

*Infection with pneumococcal bacteria causes a range of diseases including meningitis, pneumonia and middle ear infection. Infections are more common in winter and spring. Small children, and the elderly are most at risk. Infection is treated with antibiotics. Immunisation can prevent infection.*

## Pneumococcal Disease

**Last updated:** 17 January 2008

### What is pneumococcal disease?

Pneumococcal disease is caused by infection with the bacteria *Streptococcus pneumoniae*. Infection can cause a variety of diseases including: pneumonia (infection of the lungs), otitis media (infection of the middle ear) and meningitis (infection of the membranes around the brain and spinal cord).

### What are the symptoms?

Symptoms depend on the site of infection and the age of the person.

- Pneumonia can cause shortness of breath, fever, lack of energy, loss of appetite, headache, chest pain and cough.
- Otitis media can cause crying, tugging at the ear, fever, irritability, poor hearing, and sometimes diarrhoea and vomiting.
- Meningitis can cause fever, headache, stiff neck, nausea, vomiting, and drowsiness.

### How is it spread?

The bacteria often live harmlessly in the throat of healthy people. Occasionally these bacteria will cause an infection.

### Who is at risk?

People most at risk for the infection include:

- Children under two years of age

- Elderly adults
- Aboriginal and Torres Strait Islander people
- People with lung disease, heart disease, cancer, kidney disease, HIV infection, or malnutrition
- People whose spleen has been removed or doesn't work properly.
- People who smoke

Pneumococcal infections are more common in winter and early spring.

Outbreaks have occurred in childcare centres, nursing homes, and other institutions.

### **How is it prevented?**

#### Children

Pneumococcal vaccine is recommended and available free for all children at 2, 4 and 6 months of age.

It is also free for children who are aged between two and five years of age who have or are:

- Born with certain immune deficiencies
- Receiving certain drugs or radiation treatment
- People who have no spleen or whose spleen does not work properly
- HIV infection
- Chronic renal (kidney) failure
- Down's Syndrome
- Heart disease causing cyanosis or heart failure
- Premature infants with chronic lung disease
- Infants born at less than 28 weeks gestation
- Cystic fibrosis
- Insulin-dependent diabetes mellitus
- Cerebrospinal fluid leaks
- Intracranial shunts or cochlear implants.

For children with the above medical conditions, re-vaccination is recommended at 12 months of age, and a dose of the adult vaccine is recommended at 5 years of age. Please discuss with your local doctor.

**Pneumococcal vaccine is also free for:**

#### Adults

- People aged 65 years and older
- Aboriginal and Torres Strait Islander people aged 50 and over and those aged 15-49 years who:

- Have heart, kidney or lung disease
- Have asthma or diabetes
- Are immuno-compromised
- Are heavy drinkers or smoke

In some people at highest risk of severe disease, continuous antibiotic treatment may also be recommended.

If a person's first vaccination was given at the age of 65 years or older, then re-vaccination is recommended 5 years later.

Vaccine is also recommended for people aged 15-64 years who have or are:

- Immunocompromised
- Had their spleen removed or whose spleen does not work properly
- Chronic illnesses (for example: heart, kidney, lung, diabetes, or alcohol related illnesses)
- Cerebrospinal fluid leaks
- Tobacco smokers

For these people a single re-vaccination is recommended either at age 65 years or 10 years after initial vaccination (whichever is later)

### **How is it diagnosed?**

Your doctor can diagnose pneumococcal disease by the symptoms, an examination, and by doing some tests. Test may include a chest x-ray, and taking samples to look for the bacteria in the infected part of your body (e.g., blood or cerebrospinal fluid).

### **How is it treated?**

Treatment includes antibiotics, medicine to control the fever and pain, and fluids to prevent dehydration.

### **What is the public health response?**

Laboratories must confidentially notify cases of invasive pneumococcal disease (where the bacteria is located in the blood or CSF or other sterile site) to the local Public Health Unit. Public Health Unit staff will talk to the treating doctor and patient or their carer to identify risk factors that the patient may have, and to enquire about vaccination history. Close contacts of cases are not usually at increased risk of infection and don't require follow up. Information on the number of

people who get pneumococcal disease and their risk factors helps find better ways to prevent the illness.

## Further information - Public Health Units in NSW

For more information please contact your doctor, local public health unit or community health centre - look under NSW Government at the front of the White Pages

Metropolitan Areas	Location	Number	Rural Areas	Location	Number
Northern Sydney/Central Coast	Hornsby	02 9477 9400	Greater Southern	Goulburn	02 4824 1837
	Gosford	02 4349 4845		Albury	02 6080 8900
South Eastern Sydney/Illawarra	Randwick	02 9382 8333	Greater Western	Broken Hill	08 8080 1499
	Wollongong	02 4221 6700		Dubbo	02 6841 5569
Sydney South West	Camperdown	02 9515 9420		Bathurst	02 6339 5601
Sydney West	Penrith	02 4734 2022	Hunter/New England	Newcastle	02 4924 6477
	Parramatta	02 9840 3603		Tamworth	02 6767 8630
Justice Health Service	Matraville	02 9311 2707	North Coast	Port Macquarie	02 6588 2750
				Lismore	02 6620 7500

See full details of Public Health Units at

[www.health.nsw.gov.au/publichealth/infectious/phus.asp](http://www.health.nsw.gov.au/publichealth/infectious/phus.asp)