

PSITTACOSIS

The psittacosis health monitoring program provides educational information for the employee as well as a program that will assist in the prevention of contracting the disease.

Psittacosis is caused by *Chlamydia psittaci* and may be contracted by APHIS employees having direct contact with various avian species. The more common species involved are birds of the psittacine family (parrots, parakeets, cockatoos, etc.), pigeons, and turkeys.

Psittacosis in humans varies considerably. Its incubation period is usually between 5–14 days but may be longer. Symptoms may include fever, chills, headache, malaise, and some involvement of the lungs. Initially, a cough may be absent; however, a cough usually develops as the disease progresses. Other serious clinical manifestations of the disease may be endocarditis, hepatitis, and neurological complications. Severe illness with respiratory failure and death has been reported.

Persons most likely to contract psittacosis are those exposed to birds at bird quarantine facilities, border crossings, and import centers. The primary means of transmission is by inhalation of aerosolized dried feces or respiratory secretions of infected birds. Infected birds excrete the chlamydial organism in their feces, and it is extremely viable in the dried state. Exposure to a contaminated environment, or even to the aerosol created by the beating of a caged bird's wings, is sufficient to produce infection. Psittacosis should be suspected when an ill employee has had recent contact with a sick or dead bird, although an apparently healthy bird can carry and shed chlamydia. Person-to-person transmission of psittacosis is infrequent.

APHIS supervisors who have employees required by their job to work with birds and poultry must properly complete, with the employee, an APHIS Form 29 for exposure to psittacosis. Because their job will require the use of respirators, the supervisor should also designate in the APHIS Form 29 that the employee will be using a respirator so that they can be medically qualified to wear a respirator. Once the employee has been medically qualified to wear a respirator, the supervisor will need to arrange to have the employee fit-tested with the proper respirator.

APHIS employees exposed to birds must wear protective respirators (at least N95 rated) covering the mouth and nose. Half-face, negative pressure respirators with radionuclide cartridges certified by the National Institute for Occupational Safety and Health (NIOSH) provide the most effective protection against the organism causing psittacosis.

The cartridges will be changed on a daily basis and will not be removed from any quarantine area. The respirator (without cartridges) will be disinfected with an appropriate disinfectant and removed to a clean area for inspection, repair, and the addition of new cartridges.

The following are precautions which will further assist in preventing the contraction of psittacosis:

- Dust should be controlled by proper ventilation and vacuuming of areas where dust collects, since the primary means of transmission to humans is by inhalation.
- Waste from birds will not be allowed to accumulate. Wetting of the waste material with a 1:1000 dilution of quaternary ammonium compound (QAC) solution is helpful in reducing dust and destroying the organism. Wetting with the QAC solution is recommended prior to removing the waste material. Also effective are 70% isopropyl alcohol, 1% Lysol®, 1:100 dilution of household bleach, or chlorophenols. Many disinfectants are respiratory irritants, and they should be used in a well-ventilated area. Avoid mixing disinfectants with any other product.
- Protective gloves, protective clothing, and a disposable surgical cap will be worn whenever birds are handled or when cleaning cages.
- Birds should be necropsied under a hood with negative air flow; examples of such hoods would include a mini-benchtop hood, a bio-safety cabinet, and a chemical fume hood. When such a hood is not available, necropsy should be conducted using personal protective equipment, including a respirator.
- The feathers of birds to be necropsied must be moistened with water and detergent rather than a disinfectant. Disinfectants should not be used in the water since the residual effect of the disinfectant may destroy the purpose for the necropsy.
- Individuals working with birds may be exposed to other microorganisms associated with birds, which are infectious to human. Newcastle disease virus in humans is a good example. It may cause conjunctivitis and upper respiratory infection. Therefore, protection of the eyes should reduce the chance of contracting infection. Wearing protective chemical splash goggles securely placed over the cheeks, forehead, temple, and bridge of the nose, in addition to the respirator, is recommended.
- When possible, DO NOT keep birds in the office. When isolettes or filtered containers are not available, cover the bird cages with a dark cloth to keep the bird quiet (NOTE: The cloth cover could contain the infectious airborne agents).
- Prior to working with birds or poultry in quarantine or on private premises each employee shall be given information by the supervisor concerning psittacosis. This information will include symptoms, protective equipment to be used, and contact persons.