



pets in the  
classroom



# Infectious Diseases of Small Animals

Companion animals can carry diseases such as Lymphocytic choriomeningitis virus (LCMV), salmonella, *Streptobacillus moniliformis* or Rat Bite Fever (RBF) and internal parasites such as tapeworms.

Lymphocytic choriomeningitis virus (LCMV) can infect humans or pet rodents when they become exposed to contaminated urine, droppings, saliva, or nesting material from wild mice. Some pet rodents may carry the LCMV virus and, if infected, may have long-term infections and viral shedding; many times infected rodents do not exhibit clinical symptoms. LCMV is transmitted via broken skin, the nose, eyes or mouth or by a bite from an infected rodent. Most people who become infected with LCMV do not realize they are infect, or have only mild flu-like symptoms.

Salmonella is a bacterium that can be acquired through contact with an infected animal's fecal material or soiled bedding. Infected animals may not show any clinical signs of illness or may display generic signs of illness, such as wetness around the tail region. Human infection can take place by not washing hands after having contact with a small animal, the animal's habitat or substrate. Symptoms of salmonella infection in humans can include vomiting and diarrhea. Salmonella is of greatest concern for children due to their tendency to put their fingers in their mouths.

Tapeworms, specifically *Hymenolepis nana* (*Vampirolepis nana*), are one of the most common flatworm parasites found worldwide. Rodents infected with this tapeworm typically do not show any signs of illness; however, severe infections can cause weakness, weight loss and diarrhea in the infected rodent. Like salmonella, tapeworms are generally acquired through oral contact with a small animal's fecal material or soiled bedding. Symptoms of tapeworm infection can include diarrhea.

Rat Bite Fever, which in the United States is caused by a common bacteria *Streptobacillus moniliformis*, is a bacterial infection transmissible to people from rats. Rats are carriers of this bacterium and show no signs of illness, however, they can pass the bacteria on to people via bites, scratches or accidental ingestion of contaminated rat feces. Symptoms of infection will usually occur 2-10 days after exposure to an infected rat and include abrupt onset of chills and fever, vomiting, pain the back and joints, headache and muscle pain. A qualified physician can make the diagnosis of Rat Bite Fever based on the symptoms and testing for the specific strain of bacteria causing RBF. The rat can be tested by your veterinarian to determine if it is infected with *Streptobacillus moniliformis*.

*Note: The information on this Care Sheet is not a substitute for medical diagnosis. If you suspect you or a student may be infected seek medical attention.*

*Additional information can be found at the Center for Disease Control at [cdc.gov/healthypets/](http://cdc.gov/healthypets/) or contact your local veterinarian or family physician.*



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## Recommendations for Preventing the Transmission of Infectious Diseases

Taking these simple precautions can keep you from becoming infected:

- Always wash your hands thoroughly with soap and water after handling pet rodents or cleaning up pet droppings, habitats or areas where pets have been.
- Always carry some kind of disinfectant product with you if you will be handling any rodents outside your classroom or in an area that lacks proper washing facilities.
- Keep your rodent habitats, water and food bowls, decor and other surfaces as clean as possible and free of soiled bedding.
- Clean habitats in a well-ventilated area or outside. Wear rubber, latex, vinyl or nitrile gloves and wash hands thoroughly when you are done. Once the habitat is cleaned of organic material, disinfect it with a dilute bleach solution (one-half cup of bleach to one gallon of warm water) or disinfectant. Let the bleach solution or disinfectant remain on the habitat and all food bowls, water dishes, hide huts, etc. for ten minutes and then thoroughly rinse with warm water; allow to completely dry before placing the animal and the contents in the habitat. Make sure there is no lingering smell of bleach or disinfectant as small animals are very sensitive to chemicals.
- Do not handle your rodent or habitat furnishings with open sores or cuts on your hands. Wear rubber gloves.
- Pet rodents should not be allowed to roam freely throughout the classroom.
- Never let your mouth come into contact with your rodent. Some people like to give their rodent an affectionate kiss. This is a practice we do not recommend as it can transmit disease to the person kissing the animal.
- Pet rodents should be kept out of the kitchen and other food preparation areas. Kitchen sinks and bathtubs should not be used to bathe rodents, clean habitats or wash rodent items. If unavoidable, first remove all materials used to cook, prepare or serve food, including the toaster. Disinfect the area thoroughly with a mild bleach solution when finished.
- Young children should be closely supervised when cleaning habitats or handling pet rodents. They should be supervised or assisted in washing their hands immediately after handling a pet rodent, their habitat or bedding.
- Persons at risk of infection or serious complications of LCMV, salmonella, RBD or Hymenolepis nana (children less than 5 years of age, immuno-compromised persons and pregnant women or women trying to become pregnant) should avoid contact with rodents.
- By following safe animal handling practices, you ensure your safety and that of your animal.

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