

Diseases, Disorders and Injuries

Psittacosis

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What is psittacosis?

Psittacosis is an infectious disease in humans that has mild, non-specific flu-like symptoms. Psittacosis refers to any infection or disease caused by *Chlamydia psittaci*, one of several microorganisms in the genus *Chlamydia*. This disease can be transmitted from infected birds to humans. Parrot disease, ornithosis, and chlamydiosis are other names for psittacosis.

What are the signs of infection among birds?

Chlamydia psittaci infects wild and domestic birds and poultry. Birds that can contract the infection include parrots, cockatiels, parakeets, macaws, canaries, pigeons, chickens, ducks, and turkeys. The time between exposure to *Chlamydia psittaci* and the onset of illness in caged birds ranges from three days to several weeks. Sick birds show signs of:

- poor appetite or weight loss
- inflamed or runny eyes or nose
- breathing difficulties
- diarrhea

Birds can have a latent infection. "Latent" means they appear healthy and do not show any symptoms now but they can show symptoms later. These infected birds carrying the *Chlamydia psittaci* bacteria may shed the organism intermittently or sometimes continuously for weeks or months. Stress associated with nutritional deficiencies, overcrowding, breeding, egg-laying, and prolonged transport may cause birds with a latent infection to shed infectious agents. When shedding occurs, the infected birds excrete the bacteria in their droppings (feces) and nasal discharges and the bacteria can remain infective for several months.

How do birds pass on the infection to humans?

Humans can become infected with *Chlamydia psittaci* by breathing in the organism when the urine, respiratory secretion, or dried feces of infected birds is aerosolized (i.e., dispersed in the air as very fine droplets or dust particles). Other sources of exposure include mouth-to-beak contact, a bite from an infected bird, and handling the plumage and tissues of infected birds.

Can humans transmit the infection to other humans?

Person-to-person transmission of the disease is rare. It may occur when a person is exposed to infectious, aerosolized droplets from another person experiencing paroxysmal (sudden, very forceful) coughing during the acute illness. There is no evidence that the bacteria is spread by preparing or eating poultry.

What are the signs of infection among humans?

When a person breathes in *Chlamydia psittaci* bacteria, the lungs' defence mechanisms attempt to neutralize them. The bacteria that avoid this defence start an infection that varies in severity from a mild flu-like illness to severe pneumonia. Generally, the signs and symptoms appear within four to 15 days after exposure but commonly occur after 10 days. These include:

- fever
- chills
- dry cough
- weakness or fatigue
- muscle aches
- chest pain,
- headache,

Psittacosis is primarily a lung disease but it can involve several organs. Some reports show that while rare, inflammations of the liver, lining of the heart cavity, the heart muscle, and the brain can occur.

The course of the disease is variable and it can result in death. However, fatal cases are rare. In mild cases, fever may continue for three weeks or more.

How is psittacosis recognized and treated?

For accurate diagnosis of psittacosis, a doctor must know that the person has been exposed to birds and that the suspected birds are infected with *Chlamydia psittaci*. Laboratory examinations can identify the organism and detect the signs of infection. Patients who develop psittacosis require treatment with specific drugs. The disease is very responsive to tetracycline but is resistant to penicillin.

What occupations are at risk?

Psittacosis is an occupational health hazard for many people whose work brings them into contact with birds. These include:

- bird fanciers,
- pigeon fanciers,
- poultry production and processing workers,
- pet shop employees,
- bird quarantine facilities employees,
- veterinary clinics employees,
- diagnostic laboratories employees,
- racing pigeons keepers,
- public health inspectors,
- exotic and domestic bird breeders, and
- bird dealers.

Those occupations that handle wild birds may also be at risk. In some cases, landscapers were at risk when lawnmowers raised the dust from wild bird droppings.

How can we control psittacosis?

Preventive measures include feeding birds properly (clean food and water bowls daily), avoiding overcrowding, and adequate ventilation systems, including the use of high-efficiency particulate air (HEPA) filters to reduce the spread of contaminated air. It is important to clean cages daily. Do not stack cages. Position cages to prevent the transfer of feces, food, feathers, and other material from cage to cage.

To control the infection in pet birds and domestic poultry, isolate infected birds. Contact a veterinarian for any treatment and testing that may be required. In most jurisdictions, all diagnosed cases must be reported to local public health authorities. Early diagnosis and reporting can help identify sources of infection and control the further spread of psittacosis.

Educate workers who are at risk on how the disease can transfer from infected birds to people. Ask those individuals who think they may be ill to inform their healthcare provider about their bird contact.

Workers should keep infected birds in isolation and ensure these places are properly ventilated. All persons involved in the care of infected birds should wear protective clothing including gloves, eyewear, a disposable surgical cap and a properly fitted respirator with N95 or higher rating. Surgical masks may not be effective in preventing transmission of *Chlamydia psittaci*.

Do not dry sweep, brush or vacuum when cleaning cages. Moisten surfaces first with water or disinfectant before cleaning. Burn or double-bag waste for disposal. Wash hands with water and soap after being in contact with birds or their droppings.

Appropriate disinfectants include any with the following active ingredients: quaternary ammonium compounds, 3% hydrogen peroxide, isopropyl alcohol, alcoholic iodine solutions, 70% ethanol, and [household bleach](#) (diluted to 1% sodium hypochlorite). Discard items that cannot be cleaned appropriately. Note that many disinfectants are respiratory irritants and should be used with appropriate precautions in a well-ventilated area. Avoid mixing disinfectants with any other product.

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