



IMMUNIZATION FACTSHEET

Important Facts About Pneumococcal Disease & Vaccination

Adapted from the National Foundation for Infectious Diseases and the Centers for Disease Control

What is pneumococcal disease?

Pneumococcal disease is a leading cause of serious illness in children and adults. The disease is caused by the common pneumococcus bacterium, which can attack different parts of the body. When invading the lungs, the bacteria cause the most common form of bacterial **pneumonia**; in the bloodstream, they cause **bacteremia**; and when they invade the covering of the brain, they cause **meningitis**. Pneumococci may also cause **otitis media** (middle ear infection) and **sinusitis**. There are more than 90 known pneumococcal types; the 10 most common account for about 62 percent of invasive disease worldwide.

Who is at risk?

Anyone can get pneumococcal disease, but some have elevated risk for the disease or its complications:

- persons aged 65 and older;
- those with weak immune systems due to cancer, leukemia, Hodgkin's disease or the HIV virus;
- those with sickle-cell disease or without a functioning spleen;
- those with a chronic illness such as lung, heart or kidney disease, diabetes and alcoholism; and
- those living in special environments, such as Alaskan Natives and certain American Indian populations; and residents of chronic or long-term care facilities;

How significant is pneumococcal disease?

An estimated 175,000 patients are hospitalized annually in the U.S. for pneumococcal pneumonia, which is a common complication of influenza and measles. According to the CDC, invasive pneumococcal disease causes more than 6,000 deaths annually. There are 50,000+ cases of bacteremia and 3,000 to 6,000 cases of meningitis each year, producing high death rates among elderly and patients with underlying medical conditions. At least half these cases involve adults for whom vaccination is recommended.

How is pneumococcal disease treated?

Pneumococcal disease is treated primarily with penicillin. In recent years, pneumococcal strains have emerged that are resistant to one or more commonly used antibiotics. These resistant strains increase the cost and complexity of treatment and further underscore the need for vaccination.

How is pneumococcal disease prevented?

The best protection against pneumococcal disease is a polysaccharide vaccine for adults or the conjugate vaccine for children. Polysaccharide vaccine has been used in the U.S. for more than 20 years, but only half of those 65 or older have ever received it, according to the National Center for Health Statistics.

Who should be vaccinated?

Vaccination with pneumococcal polysaccharide vaccine is recommended for:

- Everyone 2 or older with such conditions as diabetes, chronic lung (except asthma), heart, kidney or liver disease or alcoholism (see ACIP guidelines for children 2 years to 59 months);
- Those whose immune systems are weakened by such conditions as cancer or HIV infection;
- People without a functioning spleen and those with sickle cell disease; and
- Residents of chronic-care or long-term care facilities.

The polysaccharide vaccine is not recommended for infants and young children under age 2, as this age group does not respond to polysaccharide vaccines. Children younger than 2 fall into the highest general risk group for invasive pneumococcal infections. Conjugate vaccine is recommended for all children 2 months to 23 months of age. Other children at increased risk include those with sickle cell disease, HIV infection and other chronic or immune-compromising conditions; these children should receive pneumococcal conjugate vaccine and pneumococcal polysaccharide vaccine. For more information about pneumococcal vaccination in infants and young children, visit www.cdc.gov.

When is the best time to be vaccinated?

Immunization of adults with the polysaccharide vaccine (reimbursable by Medicare Part B) can be done at any time and can be administered jointly with the influenza vaccine. The conjugate vaccine for infants aged 2 months to 23 months is incorporated into the **childhood immunization schedules**.

What has been the experience with pneumococcal vaccines?

Pneumococcal vaccines are considered clinically effective and safe. Pneumococcal vaccination of adults with the polysaccharide vaccine has been shown to be effective in the prevention of invasive pneumococcal disease, offering protection against 23 of the most prevalent pneumococcal types. Serotypes contained in the vaccine account for nearly 90 percent of pneumococcal disease. In infants and children, studies have shown that the conjugate vaccine reduces the incidence of invasive pneumococcal disease, pneumococcal pneumonia and otitis media.

The vaccine may cause some local reaction or soreness around the site of the injection; however, these reactions are usually minor and subside within a few days. In children, the conjugate vaccine may cause mild fever, fussiness and decreased appetite.

How often is vaccination needed?

For most adults vaccinated at age 65 or older, vaccination is needed only once in a lifetime. Adults who are vaccinated before age 65 or those who are at highest risk for serious disease may have to be immunized again at some point.

For infants and children aged 11 months or younger, three or four doses of conjugate vaccine are required, depending upon the age at which the first dose is given. Children aged 1 year to 23 months of age require two doses. Healthy children aged 2 years to 59 months of age require one dose of conjugate vaccine, and those with certain chronic diseases require two doses.

Who should not be vaccinated?

Individuals who have had a previous allergic reaction (e.g., hives, difficulty breathing) to the pneumococcal vaccine should avoid vaccination. The vaccine should also be avoided during radiation therapy or chemotherapy. Health-care providers can choose to delay vaccination of children with moderate to severe infection until the child has recovered.