

Haemophilus influenzae non-type B

Haemophilus influenzae (*H. influenzae* sometimes called "H. flu") non-type B is a bacterium that can cause pink eye, ear infection, sinus infection, and pneumonia. In rare cases, it can cause meningitis (inflammation around the spinal cord and brain), bloodstream infections, and infection of the amniotic membranes that surround a fetus. *H. influenzae* non-type B is not the same as influenza or the flu. Presence of *H. influenzae* non-type B bacteria does not always indicate infection, as healthy people are sometimes colonized with these bacteria. (Colonization occurs when bacteria are present but not causing an infection.)

Transmission

Risk factors for *H. influenzae non-type B* infection include:

- **Age:** most cases occur in elderly people.
- **Immune status:** individuals with a suppressed immune system are more at-risk for severe disease from H. flu bacteria.

Symptoms

Symptoms depend upon the part of the body affected. Pneumonia may cause a cough that produces mucus and rapid breathing. With pink eye, the eye will be pink or red, painful, and itchy. Infected eyes may develop discharge and be crusted shut in the morning. An ear infection may cause pain in the ear, especially when swallowing or lying down. Sinus infections may cause a variety of symptoms including pain and pressure in the sinuses and cold symptoms.

Diagnosis

H. flu infections must be diagnosed in a health care setting. Providers will often test a sample from the infection site for the bacteria. Not all infections are positively identified as H. flu infections before treating symptoms of bacterial infection.

Treatment

H. flu infections can be treated with antibiotics. The type of antibiotic used will be based upon the site of infection, severity of symptoms, and age of the patient. Other medications may be prescribed or recommended to manage symptoms. Antibiotic treatment is not necessary for people colonized with H. flu bacteria that are not experiencing symptoms of infection.

Prevention

Prevention measures such as chemoprophylaxis (antibiotics given to contacts of people infected with H. flu non-type B) are not necessary. Prevention efforts should follow routine practices such as hand washing and sanitization of surfaces. Many people will be exposed to this bacterium without developing infection.

There is no vaccine for H. flu non-type B. The "H flu/Hib" vaccine is intended to prevent H. flu type B disease because this is much more severe and life-threatening than non-type B disease. Hib vaccine does not offer protection against non-type B H. flu.

Exclusion Guidance

Please see child care exclusion guidance and health care associated infection based upon the site of infection (i.e., ear infection, pink eye, etc.) A child does not need to be excluded unless the child is unable to participate and the staff believes they cannot care for the child without compromising the ability to care for other children.

For additional information about H. flu, contact the North Dakota Department of Health and Human Services' Public Health Division at 800.427.2180.

Note: Non-invasive H. flu non-type B is not a reportable condition in ND, however, most tests will not have "typed" the bacteria and determined whether it is or is not a B strain, before control measures are necessary. Therefore, all *H. influenzae* cases may be reported to Disease Control for preliminary case investigation and management.

Cases and clusters should be reported to the North Dakota Department of Health and Human Services.

Resources:

1. Center for Disease Control and Prevention. (2022, March 4). *CDC Haemophilus influenzae Disease (Including Hib)*. Center for Disease Control and Prevention. Retrieved June 26, 2023, from <https://www.cdc.gov/hi-disease/>.
2. Kimberlin, D. W., Barnett, E. D., Lynfield, R., Sawyer, M. H. (2021) Red Book: 2021-2024 Report of the Committee on Infectious Diseases. 32nd ed. American Academy of Pediatrics. [Management and Prevention of Infectious Diseases; *Haemophilus influenzae* Infections] [pages 345-354].

Revised August 23, 2024