



## **Haemophilus Influenzae Type B (Hib): Fast Facts for Providers**

### **What You Need to Know**

Prior to availability of the Hib vaccine, about 20,000 cases of invasive Hib disease occurred each year in the U.S. This plummeted by 99% with widespread use of the vaccine. The Hib vaccine not only reduced the risk of disease, but it also reduced colonization in the throat, decreasing spread in the community as well as cases among unvaccinated people. Importantly, vaccination rates need to remain above approximately 90% in infants and toddlers — the groups that drive transmission — to maintain these community benefits, more commonly referred to as herd immunity.

### **Who Should Get Vaccinated?**

Children with Hib infections can have an array of symptoms. Most feared is meningitis (swelling of the brain). Children with meningitis have classic symptoms like fever, irritability, lack of appetite, stiff neck and drowsiness. Infants may have a bulging fontanelle. Symptoms can progress to coma and death.

But Hib doesn't just cause meningitis. It can also cause:

- Sepsis (bloodstream infections)
- Pneumonia (infection of the lungs)
- Cellulitis (infection of the skin; for Hib, a common location involves the side of the cheek)
- Arthritis (infection of the joints)
- Epiglottitis (infection and swelling of the tissue above the airway)

Hib, therefore, needs to be considered as a cause of any of these syndromes in unvaccinated children.

### **Healthcare Providers**

Antibiotics are the primary method of treatment for Hib. Clinicians should recognize that empiric antibiotics, the antibiotics administered when a culture isn't taken or available yet, need to cover Hib in unvaccinated children. In the cases where a culture is not obtained, the child's immunization status may be a major driver in determining the plan for antibiotics.

Hib remains uncommon, with fewer than 50 cases occurring each year in the U.S. However, if vaccination rates decrease, more children will be at risk for this deadly infection. Providers should be prepared to recognize its many presentations and act fast.

Depending on the patient's illness, the supportive care required until antibiotics take effect can vary greatly. For example, some children with pneumonia may be treated at home; others may need admission for oxygen — or worse, intubation. In contrast, sepsis, meningitis and epiglottitis are all medical emergencies and universally should be treated emergently in the hospital setting with intravenous antibiotics while waiting for results of initial testing. Third-generation cephalosporins, such as ceftriaxone, are commonly used in the emergency room or hospital for serious infections, like meningitis, bloodstream infections or epiglottitis. Despite early antibiotic treatment, not all infections are survivable.

**Long Term Impacts:**

About 3%-6% of children infected with Hib will not survive. Of those who do survive, many are left with long-term outcomes, including paralysis, deafness or blindness. Survivors can also have lifelong neurologic conditions, including developmental delay, seizure disorders and learning disabilities.

**Resources:**

[Vaccine Education - Arizona Partnership for Immunization](#)

[Hib Vaccine Recommendations | H. influenzae | CDC](#)

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