



## ***Pertussis (Whooping cough)***

### **What is pertussis?**

Pertussis is a highly contagious disease of the respiratory tract (nose and throat) caused by the bacteria *Bordetella pertussis*.

### **How is it spread?**

The bacteria are found in respiratory secretions of infected people. These people can pass the infection to other people by coughing or sneezing. Pertussis can also be spread by direct contact with infected mouth or nose secretions eg. by sharing eating utensils during a meal, sharing food or kissing.

### **What are the symptoms?**

The symptoms generally develop 7 to 10 days after exposure, but may take up to 20 days.

Pertussis usually starts with cold-like symptoms and an irritating cough, or the cough may be the first symptom. The irritating cough gradually changes over 1-2 weeks into episodes of coughing bouts, often followed by dry retching or vomiting. These coughing bouts can be very severe and frightening.

In some people, particularly children, they may end with a crowing noise (the whoop) as air is drawn back into the chest, and the child may vomit.

Very young babies may hold their breath instead of whooping and may sometimes turn blue. Adolescents and adults may only have a persistent cough.

### **How serious is pertussis?**

Pertussis kills about 295,000 children worldwide, each year and other children are left with brain damage. In Australia, between 1993 and 2005, 16 of the 18 people that died from pertussis were aged less than 1 year\*. Death from pertussis is rare in children over 10

years of age. The most common complication of pertussis in infants is pneumonia that can be complicated by seizures and prolonged decreased oxygen to the head causing brain damage.

### **What is the infectious period?**

A person is infectious during the cold-like symptoms in the early stages, through to 5 days after starting antibiotics or, if left untreated, for the first 3 weeks of coughing.

### **Who is at risk?**

Pertussis can affect any age group, however, because of early childhood immunisation, pertussis now occurs mainly in adolescents and young adults. Adults can give the infection to young babies before they are fully protected by vaccination. These young babies are at risk of severe disease. One attack of the disease usually produces long-term immunity, though second attacks in the same individual have occurred.

### **What is the treatment?**

An antibiotic called azithromycin (or erythromycin for pregnant contacts) is usually prescribed to prevent the disease from being passed on to others, however it has little effect on the course of the illness for the individual. The coughing may last for weeks or months.

### **How can pertussis be prevented?**

Immunisation works to prevent a person contracting disease or can reduce the severity of the illness. The pertussis component is combined with diphtheria and tetanus vaccine (DTPa) (and sometimes hepatitis B and polio vaccine) and is given as an injection.

\*Australian Immunisation Handbook, 9th Edition 2008 (NHMRC) <http://immunise.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook-home>

The DTPa containing vaccine is given at 2, 4 and 6 months of age with a booster at 4 years. Those few children who develop pertussis, even though they have been immunised, have a much milder infection with fewer complications than those children who do not receive the vaccine at all.

The series of 3 vaccines at 2, 4 and 6 months provide about 90% protection against pertussis but this falls to about 80% after 3 years.

A booster vaccine formulated for adults (dTpa vaccine consisting of adult diphtheria, tetanus and acellular pertussis) became available for use in Australia, in 2003. Because of waning immunity to pertussis during adolescence, this vaccine is given at 13 years.

The booster dose acts to ensure that protection lasts for as long as possible and to reduce the risk of infecting young infants. It is recommended for:

- 13 year olds as part of a free school program.
- adults working with young children (eg. health and child care workers)
- other child carers (eg. grandparents)
- couples who are planning a pregnancy
- parents who have recently had a new baby

The booster vaccine is available from GPs and incurs a cost.

## **Minimum interval between dTpa and other tetanus containing vaccines**

The dTpa vaccine can be administered at any time following a previously administered dose of tetanus toxoid containing vaccine.

## **How can it be controlled?**

People with infectious pertussis (prior to and for the first 3 weeks of the cough) should stay away from work, school and child care until they have completed 5 days of appropriate antibiotics.

Preventive antibiotic treatment is recommended for the following household or institutional contacts of pertussis cases who have spent more than 1 hour with the infected person:

- all household members when the household includes an infant aged <24 months who has received less than 3 doses of pertussis vaccine
- any woman in the last month of pregnancy

Further advice should be sought from your regional Centre for Disease Control regarding pertussis cases:

- that have attended school or child care centres
- in health care workers or in a maternity ward or newborn nurseries.

### **For more information contact your nearest Centre for Disease Control.**

Darwin	8922 8044
Katherine	8973 9049
Nhulunbuy	8987 0359
Tennant Creek	8962 4259
Alice Springs	8951 7540