

Zoonotic Diseases



PET SUPPLIES PLUS
GRAFTON, NEW ZEALAND
written by an avian/exotic veterinarian

the information on this care sheet is a basic overview and not a substitute for veterinary care. For more information and to find a qualified avian/exotic/reptile veterinarian, go to www.AAV.org, www.ARAV.org, www.AEMV.org

A zoonotic disease is an infection that can be transferred from animals to humans. Often it is humans with weakened immune systems that can be most affected - those very young or very old, undergoing chemotherapy treatment, or suffering from a disease that weakens the immune system such as HIV and AIDS. People in these situations should take special care around animals that are potentially infectious and discuss with their physician and veterinarian about pet ownership. Good hygiene is essential in preventing many of these diseases and consists of adequate washing of one's hands before and after handling an animal and anything which with they've had contact.

These are a small sampling of the numerous zoonotic diseases in the animal world. Speak to your physician and veterinarian to learn more about these and other potentially dangerous diseases.

Salmonella

Salmonella is a bacteria most commonly transferred from improperly prepared food but can also be transmitted by many animal species. It is spread by ingestion of the organism. It is one of the most talked about zoonotic infections since it can be spread by animals that don't appear ill including reptiles, amphibians, fish, birds and mammals. Reptiles (including turtles) are more commonly associated with this disease. The Centers for Disease Control (CDC) recommends that small children (under the age of five) not own reptiles or only around them under direct supervision by adults. The CDC also recommends that they not be in the same household as infants. Children

can also be exposed to this disease by holding, cuddling, or kissing chicks and ducklings. Children should not handle baby chicks or other young birds unless directly supervised by adults.

Prevention of the disease involves washing hands after handling animals or objects from their environments. Sale of small turtles has been banned in this country since 1975 because small pet turtles were a common source of salmonella in the 1970's. Cages should not be cleaned in the kitchen or bathtub because that can lead to contamination during food preparation or bathing. Cleaning animal enclosures with a dilute bleach solution (1 part bleach to 32 parts water) is sufficient to kill the bacteria.

Salmonella causes diarrhea, fever, and abdominal cramps in humans 12-72 hours after infection. The diarrhea can be so severe that the person may require hospitalization but most people recover in 4-7 days without treatment. Clinical signs in affected animals are similar but many do not show any symptoms.

Psittacosis

Psittacosis is also known as Parrot Fever or Chlamydiosis and is usually transferred from parrots but may be transferred by other bird species. Like Salmonella, it is also caused by a bacteria. It affects many species of birds and mammals and can also be transferred to humans. In humans, it causes fever and flu-like symptoms. It is important to see advice from your human healthcare professional if you suspect you may have psittacosis.

Many times, this disease presents in birds that have recently been purchased or exposed to large congregations of other birds. It is spread through the ingestion or breathing in of particles of feces, urine, nasal discharge, tears, or mucus. It can also be transmitted from the hen to the egg.

Any age bird can be affected and may show respiratory signs, trouble breathing, discharge from the eyes or nose, regurgitation, vomiting, and green diarrhea. Sometimes the disease may only show up as inflammation of the eye or be as severe as sudden death. In a flock situation, some birds may remain unaffected. These birds may still pose a danger as they can still transfer the disease to other birds that may become affected. Many signs are nonspecific and can represent a whole range of diseases such as not wanting to eat, ruffled feathers, or drowsiness.

The bacteria are susceptible to many common disinfectants including bleach, alcohol, and ammonia compounds. Thorough cleaning and disinfection is crucial to preventing the birds from reinfesting themselves. This is a disease with a treatment, a specific class of antibiotics, usually given for an extended period of time. Be sure to quarantine new

additions to your flock for at least a month to observe for any illness. See the handout on quarantine for more information on staying safe from this disease.

Mycobacterium

Another bacteria that can be zoonotic is Mycobacterium, the most common of which causes Tuberculosis. One type is referred to as "Fish Handler's Disease" because of the association with fish, but reptiles, birds, and primates can also be affected by Mycobacterium. It can be transmitted to humans by entry into a skin wound, ingestion of the organism, or breathing in the organism. It causes respiratory disease and skin lesions in humans, especially those that are immunocompromised. Affected animals often demonstrate gastrointestinal or respiratory disease or skin lesions.

To prevent this disease, wear gloves that extend to the elbows when cleaning or working in filled fish tanks and do not dispose of water in sinks or bathtubs. Bird cages should be cleaned regularly and gloves, masks, and gowns should be worn during cleaning.

Treatment for animals affected with Mycobacterium is usually not successful. Euthanasia is often recommended to protect the human handler and other animal species. If euthanasia is not an option, the animal often must be placed in a strict, permanent quarantine.

Influenza

Influenza, or the flu, can affect ferrets and birds. Ferrets are affected by any influenza virus that affects humans. Often the owners are the source of the flu in the ferret. Ferrets can spread influenza to humans but it is less likely. Like humans, ferrets also demonstrate flu-like symptoms. Also as in humans, supportive care is necessary for treatment. Prevention is based on getting your annual flu vaccine to prevent spreading the disease to your ferret.

Avian influenza is responsible for the euthanasia of millions of birds worldwide and is often spread by wild aquatic birds that do not become ill. It is very contagious among birds and can kill non-aquatic birds such as chicken, turkeys, and ducks. Symptoms in birds depends on whether the virus is classified as low or high pathogenicity and has symptoms ranging from mild disease such as ruffled feathers and a drop in egg production to severe disease with high mortality.

Humans may remain asymptomatic after exposure and infection with avian influenza in humans is rare. When infection has occurred, it has not spread easily to other people.

The virus is shed in saliva, nasal secretions, infected surfaces, and fecal material. Prevention is based on

keeping waterfowl and other wild birds away from your domestic birds, isolation of animals suspected to be infected, wearing mask, gloves, and a gown to prevent inhalation or spread of the virus, and disinfection of cages after removal of debris and fecal material.

Ringworm (Dermatophytosis)

Ringworm, unlike the previous diseases, is caused by a fungus. It is actually not caused by a parasite or worm. It gets its name from the lesion it causes in humans which is a red, circular rash surrounding normal skin in the middle which may or may not be itchy. It is often spread by direct contact with an infected animal or person. Guinea pigs and hedgehogs are the most common exotic species associated with ringworm which presents as hair loss and crusting often around the head, ears, and feet.

Treatment in both humans and other animals often consists of topical or oral antifungal medications. The disease is also reported to be self-limiting, which means it often resolves with or without treatment in a similar time period. Prevention is best by monitoring your small animals for lesions such as crusting or flaking of the skin. Gloves should be worn when handling animals. Hands should be washed with soap and water after handling.

Rat Bite Fever

Rat bite fever is caused by a Strep bacteria that lives in the mouths, respiratory tract and urine of rats and to a lesser extent mice and gerbils. Although the bacteria does not cause problems for the rat, it can cause a rash, joint pain and flu-like signs in people if bitten or scratched by an infected rodent. Also, the disease may be transmitted by ingestion of food or water contaminated with rat excrement.

Treatment involves cleaning and disinfecting any wounds and seeking medical attention if suspect symptoms such as fever, headache, vomiting are seen within 7 days of exposure.