

# Pneumococcal Disease

Pneumococcal disease is most common in children under 2 years of age and in people over 65 years. Pneumococcal disease can sometimes develop into 'invasive pneumococcal disease' (IPD) which can include serious diseases, including meningitis (infection of the covering of the brain), septicaemia (blood infection), and pneumonia with a blood infection. NB: Pneumococcal disease is not meningococcal disease which is caused by another type of bacteria.

## Signs and Symptoms:

Symptoms can depend on where the infection is in the body. The bacteria can cause less serious infections such as middle ear infections, sinusitis and bronchitis. Symptoms of a more serious infection may include fever, chills, sweats, cough, shortness of breath, stiff neck and extreme tiredness. The person may become quite unwell, appearing either very quiet/inactive or continually distressed. Older children and adults may say they have a headache and bright lights hurt their eyes.

## Treatment:

Prompt antibiotic therapy is required for IPD. Pneumococcal bacteria are becoming increasingly resistant to some antibiotics.

## Transmission:

Pneumococcal disease is caused by bacteria called *Streptococcus pneumoniae* (also known as the pneumococcus). There are different strains of the bacteria, some of which are more likely than others to cause disease.

The bacteria are easily spread from person to person by coughing or sneezing or contact with mucous from the nose and throat. Many people carry pneumococcal bacteria in their nose and throat, often without causing any health problems. Some people are at a higher risk of developing disease from the bacteria. Those at higher risk include children younger than two years of age, adults 65 years and older, people with conditions that weaken the immune system, people with cochlear implants or cerebrospinal fluid leaks, people who smoke and people living in overcrowded conditions.

## Prevention:

Vaccination is the most effective way of preventing pneumococcal disease (see Vaccination). Previous pneumococcal infection will not provide immunity as there are many strains of the bacteria that cause illness.

Reducing smoking can reduce the risk of infection. Adults should avoid smoking near other people especially young children and those who have other illnesses, such as chronic lung disease.

It is not common for people to develop pneumococcal disease after being exposed to someone with a pneumococcal infection. Therefore, prophylactic (preventative) antibiotics are not recommended for contacts of patients with such infections.

## Vaccination:

From 1 July 2020 there are changes to the timing, type and number of pneumococcal vaccines given under the National Immunisation Program (NIP). These apply to the following groups:

- Children and adults with conditions that increase their risk of [pneumococcal disease](https://immunisationhandbook.health.gov.au/resources/handbook-tables/list-risk-conditions-for-pneumococcal-disease) (<https://immunisationhandbook.health.gov.au/resources/handbook-tables/list-risk-conditions-for-pneumococcal-disease>)
- Aboriginal and Torres Strait Islander children.
- All Aboriginal and Torres Strait Islander people aged 50 years and older.
- All non-Indigenous people aged 70 years and older.

The list of conditions associated with an increased risk of pneumococcal disease has been updated. There is now a single list of risk conditions for funded NIP pneumococcal vaccination. For further details go to the [Australian Immunisation Handbook](https://immunisationhandbook.health.gov.au/search/pneumococcal) (<https://immunisationhandbook.health.gov.au/search/pneumococcal>)

Like all medications, vaccines may have side effects. Most side effects are minor, last a short time and do not lead to any long-term problems. Possible side effects of the pneumococcal vaccine may include swelling, redness and soreness where the injection was given and fever. More serious side effects are extremely rare. Talk to your doctor or immunisation provider for further advice. Contact your immunisation provider if you or your child has a reaction following vaccination which you consider serious or unexpected.

## Health outcome:

The course of disease depends on where the infection is in the body, the person's immune system, and the use of appropriate antibiotics. The illness may last anywhere from a few days to weeks.

Meningitis is the most severe type of IPD. Of children younger than 5 years of age who get pneumococcal meningitis, about 1 out of 15 dies of the infection. Others may have long-term problems, such as hearing loss, cognitive impairment, or developmental delay. About 1 out of 100 children younger than 5 years of age with a pneumococcal bloodstream infection die from it. About 5 out of 100 people with the non-invasive type of pneumococcal pneumonia will die from it. The rates of death from pneumococcal disease are higher in elderly people.

**Other resources:**

- 13 HEALTH (call 13 43 25 84)
- [The Australian Immunisation Handbook pneumococcal resources](https://immunisationhandbook.health.gov.au/resources?search_api_views_fulltext=pneumococcal&=Apply)  
([https://immunisationhandbook.health.gov.au/resources?search\\_api\\_views\\_fulltext=pneumococcal&=Apply](https://immunisationhandbook.health.gov.au/resources?search_api_views_fulltext=pneumococcal&=Apply))

**Related Content**

- [Having a vaccination information sheet](http://conditions.health.qld.gov.au/HealthCondition/condition/14/119/70/Having-a-vaccination-what-to-expect)  
(<http://conditions.health.qld.gov.au/HealthCondition/condition/14/119/70/Having-a-vaccination-what-to-expect>)

**Help and assistance:**

For more information about pneumococcal disease, contact your doctor or local public health unit. You can be immunised at your local doctor or medical centre. Check with your local council, community child health and community health centre regarding free immunisation clinics.

**References**

Heymann, D., Ed. 2015. Control of Communicable Diseases Manual, 20th edition. Washington, DC: American Public Health Association

Australian Government, 2017. [The Australian Immunisation Handbook](https://immunisationhandbook.health.gov.au) (<https://immunisationhandbook.health.gov.au>), 10th edition

Centers for Disease Control and Prevention 2017. [Pneumococcal Disease](https://www.cdc.gov/pneumococcal/index.html) (<https://www.cdc.gov/pneumococcal/index.html>)

**Contact**

If you are in an emergency situation, call 000

Get qualified health advice 24/7 for the cost of a local call. 13 HEALTH (13 43 25 84)