

What is meningitis?

Meningitis is an infection of the fluid of a person's spinal cord and the fluid that surrounds the brain. People sometimes refer to it as spinal meningitis. Meningitis is usually caused by a viral or bacterial infection. Knowing whether meningitis is caused by a virus or bacterium is important because the severity of illness and the treatment differ. Viral meningitis is generally less severe and resolves without specific treatment, while bacterial meningitis can be quite severe and can result in brain damage, hearing loss or learning disability. For bacterial meningitis, it is also important to know which type of bacterium is causing the meningitis to direct antibiotic therapy and prevention. Today, *Streptococcus pneumoniae* and *Neisseria meningitidis* are the leading causes of bacterial meningitis.

What are the signs and symptoms of meningitis?

High fever, headache and stiff neck are common symptoms of meningitis in anyone over 2 years of age. These symptoms may develop over several hours, or they may take 1-2 days. Other symptoms may include nausea, vomiting, discomfort looking into bright lights, 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 inactive, irritable, with vomiting or poor feeding. As the disease progresses, patients of any age may have seizures.

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 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 correct antibiotics.

Can meningitis be treated?

Bacterial meningitis is 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 reduces the risk of dying from meningitis to less than 15%, although the risk is higher among the elderly.

Is meningitis contagious?

Yes. Some forms of bacterial meningitis are contagious. The bacteria are spread through the exchange of respiratory and throat secretions (i.e., coughing, kissing). Fortunately, none of the bacteria that cause meningitis are as contagious as the common cold or the flu and they are not spread by casual contact or by simply breathing the air where a person with meningitis has been. However, sometimes the bacteria that cause meningitis have spread to other people who have had close or prolonged contact with a patient with meningitis caused by *Neisseria meningitidis* (also called meningococcal meningitis) or *Haemophilus influenzae* type b (Hib). People in the same household or child care center or anyone with direct contact with a patient's oral secretions (such as a boyfriend or girlfriend) would be considered at increased risk of acquiring the infection. People who qualify as close contacts of a person with meningitis caused by *N. meningitidis* should receive antibiotics to prevent them from getting the disease. Antibiotics for contacts of a person with Hib meningitis disease are no longer recommended if all contacts 4 years of age or younger are fully vaccinated against Hib disease.

Are there vaccines against meningitis?

Yes. There are vaccines against Hib and against some strains of *N. meningitidis* and many types of *S. pneumoniae*.