INFANT HEALTH **MATTERS**

Pneumococcal **Disease**

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Immunizations are the safest and most effective tools against pneumococcal disease. The risk of being unvaccinated far outweighs the risk of a vaccine.

Q: What is pneumococcal disease and how does it affect infants?

Pneumococcal disease is an infection caused by a bacteria called Streptococcus pneumoniae which has over 100 different strains.

The bacteria can live harmlessly in the throat, but during times of stress or when the immune system is vulnerable, it can cause mild symptoms or severe infection by invading the ears, sinuses, or lungs or by entering the bloodstream where it can travel to other sites including the brain.

It is the most common cause of bacteremia, bacterial pneumonia and bacterial meningitis, each of which all have the potential to result in life-threatening complications.

Q: What tools are available to protect infants from pneumococcal disease?

Tools such as pneumococcal conjugate vaccines are safe and effective at preventing pneumococcal disease. Vaccinations produce an immune response that not only protects the vaccinated individual but also those around them by preventing the spread of bacteria.

Babies receive the vaccine in a four-dose series starting at 6-8 weeks, then at four months and six months with a booster dose between 12 and 15 months.

These vaccines have been around for 24 years and have greatly reduced the infection rates of pneumococcal disease wherever they are used worldwide.

Q: Why is continued vaccination important to protect infants?

Around a decade after the first pneumococcal conjugate vaccine became available, there was around a 90% decrease in invasive infection.

Vaccinations reduce the chance that someone is infected or carries the bacteria and infects others.

When both infection and carrier rates decrease, communities benefit from herd immunity.

The best way to protect infants is to vaccinate and ensure the completion of all four doses of the vaccine series on time.

Q: When are children most vulnerable to pneumococcal disease?

Children are most vulnerable during their first year of life because their immune system is still developing.

Newborns benefit early on from some protection passed down from their mother, but these antibodies are gone after two to three months, leaving them susceptible. With each vaccine dose, infants gain better protection against infection.

Certain genetic factors can increase the risk for severe disease, including chronic kidney or liver disease, diabetes and immune deficiency. Native Alaskans and American Indians also have higher rates of severe disease in their communities.

Q: How do we best protect infants from pneumococcal disease?

The best way to protect infants is to vaccinate and ensure the completion of all four doses of the vaccine series on time.

Since there is a time range for the booster dose, I routinely give it at 12 months to boost immunity at the earliest time possible. Many toddlers fail to receive their fourth booster dose leaving them without the maximum protection from the disease.

Also, severe influenza can increase the risk of severe pneumococcal disease in infants, so receiving a flu vaccine can also help reduce pneumococcal disease.

Q: What are the differences in the available vaccinations?

All three pneumococcal vaccine formulations are effective, and all three have very favorable safety profiles, but the three available vaccines are not exactly the same. While some versions of the vaccine protect against more strains, it does not always mean better protection. The vaccines protect against different strains of the bacteria, so providers must look at infection data to decide which vaccine offers the best protection for their patients.

NATIONAL COALITION for Infant Health

The National Coalition for Infant Health is a collaborative of professional, clinical, community and family support organizations.

The coalition focuses on education and advocacy promoting patient-centered care for all infants–whether born preterm or full term–and their families.

infanthealth.org