

MSIC

Disease Information Fact Sheet on Meningitis

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 may result in brain damage, hearing loss, or learning disability. 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. Before the 1990s, *Haemophilus influenzae* type b (Hib) was the leading cause of bacterial meningitis, but new vaccines being given to all children as part of their routine immunizations have reduced the occurrence of invasive disease due to *H. influenzae*. 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 the age of 2 years. These symptoms can develop over several hours, or they may take 1 to 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, or be irritable, have vomiting, or be feeding poorly. 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 or other specimen source such as blood culture.

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.

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 things like 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 Hib. People in the same household or day-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. For health care personnel a close contact would be defined as a health care worker who provided unprotected, direct mouth-to-mouth resuscitation to a person with meningococcal disease or had extensive contact with respiratory secretions such as might occur if the worker is placing the person with meningitis on a mechanical ventilator. 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 (see below). Meningitis cases should be reported to state or local

health departments to assure follow-up of close contacts and recognize outbreaks.

Are there vaccines against meningitis?

Yes, there are vaccines against Hib and against some strains of *N. meningitidis* and many types of *Streptococcus pneumoniae*. The vaccines against Hib are very safe and highly effective.

There is also a vaccine that protects against four strains of *N. meningitidis*, but it is not routinely used in the United States and is not effective in children under 18 months of age. The vaccine against *N. meningitidis* is sometimes used to control outbreaks of some types of meningococcal meningitis in the United States. In 1999 The Advisory Committee on Immunization Practices (ACIP) added a new recommendation that provider of medical care to incoming and current college freshmen, particularly those who plan to or already live in dormitories and residence halls, should, during routine medical care, inform these students and their parents about meningococcal disease and the benefits of vaccination. College freshmen who want to reduce their risk for meningococcal disease should either be administered vaccine (by a doctor's office or student health service) or directed to a site where vaccine is available.

This vaccine may also be recommended for overseas travelers going to a country that is experiencing an outbreak or epidemic of meningococcal disease. Overseas travelers should check to see if meningococcal vaccine is recommended for their destination. Travelers should receive the vaccine at least 1 week before departure, if possible. Information on areas for which meningococcal vaccine is recommended can be obtained by calling the Centers for Disease Control and Prevention (CDC) at (404)-332-4565 or visiting the Traveler's Health section at CDC's web site: <http://www.cdc.gov>

A vaccine to prevent meningitis due to *S. pneumoniae* (also called pneumococcal meningitis) can also prevent other forms of infection due to *S. pneumoniae*. The pneumococcal vaccine is not effective in children under 2 years of age but is recommended for all persons over 65 years of age and younger persons with certain chronic medical problems.

DISEASE PREVENTION TIPS:

- * Wash your hands often using soap and water. This removes the germs that you pick up. Waterless hand gels can be used, as long as hands are free from soil, for places where running water is not available or convenient.
- * Get vaccines as recommended by your health care provider. These are very effective, safe, and can prevent many infections.
- * Avoid sharing drinking glasses and eating utensils with others.

(Source - Abstracted, in part, Div. of Bacterial and Mycotic Disease, CDC, Atlanta, GA
http://www.cdc.gov/ncidod/dbmd/diseaseinfo/meningococcal_g.htm)