

practice nurse or discuss with
your GP at your next routine visit

2 Vaccination policy background

23-valent pneumococcal polysaccharide vaccine was introduced in 1983 and has been used for over 10 years in the UK for people who are at particular risk from pneumococcal disease. The previous policy in the UK was to vaccinate only people in high-risk groups.

How effective is the vaccine?

A number of studies have shown that pneumococcal polysaccharide vaccine gives substantial, but not complete, protection against the serious forms of pneumococcal infection where the bacteria have entered the blood stream (invasive pneumococcal disease - IPD). The effectiveness of the vaccine in preventing IPD (such as septicaemia, meningitis and invasive pneumococcal pneumonia) is likely to be around 50%-70% in older age groups. Studies suggest that it is not effective in preventing pneumococcal pneumonia that occurs without septicaemia.

For more information or details about research studies please visit the Department of Health website

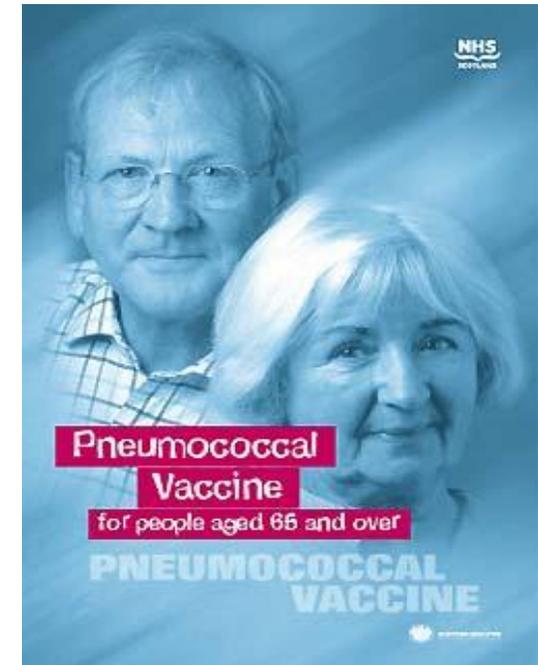
If you have any queries regarding the vaccine then please contact the

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What is pneumococcal disease?

The term pneumococcal disease describes infections caused by the bacterium *Streptococcus pneumoniae*. Pneumococcal infection causes a broad range of diseases in older people (see Table 1). It is the most common cause of serious pneumonia. As well as infecting the lungs, pneumococcal bacteria can infect the blood stream. This type of infection is called invasive pneumococcal disease (IPD). It is responsible for causing the more serious consequences of pneumococcal infection, such as septicaemia (blood poisoning), meningitis or invasive pneumococcal pneumonia, which are more likely to lead to death than non-invasive infections.

Table 1. Diseases caused by pneumococcal infection in older people

Disease caused by pneumococcal infection	Symptoms	Serious complications
Pneumonia	Cough, breathing difficulties, chest pains, fever, headache, confusion	Can cause death Can lead to septicaemia (bacteria in the blood stream) where the infection can spread to the lining of the heart (pericarditis) or brain (meningitis) Pleural effusion (fluid around the

		lungs)
Septicaemia (blood poisoning)	Fever, confusion, low blood pressure (shock)	Can cause death
Pericarditis (inflammation around the heart)	Fever, breathing difficulties, chest pains	Can cause death
Meningitis (inflammation around the brain)	Confusion, fever, headache	Can cause death
Peritonitis (inflammation of the abdomen)	Abdominal pain, fever	Can cause death
Bronchitis	Coughing, mucus secretion	

What is the cause?

Streptococcus pneumoniae (the pneumococcus) is a Gram positive organism carried in the nasopharynx of up to 30% of healthy adults and 60% of children, usually with no ill-effects¹. If, however, it enters the lungs or bloodstream of elderly or infant patients especially those who are already ill, have no spleen, or have a weakened immune system through illness or treatment, it can cause serious problems.

Ninety different types of *Streptococcus pneumoniae* have been identified; of these, 8-10 cause two-thirds of the serious infections in adults and about 80% in children. Most pneumococcal disease in

the world is caused by 20-30 of the most common types.

Streptococcus pneumoniae poses a significant public health problem. It accounts for more cases of community acquired pneumonia than any other cause. Pneumococcal pneumonia affects around 1/1000 adults yearly with a mortality rate of 10-20%. The pneumococcus is also one of the most frequently reported causes of bacteraemia and meningitis.

It is estimated that 2 in every 1,000 adults over the age of 65 in England are admitted to hospital because of pneumococcal pneumonia each year rising to over 4 in every 1,000 adults aged 80 years or over. This means that there may be more than 18,000 hospitalised cases of pneumococcal pneumonia each year in the UK in people aged 65 years and over.

Who is most at risk?

Older people and very young children are most at risk from pneumococcal disease, particularly if they are already ill, have no spleen, or have a weakened immune system, e.g. if they are having treatment for cancer. The risk in adults increases sharply in those aged 65 and over.