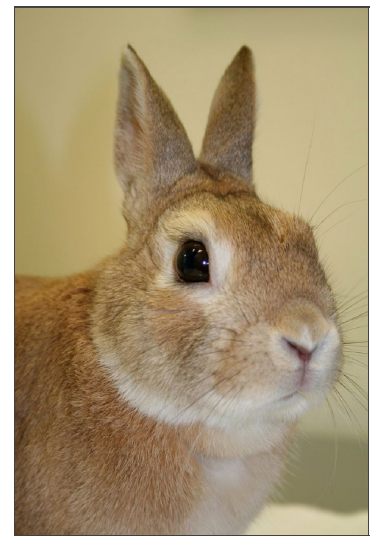


Rabbits - Infectious Disease

There are 4 major infectious diseases seen in pet rabbits. Two serious diseases caused by viruses may occur in rabbits, although they are rarely seen in indoor pets. They are **myxomatosis** and **viral hemorrhagic disease**. Because they are viral diseases, there are no effective treatments once the rabbit is infected. Two other infectious diseases of rabbits are *Encephalitozoan cuniculi* and *Pasteurella multocida*.

Myxomatosis

This is caused by the myxoma virus, which is widely distributed in the wild rabbit population. Even if your rabbit never comes into direct contact with animals from the wild, it can still become infected with this disease. This is because the virus is spread by bites from mosquitoes, flies, fur mites and fleas. It is also acquired from contaminated thorns or thistles, or by direct contact with an infected rabbit. It is found in North America (primarily California), South America, Europe and Australia. Pet rabbits are more susceptible and more severely affected than wild rabbits, as wild rabbits have developed a better genetic resistance. Clearly, outdoor rabbits are at greater risk of getting this disease. The incubation period is 1-3 days and the first signs are the development of puffy eyelids, a purulent (pus-producing) conjunctivitis, and lethargy. Subcutaneous swelling (swelling under the skin) extends around the eyes, ears and genital region. This can rapidly progress to skin hemorrhages, trouble breathing, inappetence or anorexia, swelling around the base of the ears, fever, and development of generalized skin tumors. Death is usually within 1-2 weeks after infection, but occasionally animals will survive and signs will slowly regress over about 3 months.



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Vaccination may provide temporary protection. This vaccine is not available in some countries. Pregnant animals should not be vaccinated, nor should rabbits less than six weeks old. Occasionally there is a local reaction at the injection site, but compared with the lethal infection, this is insignificant.

Viral hemorrhagic disease

Also called Rabbit CaliciVirus (RCV); Rabbit Hemorrhagic Disease (RHD); and Viral Hemorrhagic Disease (VHD), this highly contagious disease was first recognized in China in 1984 but now has an almost worldwide distribution. Viral hemorrhagic disease is caused by a calicivirus and, although the incubation period is up to three days, animals may die suddenly without any clinical signs. The disease is transmitted by direct contact with infected rabbits, rabbit products, rodents, and contamination of cages, dishes, and clothing. The virus can also transmit over short distances in moist air. Rabbits in close proximity to other rabbits (such as breeders, rabbit shows) are at a greater risk. Rabbits that recover can become carriers of

the virus and may shed virus up to 4 weeks. If there are signs, they include anorexia (not eating), pyrexia (fever) apathy and prostration. There may be convulsions and coma, dyspnea (difficulty breathing), foaming at the mouth, or a bloody nasal discharge. Some animals survive this acute phase but die a few weeks later from liver failure.

"Highly contagious disease was first recognized in China."

Given the horrendous death experienced by affected rabbits, consideration should be given to vaccinating pet rabbits annually (or even as often as every six months) in areas where the disease is rampant. Vaccines are not available in every country; they will not eradicate the disease, but may reduce the number of deaths. Speak to your veterinarian about vaccine availability in your area, and the risks and benefits of its use. New rabbits should be isolated from other rabbits for 30 days to minimize the risk of this infection.

Encephalitozoan cuniculi (E. cuniculi)

E. cuniculi is a small microsporidian parasite that is intracellular, or has to live within a cell. It can affect rabbits, mice, hamsters, dogs, cats, guinea pigs and humans. It usually causes a latent condition in rabbits, meaning that most infected rabbits will show no symptoms. When symptoms do develop, the affected rabbit may develop heavy white cataracts in one or both eyes or a head tilt; the disease can progress and produce more severe signs such as twitching eyes (nystagmus), anorexia, difficulty walking, tremors and seizures. The cataracts can be surgically removed. Otherwise, there are currently no particularly effective drugs to treat the disease; however, this may change in the near future as different drug protocols being used with various degrees of success.

"This underlines the importance of always washing your hands after handling any animal and before eating or preparing food."

Encephalitozoonosis has been described in a few cases in people, but its significance is poorly understood. Very young, elderly and immunocompromised people are most at risk. This underlines the importance of always washing your hands after handling any animal and before eating or preparing food.

Pasteurella multocida

Pasteurella multocida is a bacterial organism that commonly causes abscesses and chronic inflammatory disease in rabbits. It can infect the nasolacrimal (tear) duct, eyes, ears and nose, and can cause abscesses of tooth roots, bones (particularly the mandible or jaw), skin (or just under the skin) and/or internal organs. A very common problem associated with the organism is an upper respiratory tract infection called snuffles; snuffles usually occur in young rabbits. Most cases of snuffles are mild and, if caught early, can be effectively treated or managed. If left untreated or if the strain of bacteria is particularly aggressive, this disease can be severe, chronic and potentially fatal. A swab sample for bacterial culture can be taken to help guide treatment. Treatment usually involves either oral or injectable antibiotics, given for a minimum of 2 - 4 weeks. In some cases, treatment can be required for months (or rarely for years) depending on the response to therapy. Certain oral antibiotics, especially oral penicillin and similar drugs, can be fatal to rabbits. There are some excellent oral and injectable antibiotics for use in rabbits with this infection, but none is a sure cure. Eye drops and nose drops may be used in conjunction with other antibiotics as prescribed by your veterinarian.

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Surgery is possible may be advised if the abscess is in or under the skin; abscesses of the middle ear (causing balance problems), in the eyeball (causing blindness), in the mandible (jaw bone) or in the internal organs, are less easy to treat.

All rabbits carry some *Pasteurella* organisms, but only some show or manifest disease (the immune system generally keeps the organisms in check). Stresses such as improper diet, new diet, change in diet, introduction of a new pet, overcrowding, environmental stresses, immunosuppression or other disease may trigger clinical disease. Many rabbits become are chronically infected. The disease is easily transmitted by close contact between rabbits but remember that not all rabbits will manifest disease. Ideally, new rabbits should be isolated (for about one month) before introducing them to existing pets. Relapses may occur if your rabbit is exposed to stressful situations. It is important to keep your rabbit as healthy as possible to minimize problems with pasteurellosis.

*This client information sheet is based on material written by: Rick Axelson, DVM
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