



Pneumococcal disease

What is pneumococcal disease?

Pneumococcal disease is caused by the *Streptococcus pneumoniae* bacterium. There are more than 90 different strains (serotypes). Many of these strains live in the respiratory passages of humans and cause no ill health. Only a small number of strains are responsible for most cases of invasive disease (infection) in people.

Types of pneumococcal infections

Infection commonly occurs in the lungs, middle ear, sinuses, blood stream and meninges (lining of the brain and spinal cord).

How does the infection spread?

Streptococcus pneumoniae bacteria are spread through air-borne droplets of mucus or saliva by coughing, sneezing and touching contaminated surfaces.

People who are at increased risk of getting pneumococcal disease

Certain groups of people have an increased risk of infection including:

- people over 65
- Aboriginal people
- smokers
- people with:
 - existing chronic diseases such as cancer, lung or kidney disease
 - weakened immune systems
 - impaired spleen function or having no spleen
- children under two and in child care.

Signs and symptoms

Pneumococcal can cause many health conditions. Symptoms vary based on the type of infection you have and your age. Symptoms of pneumococcal infections include:

- respiratory symptoms – cough, chills and shaking
- difficulty breathing
- ear pain or discharge from the ear
- fever
- nausea and vomiting
- headaches
- chest pain – breathing in and out
- shortness of breath
- blood-stained sputum (spittle/mucus)
- light sensitivity
- poor appetite
- confusion
- irritability
- drowsiness
- skin rash.

Diagnosis of pneumococcal disease

Testing for *Streptococcus pneumoniae* needs to be specific as other bacteria can cause comparable infections.

Pneumococcal disease is diagnosed using a variety of tests depending on your symptoms.

Tests include:

- physical examination
- blood, urine, and sputum tests
- chest x-ray
- lumbar puncture test.



Treatment of pneumococcal disease

Treatment includes:

- antibiotics
- pain relief
- drinking more fluids
- rest
- admission to hospital for acute cases.

Preventative treatment also includes vaccination against pneumococcal disease.

How can pneumococcal disease be prevented?

Two vaccines are available to help protect people against the most common strains of the *Streptococcus pneumoniae*.

Pneumococcal vaccinations are given free as part of the National Immunise Australian Program Schedule to:

- all infants six to eight weeks, four and six months old
- children under five with specific medical risk factors
- adults 65 and over
- Aboriginal people 15 years and over.

Pneumococcal vaccines for adults and children

Pneumococcal conjugate vaccine (PCV)

This vaccine is available to all children under two years as part of the Australian National Immunise Program. It's known by the brand name Prevenar 13.

Pneumococcal polysaccharide vaccine (PPV)

This vaccine is given to people 65 and over and vulnerable, high risk people with chronic health conditions. It is known by the brand name Pneumovax 23.

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