Understanding Pneumococcal Disease

A common and serious complication of influenza infection

Pneumococcal Disease and Influenza:
- Pneumococcal disease, which can occur any time of year, is a common and serious complication of influenza.
- The best way to protect against both diseases is by vaccination, which can help to reduce illness and death. Pneumococcal vaccination is recommended for children and adults based on age and certain risks factors.

About Pneumococcal Disease:
- Pneumococcal disease is caused by bacteria called *Streptococcus pneumoniae*.
- Pneumococcal disease may cause the following illnesses:
  - **Meningitis** — infection in the covering of the spinal cord and brain (invasive disease)
  - **Bacteremia (sepsis)** — infection in the bloodstream (invasive disease)
  - **Pneumonia** — infection in the lungs (may be invasive)
  - **Otitis media** — ear infection
  - **Sinusitis** — infection of the paranasal sinuses
- Children younger than age 2 years, adults age 65 years and older, and adults of any age with chronic health conditions—such as smokers and those with heart disease, diabetes, or asthma—are at greatest risk for the disease.
- In the U.S., 90 percent of all invasive pneumococcal disease occurs in adults.¹
- Older adults are the most likely to die from invasive pneumococcal disease (bacteremia and meningitis), but adults of any age with certain health conditions are also at risk for severe illness.²

Impact of Pneumococcal Disease:
- The U.S. Centers for Disease Control and Prevention (CDC) reported 31,600 cases and 3,300 deaths in the U.S. from pneumococcal meningitis and sepsis in 2012.¹
- The number of individuals in the U.S. who die from pneumonia is harder to pinpoint. It is estimated that in the U.S., ~900,000 individuals get pneumococcal pneumonia each year and 5 to 7 percent of them die.²,³
- Individuals who survive invasive pneumococcal infection can experience serious complications, including heart attacks, hearing loss, seizures, blindness, and paralysis.
- Pneumococcal disease can lead to hospitalization, long recovery times, and lost work.

Prevention:
- Two types of pneumococcal vaccine are recommended in the U.S.: pneumococcal conjugate vaccine (PCV13) and pneumococcal polysaccharide vaccine (PPSV23)*
- Infants should receive pneumococcal conjugate vaccination as part of the routine immunization series.
- **All adults age 65 years and older should receive the pneumococcal conjugate vaccine and the pneumococcal polysaccharide vaccine.**²
- Children age 2 years and older and adults younger than 65 who have certain risk factors should get the polysaccharide vaccine.
- Adults with any of the following should receive both the pneumococcal conjugate vaccine and the polysaccharide vaccine: immunocompromising conditions, a damaged or missing spleen, cochlear implants, or CSF leaks.
- For more information, see the fact sheet “Preventing Pneumococcal Disease.”

*Information about sequencing and intervals for PCV13 and PPSV23 in children and adults is available at: [http://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/pneumo.html](http://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/pneumo.html). A healthcare professional will be able to provide more information based on specific risk factors.

**New recommendation from CDC, published September 18, 2014.⁴**
Symptoms:
- Pneumococcal disease can strike quickly and without warning. Depending on whether the infection causes pneumonia, blood infection, or meningitis, individuals may experience some combination of the following:
  - Very sudden onset of high fever, shaking/chills, cough, shortness of breath, chest pain, stiff neck, and disorientation.
  - Symptoms may be less specific in elderly patients. Older patients may not have a fever, but they may be more sleepy, lose their appetites, or suffer from dizziness.

References

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