Psittacosis

Significance

Psittacosis (sometimes also called ornithosis) is a disease caused by a small, intracellular bacteria, Chlamydia psittaci. Psittacosis is common in wild birds of all types, but it is particularly common in pigeons and in birds of the parrot family. Psittacosis can cause respiratory infections in humans. Psittacosis is highly contagious from bird to bird and from bird to human. Psittacosis is the zoonotic disease most likely to be transmitted from a laboratory animal to a worker at UC Davis.

Biology

Psittacosis can be consistently found in wild and domestic populations of virtually all species of birds. The incidence of infection in populations varies, but many studies have found incidences between 1% and 20% in wild bird populations. While most infections in birds are in-apparent, psittacosis occasionally results in illness in birds, especially if the birds are crowded or stressed. Sick birds may show respiratory distress, diarrhea, weight loss, and occasional mortality.

Infected birds, especially sick ones, are highly contagious to other birds and to human beings. The disease is spread via aerosols, so direct contact with the bird is not necessary.

One to two weeks after exposure, an infected human may develop a respiratory illness of varying severity. A mild case will appear to be the flu, while more severe cases can show chills, fever, sweating, headaches and even a pneumonia. The disease can be especially severe in individuals over age 50. The disease in man is readily treated with tetracycline-type antibiotics.

The Chlamydia that causes venereal infections in humans is not the same one that causes psittacosis. You can’t get the human venereal Chlamydia from birds.

Relative Risks

Exposure to psittacosis is a distinct possibility in people that work with wild or domestic birds. The more stable the flock and the more that is known about its health status, the lower the risk. A worker spending all his or her time with a stable, on-campus colony of known negative
animals is not at great risk. A worker dealing with sick pet birds at a teaching hospital or with newly obtained birds of unknown health status is at moderate risk.

The highest risk species at Davis have been small Psittacine birds (birds of the parrot family) and pigeons. Several human cases have resulted from working with laboratory colonies of these birds.

The nature of the work and type of exposure is also a factor. Working in a dusty environment with high densities of birds is a much greater risk that working with birds outdoors or in clean, well-ventilated areas.

If you work with birds, and if you develop suspicious signs, you should report your illness to Occupational Health Services. If you have psittacosis, an accurate diagnosis and appropriate antibiotic therapy can dramatically shorten the illness and reduce its severity.

**Prevention**

1. Know the disease. Anyone working with birds should be aware of psittacosis. If you become ill, be sure that your physician knows that you work with birds.

2. Know your flock. Colony managers should work closely with their veterinarians to develop long-term strategies to keep their colonies clean.
   1. Long term campus research colonies should be periodically tested for Chlamydia. On-campus colonies should be negative for the disease. If a colony is positive, it should either be destroyed, or it should be isolated and treated with appropriate antibiotics for 45 days.

   2. If you are bringing a new, long-term colony onto campus, work with your veterinarian do establish a flock health program for the colony. It may be possible to test every bird, or it may be more practical to prophylactically treat the entire flock with tetracycline for 45 days to eliminate any possibility of subclinical infection.

3. Newly arrived birds should be isolated from established colonies until their health status can be determined.

4. It may not be possible to test or treat all birds, especially in the case of wild birds or short term colonies. Be particularly alert to signs of ill-health in birds and be sure to promptly report sick animals to your veterinarian.

5. USDA-APHIS found that NIOSH certified dust masks were effecting in reducing the incidence of psittacosis in workers in USDA quarantine stations. Consider wearing a NIOSH certified dust mask in rooms housing birds of unknown health status.

**Contact**

**Occupational Health Services**

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**More information**

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