

Pertussis (Whooping Cough)

This brief section would normally be under the heading of communicable disease; however, considering the ongoing high incidence of pertussis in the community, this topic has its own section.

Overview	p. 1
Symptoms	p. 2
Diagnosis & Treatment	p. 3
School Recommendations	p. 3
Resources for Schools/Parents	p. 3

OVERVIEW

From the Centers for Disease Control & Prevention “Pertussis, also known as whooping cough, is a highly contagious respiratory disease. It is caused by the bacterium *Bordetella pertussis*.

Pertussis is known for uncontrollable, violent coughing which often makes it hard to breathe. After fits of many coughs, someone with pertussis often needs to take deep breathes which result in a "whooping" sound. Pertussis most commonly affects infants and young children and can be fatal, especially in babies less than 1 year of age.

The best way to protect against pertussis is vaccination.

Pertussis Vaccine

The first pertussis vaccine (combined with tetanus and diphtheria) DTP first became available in the United States in 1948.

In 1999 a combined diphtheria, tetanus and pertussis (whooping cough) vaccine, DTaP, that used an acellular pertussis vaccine, replaced the DTP vaccination on the U.S. recommended Childhood Immunization Schedule.

Unfortunately, research (and incidence of pertussis) is indicating that although having less side effects, the efficacy of acellular pertussis containing vaccine may be less than ideal. The CDC reports that research on this is ongoing.

In general, DTaP vaccines are 80-90% effective. The Tdap vaccine is relatively new (2005) - the current estimate is that Tdap vaccination protects 7 out of 10 people who receive it. The level

of protection wanes or decreases over time, with the peak level of immunity occurring within the first two years.

<http://www.cdc.gov/pertussis/>

SYMPTOMS

Early symptoms:

- Cold like symptoms
- Mild cough/fever
- After 1-2 weeks, severe coughing can begin
- Apnea — a pause in breathing (in infants)

Traditional symptoms:

- Paroxysms (fits) of many, rapid coughs followed by a high-pitched "whoop"
- Vomiting (throwing up)
- Exhaustion (very tired) after coughing fits
- The coughing fits can go on for up to 10 weeks or more

Complications:

Pertussis (whooping cough) can cause serious and sometimes life-threatening complications in infants and young children, especially those who are not fully vaccinated.

In infants younger than 1 year of age who get pertussis, about half are hospitalized. The younger the infant, the more likely treatment in the hospital will be needed. Of those infants who are hospitalized with pertussis about:

- 1 in 4 (23%) get pneumonia (lung infection)
- 1 or 2 in 100 (1.6%) will have convulsions (violent, uncontrolled shaking)
- Two thirds (67%) will have apnea (slowed or stopped breathing)
- 1 in 300 (0.4%) will have encephalopathy (disease of the brain)
- 1 or 2 in 100 (1.6%) will die

The CDC has an excellent review of symptoms. The website has a disease progression chart and a link to an audio of a pertussis cough. <http://www.cdc.gov/pertussis/about/signs-symptoms.html>

Another excellent website to learn more and to listen to the pertussis whoop is "The Sounds of Pertussis" <http://www.soundsofpertussis.com/>

DIAGNOSIS & TREATMENT

Pertussis (whooping cough) can be diagnosed by taking into consideration:

- Recent exposure
- History of typical signs & symptoms
- Physical examination
- Positive culture for *Bordetella pertussis*
- Blood test

Pertussis is treated with antibiotics. Early treatment is very important and may make the infection less severe if it is started early, before coughing fits begin. Treatment can also help prevent spreading the disease to close contacts. Treatment after three weeks of illness is unlikely to help.

SCHOOL RECOMMENDATIONS

Health care providers who have diagnosed pertussis are to report this to County of San Diego Public Health - Epidemiology. Ph. (619) 692-8499

http://www.sdcounty.ca.gov/hhsa/programs/phs/community_epidemiology/

In turn the school district/school should be notified by Public Health. Notification & communication with families and school staff is best coordinated with Public Health.

If parents report the diagnosis to school staff, Public Health – Epidemiology should be notified. Ph. (619) 692-8499

RESOURCES

California Department of Public Health <http://eziz.org/resources/pertussis-promo-materials/>

Centers for Disease Control & Prevention <http://www.cdc.gov/pertussis/index.html>

See the Kid Friendly Fact Sheet a very understandable, easy to read explanation of the disease, its transmission, etc. <http://www.cdc.gov/pertussis/downloads/BAM-villain-for-kids-fs.pdf>

National Institutes of Health – Medline Plus

<http://www.nlm.nih.gov/medlineplus/whoopingcough.html>

OF INTEREST

The History of Vaccines – Pertussis

<http://www.historyofvaccines.org/content/articles/pertussis-whooping-cough>