

Meningococcal Meningitis

(*Neisseria meningitidis*)

What is meningococcal meningitis?

Meningitis is a severe infection of the bloodstream and meninges (a thin lining covering the brain and spinal cord) caused by a bacteria or virus. Bacterial meningitis is usually more severe than viral meningitis but is less common. Bacterial meningitis is most commonly caused by *Haemophilus influenzae* type B, *Streptococcus pneumoniae* or *Neisseria meningitidis*. The most severe form of bacterial meningitis is called *Neisseria meningitidis*. It is a relatively rare disease and usually occurs as a single isolated event. Clusters of cases or outbreaks are rare in the United States.

Who is at risk for meningococcal meningitis?

Anyone can get meningococcal meningitis, but it is more common in infants and children. Other people at increased risk for meningitis are college freshmen living in dormitories, microbiologists who are routinely exposed, military recruits, and travelers to areas where meningitis occurs frequently, such as sub-Saharan Africa.

What are the symptoms of meningococcal meningitis?

Although most people exposed to the meningococcal bacteria do not become seriously ill, some may develop fever, headache, vomiting, stiff neck and a rash. Meningitis can cause sensitivity to light, confusion, drowsiness, seizures and sometimes coma. The disease is sometimes fatal.

How soon do symptoms appear?

The symptoms may appear one to 10 days after exposure, but usually less than four days.

How is meningococcal meningitis spread?

Meningococcal meningitis is spread by direct, close contact with nasal or throat discharges of an infected person. Many people carry meningococcal bacteria in their nose and throat without any signs of illness, while others may develop serious symptoms.

When and for how long is a person able to spread the disease?

From the time a person is first infected until the bacteria are no longer present in discharges from the nose and throat, he or she may spread the disease. Once an infected person has been on the appropriate antibiotics for 24 hours, that person is no longer contagious.

How is a person diagnosed?

A health care provider is needed to diagnose meningitis. A laboratory test is needed in order to determine which bacterium is causing the illness.

What is the treatment?

Bacterial meningitis is treated with antibiotics and supportive measures for certain symptoms.

Does past infection make a person immune?

No. People can get bacterial meningitis more than once.

Should children or others be excluded from child care, school, work or other activities if they have meningococcal meningitis?

Yes, people should be excluded from school, child care or the work place until at least 24 hours after antibiotic therapy was started and the illness has subsided.

What can be done to prevent the spread of pertussis disease?

Meningococcal conjugate vaccine (MCV4) protects against four strains (A, C, Y, and W-135) of *Neisseria meningitidis* and is recommended for all children 11 to 12 years of age. Adolescents should receive a booster dose at age 16. Those who were first vaccinated after age 16 do not need a booster dose. All children entering seventh through tenth grade are required to be vaccinated with one dose of MCV4. Children entering grades eleventh through twelfth are required to be vaccinated with two doses of MCV4. The vaccine is also recommended for individuals who are 21 or younger and living in on-campus housing who have not been previously vaccinated with meningococcal vaccine or received their last meningococcal vaccination more than five years prior to entering college. North Dakota colleges and universities require MCV4 for students 21 and younger. MCV4 is recommended for people who travel to certain areas of the world or who remain at risk of meningococcal disease due to a high-risk condition or occupational exposure, such as laboratory workers.

Two vaccines that protect against *Neisseria meningitidis* serogroup B are also available. These vaccines are recommended for people ages 10 and older known to be at increased risk for meningococcal disease including persons with persistent complement component deficiencies, persons with anatomic or functional asplenia, microbiologists routinely exposed to isolates of *Neisseria meningitidis* and persons identified as at increased risk because of a serogroup B meningococcal disease outbreak. People ages 16 – 23 who do not fall into one of these categories can also be vaccinated.

Good hand washing techniques can help prevent the spread of disease. If you have been in close contact (household members, child care playmates, intimate contacts, health care personnel performing mouth-to-mouth resuscitation) with a diagnosed case, you need to consult a physician regarding antibiotic treatment.

Additional Information:

Additional information is available at www.ndhealth.gov/disease or by calling the North Dakota Department of Health at 800.472.2180.

This disease is a reportable condition. As mandated by North Dakota law, any incidence of this disease shall be reported to the North Dakota Department of Health.

Resources:

Source: American Academy of Pediatrics. [Meningococcal Infections]. In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. *Red Book: 2018-2021 Report of the Committee on Infectious Diseases*. 31st ed. Itasca, IL: American Academy of Pediatrics; 2018-2021: 550-561.