

## **Haemophilus Influenzae type b (Hib) Background**

### **About Hib Disease**

Invasive Hib disease is caused by bacteria called *Haemophilus influenzae* type b (Hib disease). Hib disease is an often severe and potentially deadly bacterial infection that can cause meningitis. Hib meningitis can lead to a number of serious complications in infants and children, such as blindness, deafness and mental retardation. Hib disease can also cause severe pneumonia and other serious outcomes which primarily affect children younger than five years of age.

Before the introduction of conjugate vaccines against Hib in the late 1980s, Hib disease affected approximately one in 200 children under five years old and killed nearly 1,000 patients each year. Due to routine use of the Hib conjugate vaccine in the U.S., the incidence of Hib disease among infants and young children decreased by more than 99 percent.

### **Contracting Hib Disease**

Hib is a contagious disease, which can be passed from person to person through respiratory droplets from the nose and throat of an infected person when they cough or sneeze. Hib is most commonly spread by people carrying Hib bacteria in their noses and throats without being ill. However, they can still infect others.

### **Signs and Symptoms of Hib Disease**

The most common type of invasive Hib disease is meningitis. Symptoms of meningitis include fever, altered mental status and stiff neck. Fifteen to 30 percent of Hib meningitis survivors suffer some permanent nervous system damage, including blindness, deafness, and mental retardation. Other complications of Hib disease include skin infection, pneumonia and difficulty breathing due to severe throat swelling (epiglottitis), which can lead to life-threatening airway blockage.

### **Protecting Children Against Hib**

Hib disease usually occurs in children under five years of age, and immunization is the best preventive measure against the disease. In the U.S., invasive Hib disease occurs primarily in under-immunized children and among infants too young to have completed the primary immunization series. The Centers for Disease Control and Prevention (CDC) recommends that children receive the complete Hib vaccination series. The series includes a booster dose in the second year of life, in addition to a complete primary series of immunization in infants. As Hib disease is rare in children older than five years of age, Hib vaccine is not routinely recommended for persons five years of age and older.

### **Hib Vaccine Shortage and Disease Outbreaks**

The Hib vaccine shortage began in 2007 when another vaccine manufacturer temporarily suspended manufacturing of its Hib containing vaccines. This led the CDC to recommend temporary deferral of the booster dose for healthy children not at increased risk for Hib disease. Since 2008, small outbreaks of invasive Hib disease, including several deaths, have been reported across the country.

Earlier this summer, the CDC reinstated the routine Hib booster dose due to an increase in supply. However, supply was not sufficient to support a mass catch-up effort for the millions of children who did not receive the booster dose during the shortage. Hiberix will help restore supply so children who missed the booster dose can get caught-up. Additionally, children coming in for routine visits can receive the Hib booster dose on time.