

Pneumococcal polysaccharide vaccine (PPSV)

CDC answers your questions

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For complete information on CDC's recommendations for the use of pneumococcal vaccine, go to www.immunize.org/acip

How serious is pneumococcal disease?

An estimated 40,000 cases of invasive pneumococcal disease occur annually. Case-fatality rates are high, particularly when disease results in meningitis (~30%) or bacteremia (~20%). In addition, pneumococcal pneumonia, often a secondary complication of influenza, results in an estimated 175,000 hospitalizations annually.

My patient doesn't have a record of receiving pneumococcal polysaccharide vaccine (PPSV) and can't remember if she has had it in the past. What should I do?

Vaccinate her. People with unknown vaccination status should be vaccinated.

Should all nursing home patients be vaccinated against pneumococcal disease?

Yes. Standing orders for vaccination of persons admitted to long-term care facilities can help simplify the procedure (see suggested standing orders at www.immunize.org/standingorders).

Which additional groups did CDC target in 2008 for vaccination with PPSV?

In 2008, the CDC's Advisory Committee on Immunization Practices (ACIP) reviewed data that showed an increased risk of invasive pneumococcal disease among adults who smoked cigarettes or who had asthma. Consequently, these two groups were added to the categories of adults for whom vaccination is recommended.

My patient has had pneumococcal pneumonia. Is vaccination still necessary for him?

Yes, if he is in a group recommended for PPSV vaccination (see table). More than 90 known serotypes of pneumococcus exist; 23 serotypes are in the current vaccine. Infection with one serotype does not necessarily produce immunity to other serotypes.

Should HIV-positive patients receive PPSV?

Yes. Patients with HIV infection should be given PPSV as soon as possible after diagnosis and a one-time revaccination dose at the appropriate interval (see table). The risk of pneumococcal infection is up to 100 times greater in HIV-infected persons than in other adults of similar age. Although severely immunocompromised persons may not respond well to the vaccine, the risk of disease is great enough to warrant vaccination even though there is a chance that the vaccine may not produce an antibody response.

Can I give other vaccines at the same time I give PPSV to a patient?

Yes. PPSV is an inactivated vaccine, which means you can give all other recommended vaccines at the same visit (using separate syringes) or at any later time with no waiting period following PPSV.

When should I vaccinate patients who are planning to have either a cochlear implant or elective splenectomy?

If time permits, give PPSV to such patients at least 2 weeks before surgery.

What needle length is recommended for administering PPSV to adults?

Pneumococcal vaccine may be given either IM or SC. Use a 1–1½" needle for IM, depending on muscle mass. For SC, use a ½" needle.

Some physicians in our area order PPSV every 5 or 6 years for their patients. Is this correct?

CDC recommends 1 dose of PPSV for most people in a lifetime and 2 doses for certain people (see table below). PPSV is a polysaccharide vaccine that does not boost well, and data do not indicate that more than 2 doses are beneficial.

Who needs to be vaccinated with PPSV?	Who needs a second dose of PPSV?
<ol style="list-style-type: none">1. Vaccinate all previously unvaccinated adults age 65 years and older.2. Vaccinate all adults who smoke cigarettes.3. Vaccinate persons ages 2–64 years who<ul style="list-style-type: none">• have chronic cardiovascular disease (e.g., congestive heart failure, cardiomyopathy), chronic pulmonary disease (e.g., COPD, emphysema, adults with asthma), or diabetes mellitus, or who are cochlear implant patients.• have chronic liver disease (including cirrhosis), are alcoholic, or have a cerebrospinal fluid leak.• live in special environments or social settings (e.g., adults ages 50–64 years who are Alaska Natives or certain American Indian populations if recommended by local health authorities).4. Vaccinate persons ages 2–64 years with functional or anatomic asplenia (including persons with sickle cell disease or splenectomy patients).5. Vaccinate immunocompromised persons age 2 years and older, including those with HIV infection, leukemia, lymphoma, Hodgkin's disease, multiple myeloma, generalized malignancy, chronic renal failure (including dialysis patients), or nephrotic syndrome; those receiving immunosuppressive therapy (including long-term systemic corticosteroids); and those who have received an organ or bone marrow transplant.	<p>A one-time revaccination is indicated for</p> <ul style="list-style-type: none">• All adults age 65 years and older who were previously vaccinated with PPSV prior to age 65 years if 5 years (or more) have elapsed since the previous dose.• All children and adults who are at highest risk of serious pneumococcal disease or are likely to have a rapid decline in pneumococcal antibody levels (categories 4 and 5 to the left) if 5 years (or more) have elapsed since the previous dose.