

Pneumococcal Vaccination in Adults: Who Gets What and When?

Prevnar 13 is often thought of as a childhood vaccine, but it is also FDA-approved for use in adults 18 years of age and older (condition unspecified).² The CDC recommends its use in adults 65 years and older and in younger adults with immunocompromising conditions, cerebrospinal fluid (CSF) leak, or cochlear implant, in addition to *Pneumovax 23*.¹ Both vaccines cover 12 of the same serotypes, plus *Prevnar 13* covers one more, and *Pneumovax 23* covers 11 others.⁵ Immune response to *Prevnar 13* (a conjugate vaccine) is as good as or better than *Pneumovax 23* (a polysaccharide vaccine).⁵ The act of conjugating or linking the polysaccharide vaccine to a carrier protein enhances immunogenicity.⁶ When both are indicated, give *Prevnar 13* first for the best immune response.⁵ There is a slightly lower immune response to *Prevnar 13* when it is given at the same visit as the influenza vaccine in the elderly.⁵ **However**, either *Prevnar 13* or *Pneumovax 23* can be given at the same visit as the influenza vaccine (live or inactivated), or other vaccines in adults, at separate injection sites.^{3,4,8} Although *Prevnar 13* and *Pneumovax 23* should not be given at the same visit, they should not be repeated if accidentally given sooner than the recommended interval.¹ The CDC's recommendations for pneumonia vaccination in adults are summarized in the table below. If the following recommendations are followed correctly, no adult will receive more than three doses of 23-valent pneumococcal vaccine, and not more than one dose of *Prevnar 13*, in their lifetime.¹

Information in the table below is from reference 1 unless otherwise noted.

Who	What and When
<p>Immunocompromised adults 19 to 64 years of age:</p> <ul style="list-style-type: none"> • Asplenia (functional or anatomic)^b • Hemoglobinopathy (e.g., sickle cell disease) • Congenital or acquired immunodeficiency (includes complement deficiency, B- or T-cell deficiency, and phagocytic disorders [excluding chronic granulomatous disease]) • Cancer (e.g., leukemia, lymphoma, Hodgkin's disease, multiple myeloma) • HIV • Chronic renal failure or nephrotic syndrome • Organ transplant^b • Iatrogenic immunosuppression (e.g., systemic corticosteroids 14 days or longer,⁴ radiotherapy, chemotherapy)^b 	<p>Single dose of <i>Prevnar 13</i> (if not previously given),^a followed by <i>Pneumovax 23</i> at least eight weeks later.</p> <p>Wait until at least one year has passed since any previous <i>Pneumovax 23</i> dose to give <i>Prevnar 13</i>.</p> <p>A second <i>Pneumovax 23</i> should be given at least five years after the first, but at least eight weeks after <i>Prevnar 13</i>.</p>

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Who	What and When
Immunocompetent adults 19 to 64 years of age with CSF leak or cochlear implant ^b	Single dose of <i>Prevnar 13</i> (if not previously given), ^a followed by <i>Pneumovax 23</i> at least eight weeks later. Wait until at least one year has passed since any previous <i>Pneumovax 23</i> dose to give <i>Prevnar 13</i> .
Immunocompetent adults 19 to 64 years of age or older with diseases, habits, or living conditions that put them at high risk of pneumococcal disease: <ul style="list-style-type: none"> • Heart disease (including heart failure or cardiomyopathy) • Pulmonary disease (including COPD, emphysema, or asthma) • Diabetes • Alcoholism • Cigarette smoking • Chronic liver disease 	Single dose of <i>Pneumovax 23</i> .
Adults 65 years of age and older	Single dose of <i>Prevnar 13</i> (if not previously given, or vaccination history is unknown), ^a followed by <i>Pneumovax 23</i> at least one year later (at least eight weeks later for adults who are immunocompromised, with functional or anatomic asplenia, or who have CSF leak or cochlear implant). ^{1,4,7} Wait until at least one year has passed since any previous <i>Pneumovax 23</i> dose to give <i>Prevnar 13</i> . ACIP recommendation, 2019 (final CDC guidance pending): <i>Pneumovax 23</i> is recommended. For patients 65 years of age and older without an immunocompromising condition, <i>Prevnar 13</i> (if not previously given), based on shared clinical decision-making. ⁹ The addition of <i>Prevnar 13</i> prevents one case of outpatient pneumonia for every 2,600 immunocompetent seniors and one case of invasive pneumococcal disease for every 26,300 immunocompetent seniors vs giving <i>Pneumovax 23</i> alone. ¹⁰ Those who received one or more doses of the 23-valent vaccine before age 65 for any indication should receive another dose at age 65 or older after at least five years have elapsed since their previous <i>Pneumovax 23</i> dose.

a. Any dose of *Prevnar 13* counts if given at younger ages.¹

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- b. If elective splenectomy or cochlear implant is being considered, the vaccine should be given at least 2 weeks before the procedure. If vaccination prior to the procedure is not feasible, the vaccine should be given as soon as possible after surgery. Similarly, there should also be a 2-week interval between vaccination and initiation of cancer chemotherapy or other immunosuppressive therapy, if possible.⁴

Users of this resource are cautioned to use their own professional judgment and consult any other necessary or appropriate sources prior to making clinical judgments based on the content of this document. Our editors have researched the information with input from experts, government agencies, and national organizations. Information and internet links in this article were current as of the date of publication.

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I'm a Senior. Which Pneumonia Vaccine Do I Need?

What is pneumococcal disease?

Pneumococcal disease is caused by pneumococcus. It is a bacteria. It can infect the lungs (causing pneumonia), blood, and brain. These infections can be serious and hard to treat. Pneumococcus can also cause ear and sinus infections. Some types of this bacteria resist antibiotics.

Am I at risk for pneumococcal disease and pneumonia?

Anyone can get it. But some people are at greater risk. People who are 65 years of age and older are at high risk. So are smokers and people who abuse alcohol. Conditions that put people at high risk are:

- lung, heart, or liver disease, and diabetes
- immune system impairment (e.g., cancer, HIV, immune disease, no functioning spleen, chronic steroid medication such as prednisone, sickle cell disease, chronic renal disease, organ transplant)
- cochlear implant or cerebrospinal fluid (CSF) leak

What pneumococcal pneumonia vaccines are available?

Prevnar 13 and *Pneumovax 23* are available. They cover different types of pneumococcus bacteria, with some overlap.

Do I need both Prevnar 13 and Pneumovax 23?

If your **immune system is impaired**, you need **both** vaccines.

What if my immune system is healthy?

Pneumovax 23 is recommended. *Prevnar 13* is also recommended. However, new evidence suggests that *Prevnar 13* may not be necessary for some seniors. This isn't because *Prevnar 13* doesn't work well...it does. It is because the infections prevented by *Prevnar 13* are now less common in our communities. This is due to years of vaccinating children with *Prevnar 13*.

The CDC is looking at this new evidence and may change their recommendations about *Prevnar 13* later this year. Speak with your healthcare provider if you have any questions.

What else can I do to prevent pneumococcal disease and pneumonia?

- Get a flu shot every year. (Getting the flu ups your risk of pneumococcal disease and pneumonia.)
- If you smoke, stop.
- Stay healthy. Control lung disease (e.g., asthma, COPD), heart disease, and diabetes.
- Wash your hands often. Practice good hygiene.

[This handout may not cover all possible information. It does not replace the need for professional medical care. Always follow the instructions from your healthcare provider.] [September 2019; 350901]