



Pneumococcal infection

This pamphlet is aimed at anyone wanting more information about **pneumonia** and **other diseases that are caused by pneumococci**, and how you can protect yourself.

What are pneumococci?

Pneumococci are bacteria that can cause a number of different diseases in both children and adults. They are the most common cause of pneumonia, and ear and sinus inflammation. A pneumococcal infection can sometimes lead to more severe illness, with serious complications that may require hospitalisation and which, in rare cases, may be life-threatening. There are over 100 different variants, or serotypes, of pneumococci.

How are pneumococci spread?

Pneumococci are present in the airways, primarily in the nose and throat. The bacteria are very common in children of pre-school age and are fairly common in schoolchildren. Children do not usually fall ill with the bacteria.

Pneumococci in healthy or ill people are spread primarily by:



Coughing



Sneezing and when blowing
their noses



Close contact



How can you protect yourself?

- Avoid close contact with ill people.
- Wash your hands and follow good hygiene when coughing or sneezing, and when blowing your nose.
- Get vaccinated to reduce the risk of serious diseases caused by pneumococci.

Pneumococcus vaccination for children has been included in a national vaccination programme since 2009. After this, the incidence of severe pneumococcal disease in children has decreased significantly. Since 2022, vaccination against pneumococci has also been included in a special national vaccination programme for children and adults who are in risk groups. Vaccination will also be offered to everyone aged 75 or older.

Common diseases caused by pneumococci



Pneumonia (inflammation of the lungs)

Pneumococci are the most common cause of pneumonia, when parts of the lungs become infected. It is usually children younger than two years old and older adults who get pneumonia. For anyone over the age of 65 or who has a disease that affects the immune system, pneumonia can be particularly serious.



Ear inflammation (otitis)

Ear inflammation, or earache, can occur in connection with a cold. It is most common in children, though adults are also affected. The eardrum becomes more rigid, which affects the hearing, and if the pressure becomes too great, it can rupture. The risk of severe infections and complications is greater in older adults.



Sinus inflammation (sinusitis, rhinosinusitis)

Respiratory tract infections can cause symptoms in the sinuses – the air-filled spaces that open into the nose. This can cause a blocked nose or pain in the face next to the nose, above the teeth or in the forehead. It is a common complication as the mucous membranes in the sinuses become swollen and mucous is produced.

More severe diseases that can be caused by pneumococci

Pneumonia with sepsis or meningitis means that the infection is invasive. This means that pneumococci have spread to locations in the body that are usually free from bacteria. When this happens, the disease is usually severe and hospitalisation may be required.



Sepsis (blood poisoning)

The symptoms of sepsis are caused by the immune system's response, and it means that the infection is affecting the entire body. This can result in important organs such as the heart, lungs, brain and kidneys not working as they should.



Meningitis (inflammation of the cerebral membrane)

Meningitis is a serious but rare disease. The infection causes inflammation in the fluid and membrane that surround the brain and spinal cord.

Are you in a risk group?



Some medical conditions can weaken your immune system and increase the risk of pneumococcal infection.

Advanced age and chronic diseases are some of the risk factors that increase the risk of being affected by severe disease caused by pneumococci. The Public Health Agency of Sweden therefore recommends that anyone aged 65 years or older, as well as children aged 2 years or older who belong to risk groups, should get vaccinated against pneumococci.

65+



You are at increased risk of severe pneumococcal disease if you are:

- 65 or older
- A smoker
- An alcoholic
- A drug addict
- A welder

or if you have:

- Chronic heart disease
- Chronic kidney failure
- Diabetes
- Chronic lung disease
- Chronic liver disease
- Certain neurological diseases that affect lung function and cough strength
- Severely weakened immune system
- Previously had severe (invasive) pneumococcal infection

You are at a very high risk of severe pneumococcal disease if you have:

- Lack of spleen function or if you have had your spleen removed (asplenia/hyposplenia)
- Weakened immune system
- Cystic fibrosis
- Cochlear implant
- Cerebrospinal fluid leak
- Undergone organ transplantation

How to get vaccinated against pneumococci

How can I get vaccinated against pneumococci?


You can get a vaccination against pneumococci at a health centre, at a hospital or by private vaccination at a vaccination clinic.

How does the vaccination work?

A nurse or a doctor administers the vaccine via a syringe into a muscle on the outside of the upper arm. Your body then produces antibodies which is a part of the process in how the immune system combats infection.

Can I get vaccinated against pneumococci at the same time as receiving vaccine against other diseases?

You can have pneumococcal vaccine at the same time as, for example, COVID-19 and influenza vaccines, as it is usually safe to have several vaccines at the same time. For particularly vulnerable people, there may be reasons for having the vaccines at different times in order to avoid the risk of side effects.



*Ask your doctor if
vaccination is right
for you*

Who should not get vaccinated against pneumococci?

- Anyone who has had a severe reaction to a previous vaccination.
- Anyone with a severe allergy to a vaccine component.
- Anyone with an acute disease with a high fever.



Don't forget

The Public Health Agency of Sweden recommends that everyone aged over 65 and anyone in a risk group should get vaccinated against pneumococci. Since 2022, pneumococcal vaccination has been included in the national vaccination programme for people in risk groups, and vaccination must also be offered to anyone aged 75 or older.



How long does the vaccine protect against pneumococci?

There are two different kinds of vaccine against pneumococci. You may be given one or both kinds of vaccine depending on your age, whether you have been given vaccine against pneumococci before, or whether you have a disease that means you are in a risk group. If it is recommended that you should receive both kinds of vaccine, these will be given on two different occasions. Some people need to get vaccinated again after some years. You can ask your doctor or nurse when you are getting vaccinated if you will need a repeat dose.

What does the pneumococcus vaccination cost?

Most regions offer free vaccination against pneumococci for people aged 65 years or older, and for people with certain medical conditions who belong to one of the risk groups.

Go to [Pneumo.se](https://pneumo.se) or 1177.se to find out what is available in your region.

Don't hesitate to contact your doctor, nurse or vaccination provider if you have any questions or concerns about pneumococcal vaccination.



Seek care

Contact a health centre or a urgent care centre if you think you have pneumonia or some other serious illness caused by pneumococci. If you have symptoms, you should always call the healthcare centre first.

Speak with your doctor,
nurse or vaccination
provider for more
information about
pneumococcal vaccination.

The information in this pamphlet is based on the Public Health Agency of Sweden's recommendations for pneumococci and also 1177. You can read more about pneumococci and different risk groups at **folkhalsomyndigheten.se** or in the Healthcare Guide at **1177.se**

Scan the QR
code to read
more at

pneumo^{se}



Place for vaccination provider's stamp or own notes



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