabbits are herbivores, and they feed by nibbling or gnawing their food. Adults 8 months and older should be fed commercial rabbit pelleted diets and only timothy hay; younger rabbits may eat alfalfa or oat hay. Rabbits sometimes tend to overeat and gain excess weight, in which case they may need to be fed only measured amounts of food. Other food items (lettuce, spinach, carrots, and apples) can be offered in small amounts. A veterinarian can provide advice on feeding.

Fresh water should always be available either in a bottle with a sipper tube or in a heavy ceramic dish that cannot be overturned. Water containers should be cleaned daily.

Handling

The improper handling of rabbits can cause serious injuries. When frightened and trying to escape, rabbits tend to kick their hind legs, which can injure their backs and result in paralysis of the rear legs. If a rabbit resists being picked up, it should be released immediately and approached later after it has calmed down.

Rabbits should never be picked up by their ears. To pick up a large rabbit, put one hand under the chest and the other hand under the animal's rear quarters. In general, rabbits don't like to be held and prefer to be petted while sitting next to, rather than on, the person doing the petting.

Diseases

Rabbits can develop health problems that can be quite expensive to treat. Make sure you are prepared to face these expenses before you choose a rabbit as a classroom pet.

Rabbits may develop overgrown incisor teeth that interfere with the animal's ability to eat. Overgrown incisors must be clipped by a veterinarian or a person who has been trained in this procedure.

Rabbits can suffer from heat stroke. Signs of heat stroke include panting, salivation, ear reddening, weakness, refusal to move, and convulsions. If heat stroke is suspected, the rabbit should be sprayed or gently bathed with cool (not cold) water. Consult a veterinarian immediately.

Rabbits frequently develop hairballs in the stomach; hair enters the stomach when the rabbit grooms its fur, and the fur remains in the stomach because it does not pass through into the feces. Rabbits are not able to vomit, so hairball problems can be suspected when the rabbit loses its appetite and becomes thin and



listless. Surgery may be necessary to remove the hairball, although oral administration of enzymes and other medications may help dissolve the hairball and resolve the problem. A veterinarian should be consulted.

Rabbits, especially adults, may develop sores (including skin ulcers) on the rear paws when housed on wire floors. This condition should be treated by a veterinarian.

Snuffles is a common upper respiratory tract disease that, if left untreated, can become chronic or fatal. The bacterium *Pasteurella multocida*, which often lives in rabbit noses, is the most common cause of the disease. Signs of infection do not usually occur until the animal is stressed or has a suppressed immune system. The disease is highly contagious and can be transmitted not only by rabbits but by human handlers, so always wash your hands after handling a rabbit. Even healthy-looking rabbits without any sign of the disease can develop snuffles. Initial symptoms include a nasal discharge, sneezing, and loud snuffling or snorting due to the blocked nasal tract. Progressive signs of the disease include conjunctivitis, an eye infection, ear infections that cause torticollis (twisting of the neck), head shaking, scratching, head tilt, disorientation, circling, or an inability to stand. The infection can clear up in one part of the body but remain in the rest. An advanced case of the disease includes pneumonia and bacteremia, a blood infection. Rabbits showing any of these symptoms should be seen by a veterinarian as soon as possible. Treatment can be long term and includes the use of antibiotics. The risk for snuffles can be minimized by protecting the rabbit from stress; you can do this by providing comfortable, entertaining housing, and good nutrition for your rabbit.

Human Health Concerns

Humans may be infected by the *Pasteurella multocida* agent that causes snuffles in rabbits. Infectious disease risks from pet rabbits are generally low, although wild rabbits may harbor disease agents that can infect humans. Rabbit bites and scratches may be severe. People may develop allergies to rabbits.

Seek the advice of a physician if a human disease is suspected due to contact with rabbits.

Resources

1. Rabbits, chapter in *Assistant Laboratory Animal Technician Training Manual*, 2008, American Association for Laboratory Animal Science, Memphis, TN.
2. Contact your veterinarian or a local veterinary school or veterinary technology program to get more information about this animal species.

Some of this material has been adapted from the Assistant Laboratory Animal Technician Training Manual, American Association for Laboratory Animal Science, Memphis, TN.