
Meningitis

What is meningitis?

Meningitis is an infection of the fluid surrounding a person's spinal cord and brain. It is sometimes referred to as spinal meningitis. *Neisseria meningitidis* is one of the many bacteria that cause the disease. Viruses can cause meningitis as well. *N. meningitidis* is found without causing symptoms in people around the world. The bacteria cause illness sporadically, either in isolated cases or epidemics. There are nine types of *N. meningitidis*. Types A, B, and C cause more than 90% of meningococcal disease globally.

What is the difference between viral meningitis and bacterial meningitis?

Knowing whether meningitis is caused by a virus or a bacterium is important because the severity of the illness and the treatment differ. Viral meningitis is generally less severe and resolves without specific treatment, while bacterial meningitis can be quite severe. For bacterial meningitis, it is also important to know which type of bacteria is causing the meningitis because antibiotics can prevent some types from spreading and infecting other people.

What are the signs and symptoms of meningitis?

High fever, intense headache, and stiff neck are common symptoms of meningitis in anyone over the age of 12 years. These symptoms can develop over several hours, or they may take 1 to 2 days. Other symptoms

may include nausea, vomiting, sensitivity to light, rash, confusion, and sleepiness. In newborns and small infants, the classic symptoms of fever, headache, and neck stiffness may be absent or difficult to detect, and the infant may only appear slow or inattentive, or be irritable, vomiting, or feeding poorly. As the disease progresses, patients of any age may have seizures. In some cases, the bacteria remain in the blood stream causing a type of "blood poisoning." The bacteria can also cause pneumonia, septic arthritis, and other symptoms.

How is meningitis diagnosed?

Early diagnosis and treatment are very important. If symptoms occur, the patient should see a doctor immediately. The diagnosis is usually made by growing bacteria from a sample of the spinal fluid. The spinal fluid is obtained by performing a spinal tap, in which a needle is inserted into an area in the lower back where fluid in the spinal canal is readily accessible. Identification of the type of bacteria responsible is important for selection of the correct antibiotics.

How serious is *N. meningitidis*?

Bacterial meningitis can be quite severe and may result in brain damage, hearing loss, or learning disability.

Can meningitis be treated?

Bacterial meningitis can be treated with a number of effective antibiotics. It is important, however, that treatment be started early in the course of the disease. Appropriate

antibiotic treatment of most common types of bacterial meningitis should reduce the risk of dying from meningitis to below 15%, although the risk is higher among the elderly. There is no specific treatment for viral meningitis at this time. Most patients recover completely on their own, and physicians will often recommend bed rest, fluids, and medicine to relieve fever and headache.

How is meningitis spread?

Some forms of bacterial meningitis are contagious. The bacteria are spread through the exchange of respiratory and throat secretions, such as kissing and sharing utensils and cigarettes. Fortunately, none of the bacteria that cause meningitis are as contagious as illnesses such as the common cold or the flu, and they are not spread by casual contact or by breathing the air where a person with meningitis has been.

Is there a vaccine for meningitis?

There are two licensed vaccines that protect against some types of meningitis (A, C, Y, and W-135): Meningococcal Conjugate vaccine (MCV) and Meningococcal Polysaccharide vaccine (MPSV). Currently, there is no vaccine available in this country to prevent *Neisseria Meningitis* type B. Meningococcal conjugate immunization is routinely recommended for adolescents 11-12 year old, at high school entrance, and for college freshmen living in dorms if they were not previously vaccinated. Individuals between the ages of 11 and 55 may be eligible for vaccine if they are at increased risk of meningococcal disease, such as boarding school students or if they travel to some sub-Saharan African countries. No vaccine is 100% effective in preventing *N. meningitidis*.

What should I do?

Meningitis cases should be reported to state and local health departments to assure follow up of close contacts and to help recognize outbreaks. Overseas travelers should check with their physician to see if meningococcal vaccine is recommended for their destination. Travelers should receive the vaccine at least 1 week before departure, if possible.

For specific concerns about meningitis, call the New Hampshire Department of Health and Human Services, Communicable Disease Control Section at 603-271-4496 or 800-852-3345 x4496. For further information, refer to the Centers for Disease Control and Prevention website at www.cdc.gov or the New Hampshire Department of Health and Human Services website at www.dhhs.nh.gov.