



## FACT SHEET

### Pneumococcal disease in children

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#### What is Pneumococcal disease?

- Pneumococcal disease refers to infections caused by the bacterium *Streptococcus pneumoniae*, also called the pneumococcus.
- There are over 90 different types of pneumococcal bacteria. These individual types are called serotypes. Most serious infections in children are caused by a small number of pneumococcal serotypes.
- The pneumococcus is the most common cause of invasive (serious) bacterial infections in children, including meningitis (infection of the lining of the brain and spinal cord), bacteremia (infection of the blood), and pneumonia (infection of the lungs).
- The pneumococcus is also the most common bacterial cause of acute middle ear infections in children, the most frequent reason for pediatric office visits in the U.S.
- Children 2 years of age and under have the highest rates of pneumococcal disease.
- Serious complications from pneumococcal disease are most common among very young children and in children with meningitis.
- Meningitis can cause seizures, hearing loss, learning and mental difficulties, and death. For children who develop severe pneumococcal infections and have illness complications, as many as 3 of every 10 will die. Severely ill children who survive the infection will suffer permanent effects of the infection 25-35% of the time. These permanent effects can include hearing loss, seizures or other forms of brain damage.
- Pneumococcal bacteremia and pneumonia often require hospitalization for treatment.

#### What are the symptoms?

- Symptoms vary according to the age of the child and whether the child has meningitis, bacteremia, pneumonia, or otitis media. If you think your child may have a serious infection, see your health care provider right away.
  - **Pneumonia** causes fever, difficulty breathing, cough, chest pain, loss of appetite, and possibly excessive sleepiness.
  - **Meningitis** causes fever, sleepiness or irritability, headache, vomiting, seizures, and loss of consciousness.

- **Bacteremia** causes fever and chills, and possibly sleepiness and loss of appetite.
- **Otitis media** causes ear pain, trouble hearing and sometimes fever

#### How is it spread?

- The bacteria spreads from person to person through secretions from the nose, mouth and throat.
- Although the bacteria can spread from person to person, pneumococcal disease does not usually occur in contacts of ill persons. And no special treatment of contacts of persons with pneumococcal infection is necessary.

#### Diagnosis and treatment

- Health care providers diagnose pneumococcal infection by physical examination and taking samples of blood or spinal fluid for culture. A chest X-ray is used to diagnose pneumonia.
- Treatment of mild infections can be done outside of the hospital using oral antibiotic drugs but severe infections require hospitalization and antibiotic drugs by vein.

#### Prevention

- Until recently, pneumococcal infection could be treated effectively with antibiotics. Many pneumococcal bacteria are now becoming resistant to commonly used antibiotics making treatment more difficult. For this reason, it is desirable to prevent pneumococcal infections through vaccinations, rather than depend on antibiotic treatment after infection occurs.
- When your doctor prescribes antibiotics for your child for any reason, make sure the medicine is taken exactly as it was prescribed and finish all of it. Never give your child antibiotics unless prescribed by your doctor and try to avoid unnecessary antibiotic treatments whenever possible. This will help avoid developing drug-resistant pneumococcal infections.

## **Pneumococcal vaccines**

There are currently two pneumococcal vaccines available for children:

**Pneumococcal conjugate vaccine (Prevnar)** was licensed in February 2000 and protects against the 7 most common pneumococcal serotypes that account for 80% of invasive pneumococcal disease in young children.

- ✓ It is recommended for all children 23 months of age and younger and for children 24 to 59 months of age who are at high risk for pneumococcal meningitis, pneumonia, or blood infection. High risk children include children with:
  - Sickle cell disease, no or poorly functioning spleen; human immunodeficiency virus (HIV) infection or other illnesses that weaken the immune system; have a basilar skull fracture or cerebrospinal fluid leak; and/or
  - Attend group child care where the child regularly spends four or more hours per week with two or more unrelated children.
- ✓ The recommended immunization schedule is doses given at 2,4,6 and 12-15 months of age, however the number of Prevnar doses varies depending on the age at which the vaccination is started.
- ✓ Prevnar can be given at the same time as other routine childhood immunizations.
- ✓ The most common side effect from this vaccine is fever of 100.4 F or greater, which may occur within 48 hours of

receiving the vaccine in up to 4 out of every 10 children.

**Pneumococcal polysaccharide** vaccine is only effective in children 2 years of age and older and protects against 23 pneumococcal serotypes. This vaccine is recommended for children who are at least two years of age and at high risk for complications of pneumococcal infection. High risk children include children with:

- Sickle cell disease, no spleen or poorly functioning spleen; HIV infection or AIDS; or take medication or have other illnesses that weaken the immune system; have a basilar skull fracture or cerebrospinal fluid leak.
- High risk children who are 2 years of age should receive one dose of Prevnar and then two months later, one dose of pneumococcal polysaccharide vaccine.
- One more dose of pneumococcal polysaccharide vaccine is recommended: 3 years later for high-risk children 10 years of age and five years later for high-risk children who are at least 11 years old.

**Report all cases to El Paso Department of Public Health by calling 915-771-5810**