

## Husbandry and Health of Mice



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Mice are intelligent and playful, and in the right situation can be affectionate pets. Mice are easy to care for, quiet, and friendly animals when handled daily and carefully. With adult supervision, they make excellent pets for older children. However, they're not maintenance free and bringing a pet mouse into your home comes with a commitment to purchase a large enough cage and provide regular cleaning and laundering of the cage and its accessories, daily social time, and a high-quality diet.

They have excellent hearing and a good sense of smell but unfortunately have poor eyesight, and therefore are prone to falling if left unattended on areas with ledges.

Mice are largely nocturnal and are often swift-moving creatures, which makes them inappropriate pets for most small children. Additionally, they may jump quickly and without warning. Daily handling is important from a stimulation standpoint, but also will help to tame them and make them more friendly.

Playful and intelligent, mice like toys. A well-outfitted mouse home includes numerous items for play and enrichment, such as a solid wheel (wire wheels can cause legs to break), an enclosed sleeping box, chew toys, and climbing toys. Toilet tissue rolls, sisal rope climbs, and cornstarch baths are favorites. Chew toys such as wood from apple trees and dog rawhides are popular.

The average life expectancy for the pet mouse is approximately 18 to 24 months. Unfortunately, as a prey species, they tend to hide illness, so by the time any trouble is apparent to you, it's probably been going on for a while. Most mice are already significantly ill by the time they get to a veterinarian.

### Housing

Female mice generally live well housed in small groups if provided with a large enough cage space. Males are best housed singly since they may fight if kept in groups. Mice in general have a fairly significant odor that is much more prominent in males than females. Generally,



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small groups of females do better than mixing in the boys with them.

Cages should be large and well-ventilated. Wire caging with narrow bars allows for good ventilation and helps prevent escape. Many people choose aquariums for no-escape safety reasons. A single mouse should be housed in nothing smaller than a 15-gallon tank, but a 20-gallon tank would be an appropriate size for two mice.

Bedding should be deep and absorbent but not made from wood-based materials. Recycled paper products such as CareFRESH bedding is ideal. Scooping out waste materials daily and changing the entire cage weekly will help keep the environment healthy and minimize odors.

Mice prefer sleeping in secluded areas. They enjoy nesting in plastic hideaways or flower pots laid on their sides. They will often take treasured items into their sleeping or nesting areas. Torn paper towels are often prized bedding material and it's inexpensive to replace when it becomes soiled.

### Diet

Commercial pelleted rodent block is an appropriate diet and can be supplemented with small amounts of healthy people foods. It is wise to avoid high fat extras such as seeds and large amounts of nuts. Introduce all foods slowly in order to avoid diarrhea.

### Health

New mice should be quarantined for an extended period of time, even as long as four weeks, before integrating into an otherwise healthy group.

Skin diseases are common in mice and can have a number of underlying causes. One of the more common includes bite wounds from cage mates. Taking care of the underlying reason for the squabble will usually end this behavior. This problem may require separating the animals, providing a larger enclosure, or neutering the mice. Most commonly, infections of these wounds occur secondary to Staphylococcus species. The wounds should be treated with antibiotics and pain medication. However, the wounds can occasionally abscess and become chronic problems that require surgery.

In groups of mice, barbering of fur is common. Affected animals show bare patches of fur although the underlying skin looks normal. Barbering appears to have hierarchical indications within the group and removing the barber often results in resolving the symptoms in the barbered mouse. Some controversy exists as to whether it is the dominant mouse being barbered or doing the barbering.

Also common is mite infestation. These parasites can result in the mouse scratching itself and causing severe skin irritation, most commonly in the head, neck, or shoulder area. Skin scrapings can diagnose the mites, as can directly seeing the mites on the fur. The mite's entire life cycle is completed on the mouse, but transmission between animals is common and reinfection happens. Medical treatment, in addition to addressing any secondary bacterial infection, is generally curative.

Occasionally, a mouse appears to scratch severely for no obvious reason. This has been referred to as obsessive-compulsive itching disorder in mice. Vitamin A supplementation can help in addition to controlling any secondary bacterial infections. Ringtail is most commonly associated with low humidity conditions in young animals resulting in constrictions around the tail. In severe cases, tail amputation is frequently indicated.

Pneumonia is common in mice. It is usually caused by a bacterial infection. Symptoms include upper respiratory signs such as sniffing and sneezing as well as lower respiratory tract signs such as labored and noisy breathing. Symptoms of overall illness include squinting, red-brown tears, and a rough coat. Some cases may also have neurologic symptoms including a head tilt. This disease is really contagious and similar to rats with mycoplasmosis. Mice may be carriers of mycoplasmosis and yet be asymptomatic, which means that all mice in contact that show respiratory disease should be considered infected.

In addition to medical therapy, it helps reduce signs to clean their bedding daily with material unlikely to irritate the respiratory tract, such as unscented recycled paper bedding. Unfortunately, mycoplasmosis is a common and severe disease often leads to death in pet mice.

Mammary adenocarcinomas are common in mice and can be found anywhere on the body due to the extensive amount of mammary tissue in mice. Unfortunately, these are more aggressive than those in rats, and although they can be surgically removed, they do have a more significant amount of local tissue invasion as well as likelihood of spreading to the lung.

Lymphosarcoma is also a common cause of tumors. Chemotherapy tends to work, but a remission time of weeks is considered a reasonable expectation.

Lastly, benign respiratory adenomas are also commonly seen in some strains of mice as well as older animals. White lesions may be seen on the surface of the lungs that may be large enough to be identified radiologically.

Since mice are commonly used as models in research, much information is readily available about the cancer tendencies of this species. Unfortunately, much less information is available about the treatment options for an individual mouse.

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