

## Diphtheria "The Strangler"

This respiratory infection is gradual in onset, and symptoms manifest over the first 1 to 2 days of infection. Symptoms include a low grade fever, conjunctivitis, or an ear infection. Severe complications leading to death include neck swelling accompanied by upper airway obstruction due to extensive membrane formation in the back of the throat. In the pre-vaccine era, children would die from airway obstruction. Other rare complications include inflammation of the heart and nerve involvement in the extremities.

Diphtheria is a bacillus that produces a toxin. Humans are the sole reservoir of this organism. The bacillus is spread by respiratory droplet and/or by direct contact with discharge from skin lesions. In untreated people, organisms can be present in discharge from the nose, throat, eyes, and skin lesions for 2 to 6 weeks after infection. Patients treated with appropriate antibiotics usually only transmit the disease for less than 4 days. Fully immunized people may be asymptomatic carriers or have a mild sore throat. Severe disease occurs more often in people who are not immunized or their immunization status is inadequate.

Endemic Diphtheria still occurs across the world. People who travel to areas where Diphtheria is endemic and come in close contact with people living in the endemic area may become infected. If raw milk or milk products are consumed, this can serve as a vehicle of transmission. After 1990, a Diphtheria epidemic occurred through the newly independent states of the former Soviet Union including, Russia, the Ukraine, and the Central Asian Republics with case fatality rates anywhere from 3 to 23%.

Because the condition of patients with Diphtheria may deteriorate rapidly, a single dose of antitoxin should be administered on the basis of the clinical diagnosis, even before culture results are available. To neutralize Diphtheria toxin, the preferred route of administration of the antitoxin is intravenously.

Universal immunization with Diphtheria toxoid-containing vaccine is the only effective control measure. The schedule for immunization is at 2 months, 4 months, 6 months, 15 months, and then a booster given between the ages of 4 and 6 years. Side effects of the vaccine are mild and include fever, redness, swelling, and pain at the injection site.