

Pneumococcal Vaccination *for* Patients



Is Pneumococcal Vaccination Right for Me?

This brochure provides an overview of pneumococcal disease and describes the vaccines available in the United States to help protect against infection. The information is designed to help you make informed decisions about your health care treatment options, including which vaccine(s) to receive and when you should be vaccinated.

What Is Pneumococcal Disease?

Pneumococcal disease is a term that refers to infections caused by specific types of bacteria called *Streptococcus pneumoniae* (*S. pneumoniae*). There are more than 90 different types of *S. pneumoniae* bacteria. However, most serious infections are caused by only some types of these bacteria.¹ In addition to causing roughly one third of pneumonia cases, these bacteria also cause other types of infections such as meningitis (infection of the lining of the brain and spinal cord) and bacteremia (infection in the blood). Together, these infections are sometimes referred to as invasive pneumococcal disease.

S. pneumoniae are spread through direct contact with respiratory secretions (such as saliva or mucus). Each year in the United States, pneumococcal pneumonia leads to more than 150,000 hospitalizations.² Death rates are as high as 12% for patients with blood infections and 14% for those with meningitis.² The risk of getting sick or dying from pneumococcal disease is higher among older adults and those with certain health conditions.³

Pneumococcal Vaccines

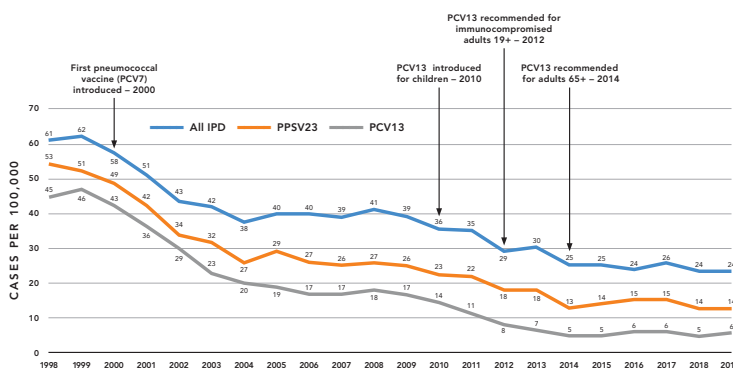
There currently are two types of vaccines in the United States that protect against pneumococcal disease—pneumococcal conjugate vaccine (PCV) and pneumococcal polysaccharide vaccine (PPSV). These vaccines, referred to with the abbreviations PCV13, PCV15, PCV20, and PPSV23, protect against 13, 15, 20, and 23 different types of *S. pneumoniae*, respectively. All of these vaccines are made from pieces of bacteria that can stimulate the immune system without causing disease. The vaccines provide protection against different types of *S. pneumoniae*, but there is some overlap among the vaccines. The types of *S. pneumoniae* included in the vaccines are the types most likely to cause infections. Although the vaccines do not protect adults from all pneumococcal infections, they reduce the risk of severe disease that requires hospitalizations or can be deadly.

Effectiveness of Pneumococcal Vaccination

As shown in **Figure 1**, pneumococcal vaccines have dramatically reduced the overall number of people in the United States who develop invasive pneumococcal disease. The number of pneumococcal disease infec-

tions went down after the first pneumococcal vaccine was introduced in 2000, and then continued to drop after PCV13 was introduced in 2010 and recommended for more people in 2014.⁴ The gray line shows infections by types that PCV13 protected against, the orange line shows infections by types that PPSV23 protected against, and the blue line shows infections from all invasive pneumococcal disease. Although these vaccines do not protect against all disease, they do reduce risk. (PCV15 and PCV20 were approved in 2021 and were not included in these data.)

Figure 1. Trends in Pneumococcal Disease in Adults 65 Years of Age and Older



* In 2019, the decision to use PCV13 in adults 65 years and older shifted from being routinely recommended to being based on shared clinical decision making.

Source: <https://www.cdc.gov/pneumococcal/surveillance.html>

Studies through 2019 show that getting at least 1 shot of PCV13 protected:⁵

- **3 in 4 adults 65 years of age or older against invasive pneumococcal disease**
 - **9 in 20 adults 65 years of age or older against pneumococcal pneumonia**
- And getting 1 shot of PPSV23 protected:
- **Between 6 and 7 of 10 healthy adults against invasive pneumococcal disease**

Those who do get sick after getting vaccinated are likely to have milder symptoms.

Studies of PCV15 found that this vaccine provides protection against the 15 types of *S. pneumoniae* included in the vaccine that were similar to the levels of protection seen with PCV13.⁶ Similarly, studies of PCV20 found that it provides protection against the 20 types of *S. pneumoniae* in the vaccine.⁷

Safety of Pneumococcal Vaccines

Like other vaccines, pneumococcal vaccines are tested extensively. In addition to being effective, pneumococcal vaccines have also been found to have a high level of safety, and most people do not have any serious problems with them. However, as with any medication, there is always a chance of experiencing side effects. These are usually mild and go away on their own in a few days. The most common side effects that occur after PCV13, PCV15, or PCV20 include reactions where the shot was given (redness, swelling, pain, or tenderness), fever, loss of appetite, irritability, feeling tired, headache, muscle and joint pain, and chills. The most common side effects that occur after PPSV23 include reactions where the shot was given, feeling tired, fever, and muscle aches.⁵

Who Should Receive Pneumococcal Vaccines?

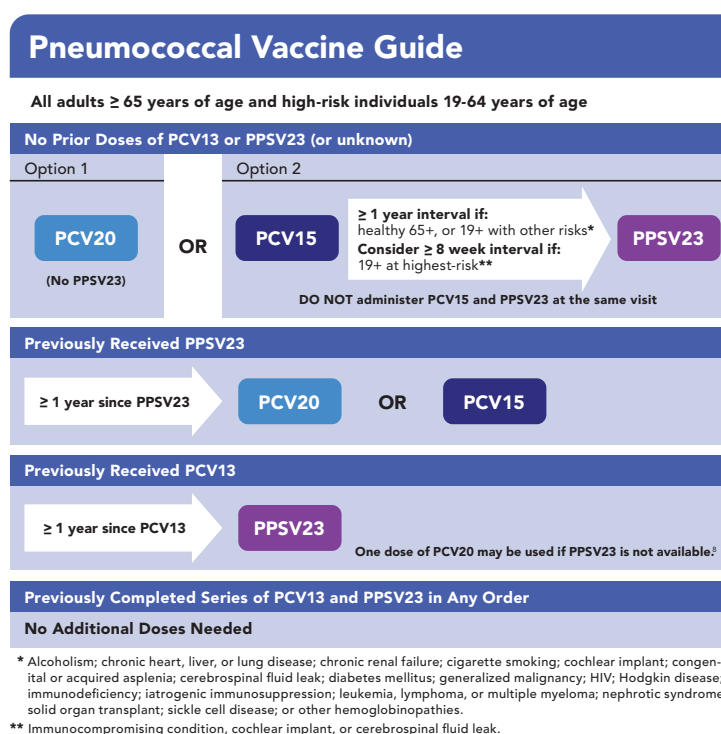
Current recommendations for adults focus on providing pneumococcal vaccines to individuals who have greater risks for serious infections, including those who are 65 years of age and older as well as those who are 19 through 64 years of age with certain health conditions. These health conditions include:⁸

Chronic Health Conditions	Immunocompromising Conditions
<ul style="list-style-type: none"> Alcoholism Cerebrospinal fluid (CSF) leak Cigarette smoking Cochlear implant Diabetes Heart disease (heart failure) Liver disease Lung disease (chronic obstructive pulmonary disease [COPD], asthma) 	<ul style="list-style-type: none"> Asplenia (no spleen) HIV infection Hodgkin disease Iatrogenic Immunosuppression Immunodeficiencies Kidney failure Leukemia Lymphoma Malignancy Multiple myeloma Nephrotic syndrome Sickle cell disease Solid organ transplant

Which Vaccine(s) Should You Receive?

In 2021, two new PCVs were licensed by the U.S. Food and Drug Administration for adults aged 18 years and older—PCV15 and PCV20. On October 20, 2021, the Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices recommended use of either PCV20 alone or PCV15 in series with PPSV23 as follows.⁸ As illustrated in **Figure 2**:

Figure 2. *Pneumococcal Vaccine Guide*⁸



For individuals who are:

- **65 years of age or older**
- or —
- **19 to 64 years of age with certain underlying medical conditions or other risk factors as listed above**

And of those who have not previously received PCV or their previous vaccination history is unknown, CDC recommends either:

- **1 dose of PCV20 with no additional doses needed**
- or —
- **1 dose of PCV15 followed by a dose of PPSV23 at least 1 year later**

For individuals who are 19 years of age or older and have previously received only PPSV23, CDC recommends either PCV15 or PCV20 at least 1 year after the last dose of PPSV23. No additional doses will be needed.

Adults who previously received PCV13 do not need to receive either PCV15 or PCV20. However, CDC recommends a dose of PPSV23 at least 1 year after receiving PCV13.⁸

Having a Conversation With Your Pharmacist About Pneumococcal Vaccines

The selection of which pneumococcal vaccine(s) and number of vaccine doses you should receive depends on which health condition(s) you have.² You can also read more details about pneumococcal vaccines in “Pneumococcal Vaccination: What Everyone Should Know” from CDC at: www.cdc.gov/vaccines/vpd/pneumo/public/index.html.

Pneumococcal vaccines for adults are available at a number of locations, including many community pharmacies. If you are 65 years of age or older, smoke cigarettes, or are 19 through 64 years of age with any of the health conditions listed above, you are at greater risk for pneumococcal disease. Talk to your pharmacist or other health care provider to find out whether vaccination is right for you and which vaccine(s) are most appropriate.

If you are not certain whether you have already been vaccinated against pneumococcal disease, ask a pharmacist or health care provider to check your records.

Pneumococcal vaccine may be available at no cost to you. Medicare Part B covers the cost for pneumococcal vaccines when given appropriately. Additionally, most private health insurance plans cover pneumococcal vaccines with \$0 copay.

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