



## Meningococcal Meningitis<sup>TM</sup>

(*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 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 that 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 ten 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 healthcare 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?**

Certain antibiotics are very effective for the treatment and elimination of bacteria from the nose and throat.

## **Does past infection make a person immune?**

No, because there are many different types of bacteria that cause meningitis. If someone is infected with one type of meningitis, that does not make them immune to other types.

## **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 meningococcal disease?**

Practice good hand washing techniques. 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 take preventative measures. This would consist of consulting a physician for the necessary antibiotic treatment.

Meningococcal conjugate vaccine (MCV-4) protects against four strains of *Neisseria meningitidis* and is recommended for all children 11-12 years of age, although it has been approved for use in children as young as nine months. All children entering middle school are required to be vaccinated against meningococcal disease. Adolescents are also recommended to receive a booster dose at 16. Adolescents who received their first dose of meningococcal vaccine at 13-15 years of age should receive a booster at 16-18 years of age. Those who were first vaccinated after age 16 do not need a booster dose.

The vaccine is also recommended for individuals that will be freshmen in college and living in dormitories who have not been previously vaccinated with meningococcal vaccine or it has been more than five years since their last meningococcal vaccination. MCV-4 is also recommended for people who are traveling to certain areas of the world or who remain at risk of meningococcal disease due to occupational exposure such as laboratory workers. Certain individuals who have medical condition that puts them at high-risk for meningococcal disease may be recommended to receive booster doses every five years.

### **Additional Information:**

Additional information is available at [www.ndhealth.gov/disease](http://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.**

Resource: American Academy of Pediatrics. [Meningococcal Infections]. In: Pickering LK, ed. *Red Book: 2009 Report of the Committee on Infectious Diseases*. 28<sup>th</sup> ed. Elk Grove Village, IL: American Academy of Pediatrics; 2009: 455-463.

Centers for Disease Control and Prevention. Updated Recommendations for Use of Meningococcal Conjugate Vaccines – Advisory Committee on Immunization Practices (ACIP).. MMWR 2010; 60(03); 72-76.