



HAEMOPHILUS INFLUENZAE, TYPE B (HIB)

What is Hib?

Haemophilus influenzae, a type of bacteria, can cause many different kinds of infections. These infections range from mild, like ear infections, to serious, like bloodstream infections. Invasive disease is usually serious, requiring treatment in a hospital, and can sometimes result in death.

There are six distinct types of *H. influenzae* (named 'a' through 'f'), as well as other *H. influenzae* that are classified as nontypeable. The one that people are most familiar with is *H. influenzae* type b or Hib. Until recently, Hib was one of the most important causes of serious bacterial infection in young children. Because of the new Hib vaccines, fewer cases of this disease are seen. Hib can cause several diseases such as meningitis (inflammation of the coverings of the spinal column and brain), bloodstream infections, pneumonia, arthritis, and infections of other parts of the body.

Who gets Hib?

H. influenzae, including Hib, disease occurs mostly in children younger than 5 years old and adults 65 years or older. Children and adults who have had *H. influenzae*, including Hib, disease are at risk of getting it again. American Indians, Alaskan Natives, and people with certain medical conditions are also at increased risk. Those medical conditions include sickle cell disease, asplenia, HIV infection, antibody and complement deficiency syndromes, and cancer requiring treatment with chemotherapy, radiation therapy, or bone marrow stem cell transplant.

How is Hib spread?

Infected people spread *H. influenzae*, including Hib, to others by coughing or sneezing, which creates small respiratory droplets that contain the bacteria. People who are not sick but have the bacteria in their noses and throats can still spread the bacteria. The bacteria can also spread to people who have close or lengthy contact with a person with *H. influenzae* disease.

What are the symptoms of Hib?

Haemophilus influenzae can cause many different kinds of infections. Symptoms depend on the part of the body that is infected and can result in pneumonia, bloodstream infections, or meningitis. Symptoms may include fever, chills, shortness of breath, headache, nausea, and vomiting and others, depending on the type of infection. Hib disease can appear in several forms; the most common is meningitis. Some children with meningitis may have long-lasting neurological problems. In some cases, death may occur.



How soon do symptoms appear?

The incubation period for *H. influenzae* or Hib disease is unknown and widely variable but is thought to be approximately two to four days after an exposure. If the person is not treated, it may last for as long as the bacteria is present in the nose and throat, even after symptoms have disappeared, potentially exposing others.

Should an infected person be excluded from work or school?

Yes, an individual found to be infected with *Haemophilus Influenzae* or Hib should be excluded/ isolated for 24 hours after the initiation of antibiotic treatment.

What is the treatment for Hib?

People diagnosed with *H. influenzae* disease take antibiotics to treat the infection. Depending on how serious the infection is, people with *H. influenzae* disease may need care in a hospital, including breathing support, medication for low blood pressure, or support for more severe complications or infections.

What can a person or community do to prevent the spread of Hib?

Staying up to date with recommended vaccines and maintaining healthy habits, like washing hands often and not having close contact with people who are sick, help prevent disease caused by *Haemophilus influenzae*.

Vaccines can prevent *Haemophilus influenzae* type b (Hib) disease. However, the Hib vaccine does not prevent disease caused by the other types of *H. influenzae*. The Centers for Disease Control and Prevention (CDC) recommends Hib vaccination for all children younger than 5 years old. Children need multiple (three or four) shots of a Hib vaccine. Older children and adults usually do not need a Hib vaccine. However, CDC recommends Hib vaccination for people with certain medical conditions.

H. influenzae can spread to people who have close or lengthy contact with a person with *H. influenzae* disease. In certain cases, close contacts of someone with *H. influenzae* disease should receive antibiotics to prevent them from getting sick. A doctor or local health department will make recommendations for who should receive preventive antibiotics.

Resources

Centers for Disease Control and Prevention, <https://www.cdc.gov/hi-disease/index.html>

Heymann, D. (2015). Pneumonia. In D. Heymann (Ed.), Control of communicable diseases manual (20th ed) APHA Press.

Office of Infectious Disease Epidemiology
24/7 Emergency Contact Number: 1-888-295-5156

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