

Louisiana Pharmacists Association Educates Patients about Pneumococcal Vaccines

One of the most common misconceptions about the pneumococcal vaccine is that it only prevents you from getting pneumonia. Although prevention of pneumonia can occur, the pneumococcal vaccine can prevent against other infections as well. It prevents the spread of *Streptococcus pneumoniae*, or pneumococcus, which is one of the most common causes of pneumonia, meningitis, and bacteremia in all ages. These infections can be serious and life-threatening. Understanding the importance of receiving the pneumococcal vaccines can help prevent these infections from occurring. If these infections do occur, however, noticing signs and symptoms of these infections can help catch the infection at an earlier stage and potentially prevent hospitalization.

Pneumonia is an infection of the lungs that results in symptoms such as fever and chills, cough with phlegm that may persist or worsen, rapid or difficulty breathing, chest pain, fatigue, and excessive sweating. It is the most common infection of the pneumococcal bacteria, accounting for about 400,000 hospitalizations every year. Of those 400,000 hospitalizations, about 30% result from community-acquired pneumonia while another 25-30% result from community-acquired pneumonia with bacteremia. Bacteremia occurs when bacteria enter the blood, resulting in a more serious infection. According to the Centers for Disease Control and Prevention (CDC), pneumococcal pneumonia has a 5-7% fatality rate and may be higher in elderly patients; thus, it is important to receive the pneumococcal vaccines as well as recognize the symptoms.

A rare but serious pneumococcal infection is bacterial meningitis. It is an infection of the tissue covering the brain and spinal cord. The hallmark sign of meningitis is a stiff neck, but other symptoms include fever, headache, sensitivity to light, confusion, and seizures. According to the CDC, "*Streptococcus pneumoniae* is the leading cause of bacterial meningitis among children younger than 5 years old in the United States. Before routine use of pneumococcal conjugate vaccine, children younger than 1 year old had the highest rates of pneumococcal meningitis with approximately 10 cases per 100,000 population." Vaccination is key to reducing this infection and thus reducing fatality in children and adults.

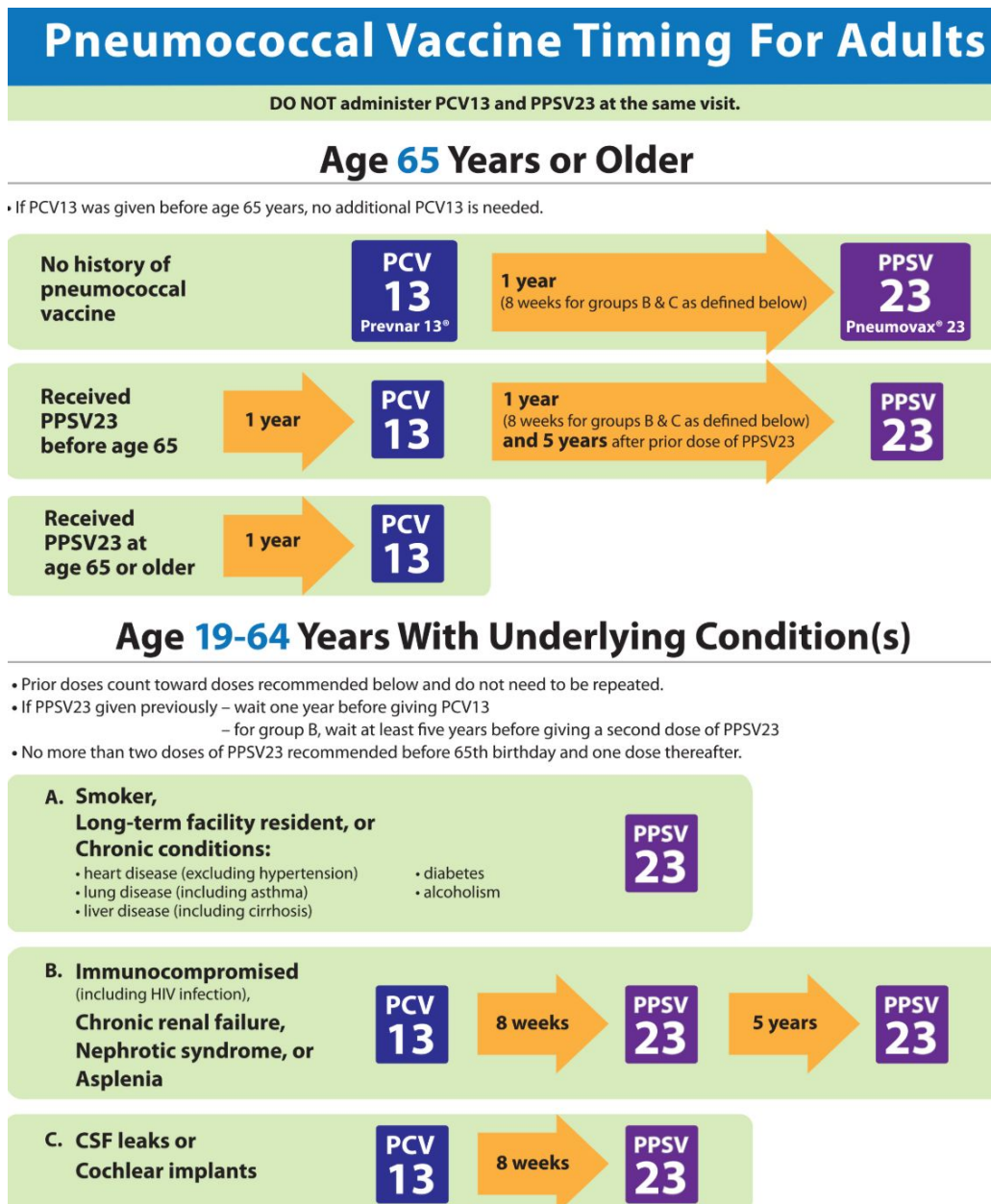
There are two vaccines available to prevent pneumococcal infections, Prevnar 13[®] (PCV13) and Pneumovax 23[®] (PPSV23). Prevnar 13[®] protects against 13 types of pneumococcal bacteria, and Pneumovax 23[®] protects against 11 additional strains of bacteria not covered by PCV13. The CDC recommends anyone who is 65 years or older who has not received the vaccines should receive PCV13 first followed by PPSV23 a year later.

PCV13 should be considered in those 19 or older who have had their spleen removed, a cochlear implant, cerebrospinal fluid leaks, or a weakened immune system. Those with a weakened immune system include HIV infection, cancer, radiation, long-term

use of corticosteroids, organ transplant or renal failure. Adults only need to receive one dose of PCV13.

PPSV23 should be considered in people between the ages of 19-64 who either smoke or have a chronic condition including heart disease, liver failure, lung disease, or diabetes. You can receive PPSV23 eight weeks or more after PCV13, but for those with a weakened immune system, sickle cell, or asplenia, they will need to revaccinate with PPSV23 five years later to maintain coverage. In addition, anyone 65 years or older will need an additional PPSV23 regardless of previous vaccination.

For our visual learners, we have included a chart courtesy of University of New Mexico Health Science Center that presents the same information as described above.



Some common side effects from the vaccines include chills, drowsiness, fatigue, headache, skin rash, redness, swelling, or tenderness at the site of injection. For more information or questions regarding the pneumococcal vaccines, contact your primary healthcare provider or local pharmacist.

References:

- 1) CDC Pneumococcal Disease page. Centers for Disease Control and Prevention website. <https://www.cdc.gov/pneumococcal/about/infection-types.html>. September 6, 2017. Accessed August 6, 2018.
- 2) Lexicomp Pneumococcal Conjugate Vaccine page. Lexicomp website. https://online.lexi.com/lco/action/doc/retrieve/docid/patch_f/6640361. Accessed August 6, 2018.
- 3) Prevnar 13. Pfizer website. <https://adult.prevnar13.com>. Accessed August 6, 2018.
- 4) Pneumovax 23. Merck vaccines website. <https://www.merckvaccines.com/products/pneumovax23>. Accessed August 6, 2018.
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