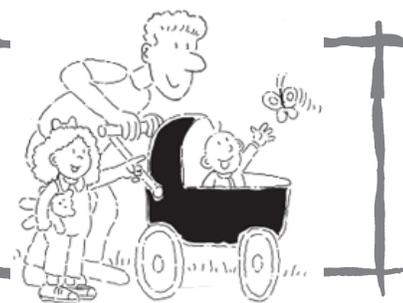


Pneumococcal Infections



Pneumococcus is a type of bacteria that can attack different parts of the body and cause many serious infections including

- Meningitis (brain)
- Bacteremia (bloodstream)
- Pneumonia (lungs)
- Sinusitis (sinus membranes)
- Otitis media (ears)

These infections can be dangerous to very young children, the elderly, and people with certain high-risk health conditions.

When and how is pneumococcal infection spread?

Pneumococcal infections occur most often during the winter months. Infections spread from person to person the same way a cold or the flu spreads—by droplets passed through the air from coughing or sneezing, and through direct contact such as touching unwashed hands or kissing. The disease may spread quickly, especially in places where there are a lot of children, like child care centers and preschools.

Who is at risk?

Very young children do not have fully developed immune systems. This makes them more at risk from bacterial infections like pneumococcus. In addition, pneumococcal infection can be life-threatening for people with certain health problems such as

- HIV infection or other immune system disorders
- Sickle-cell disease
- Leukemia or lymphoma
- Chronic lung, heart, or kidney disease
- A removed spleen or one that doesn't work properly
- Bone marrow or organ transplants

What are the symptoms of common pneumococcal infections?

Bacteremia and meningitis

Pneumococcal bacteremia and *pneumococcal meningitis* occur when pneumococcal bacteria get into the bloodstream and/or the central nervous system. Bacteremia is the presence of bacteria in the blood. Meningitis is an infection of the thin lining and blood vessels that cover the brain and spinal cord.

Symptoms of meningitis include

- High fever
- Stiff neck
- Headache
- Vomiting
- Extreme tiredness and/or irritability
- Loss of appetite

Pneumonia

Pneumococcal pneumonia is an infection of the lung. Symptoms of pneumonia include

- Cough that may bring up thick yellow-green or bloody mucus
- High fever
- Shortness of breath or chest pain
- Extreme tiredness
- Hard and rapid breathing

Sinusitis

Sinusitis occurs when the membranes lining the air-filled pockets in the bone of the face (sinuses) swell. The sinus cavities may fill with fluid. Symptoms of sinusitis include

- Pressure behind the eyes
- Pain in the face or puffiness of the face
- Trouble breathing through the nose
- Postnasal drip or prolonged runny nose
- Fever
- Toothache

Otitis media

Otitis media is an infection of the middle ear. Young children commonly develop middle ear infections when they have colds, the flu, or other viral respiratory infections. Symptoms of an ear infection include

- Ear pain (very young children may pull at their ears because of the pain)
- Fever
- Restlessness or irritability
- Crying
- Runny nose

How are pneumococcal infections treated?

Your child's doctor will be able to tell if your child has a pneumococcal infection by your child's symptoms, a physical exam, and looking at your child's medical history. X-rays, blood tests, and sometimes a spinal tap also may be done to find out whether a child has a pneumococcal infection.

Prompt treatment with antibiotics is usually effective. In addition, your child may need bed rest and a lot of fluids. In some cases, your child may need to be hospitalized.

Unfortunately, some strains of the pneumococcal bacteria are developing resistance to the antibiotics usually used to kill them. This means that other antibiotics must be used. Your child's doctor will let you know which antibiotic is best for your child.

How can I help prevent the spread of pneumococcal infections?

- Teach your children to wash their hands regularly with soap and water. This helps prevent the spread of infection.
- Avoid dust, tobacco smoke, and other substances that may interfere with breathing and make children more likely to get sick.

Pneumococcal vaccines

There are 2 pneumococcal vaccines.

1. Pneumococcal conjugate vaccine can protect infants and young children from pneumococcal infections. It is most effective against the serious pneumococcal diseases—bacteremia, meningitis, and pneumonia—and is minimally effective in preventing otitis media and sinusitis.
2. Pneumococcal polysaccharide vaccine (PPV) is given to some older children in addition to the conjugate vaccine.

Pneumococcal vaccines are safe and can be given as a separate injection at the same time as other immunizations.

Who should receive the vaccine?

A pneumococcal conjugate vaccine for infants, called Prevnar7 (PCV7), was first licensed in the United States in 2000. In February 2010 a new, expanded pneumococcal conjugate vaccine (PCV13 or Prevnar13) was licensed by the US Food and Drug Administration. This vaccine is recommended by the American Academy of Pediatrics for all children beginning at age 2 months. A series of doses may be given at 2, 4, 6, and 12 to 15 months of age. A “catch-up” immunization schedule is available for children who get a late start. Children 14 months through 59 months of age who have been completely immunized with PCV7 should receive a “supplemental” dose of the new PCV13 vaccine, since it offers additional protection against 6 more strains of pneumococcus. For children with high-risk medical conditions who are completely immunized with PCV7, the supplemental dose of PCV13 can be given through 71 months of age.

PPV is given to older adults and some children. This vaccine can provide protection against some pneumococcal strains not found in PCV7 or PCV13. PPV can be used in children who are older than 2 years and at high risk after they have been immunized with PCV7 and PCV13. Your child’s doctor can explain whether your child needs this vaccine.

Pneumococcal vaccines may be given to some children 5 years of age and older if they have a medical illness that increases their risk for serious pneumococcal infection.

Are there side effects to pneumococcal vaccines?

Most children have no side effects with pneumococcal vaccines. Those side effects that do occur are mild and temporary. The possible side effects include

- Soreness, swelling, and redness where the shot was given
- A mild-to-moderate fever
- Fussiness

These symptoms may begin within 24 hours after the shot and usually go away within 48 to 72 hours.

Talk with your child’s doctor to see if your child should be vaccinated for pneumococcal infection and about the possible reactions to these immunizations.

The information contained in this publication should not be used as a substitute for the medical care and advice of your pediatrician. There may be variations in treatment that your pediatrician may recommend based on individual facts and circumstances.

From your doctor

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