

Bacterial Meningitis

What is meningitis?

Meningitis refers to a swelling of the membranes of the brain or spinal cord. It is a general term and does not refer to whatever is causing the swelling. Anyone can develop meningitis, although the three causes mentioned below are more common in infants and children less than 5 years old.

When most people talk about meningitis they are referring to any of the following:

- meningococcal meningitis, caused by the bacteria, *Neisseria meningitidis*;
- haemophilus meningitis, caused by the bacteria, *Haemophilus influenzae*; or
- aseptic or viral meningitis, caused by any number of viruses.

There are other causes of meningitis, but of the three listed above, haemophilus meningitis is no longer a major public health problem. A very effective vaccine given to infants has basically done away with haemophilus meningitis throughout the United States.

Aseptic or viral meningitis is fairly common, almost always occurring as single, isolated events. The disease is usually, but not always, mild and the person recovers uneventfully. Rarely does aseptic meningitis require a public health.

Meningococcal meningitis is an uncommon, but serious health threat. Usually the disease occurs as single, isolated cases, and rarely does it cause an outbreak.

How is meningococcal meningitis spread?

The meningococcus bacteria are spread by direct close contact with nose or throat secretion of an infected person. Many persons, 5 to 10% of the population, carry the bacteria in their nose and throat and never develop any illness; however, a few people may develop serious symptoms.

What are the symptoms?

Symptoms may appear 2 to 10 days after contact, but usually within 5 days. Most people who are exposed to the meningococcus bacteria do not become seriously ill. Some, however, may develop fever, headache, vomiting, stiff neck, and a rash. Up to 25% of persons who recover from meningococcal meningitis may have chronic damage to the nervous system. The disease is fatal 5 to 15% of the time.

Any person may transmit the bacteria to another person, from the time he/she is infected until the bacteria are no longer present in the discharges from the nose or throat.

What is the treatment for meningococcal meningitis?

Various antibiotics can be used to treat the disease, however, penicillin is the drug of choice.

Should a person who has been in contact with a diagnosed case of meningococcal meningitis be treated?

Only people who have been in close contact (household members, sexual partners, health care personnel performing mouth-to-mouth resuscitation, day care center playmates, etc.) need to be considered for preventive treatment. The doctor may choose to give an antibiotic called rifampin to the exposed persons or simply watch the people carefully and treat only those who develop any illness suggestive of meningitis.

The risk of exposed individuals developing meningococcal disease is the determining factor in the decision to give preventive treatment. For example, close contacts generally are given preventive treatment, preferably within 24 hours of the diagnosis in the ill person. Whereas, persons with only casual contact (as might occur in a regular classroom, office or factory setting) usually do not have enough exposure to cause concern. The Kansas City Health Department does provide preventive treatment to persons exposed to meningococcal meningitis. This needs to be done by your own doctor or the medical clinic where you receive health care.

Can I be vaccinated against meningococcal meningitis?

Yes and no. There are various strains of the bacteria and the vaccine does not protect against all of them. Therefore, its usefulness is limited. If one of the vaccine strains has caused an outbreak, then the vaccine can be employed as part of the control effort.

The vaccine is recommended for college students, particularly freshmen, and for overseas travel when the traveler will be going to areas of the world where meningococcal disease is far more common.

If vaccination is not an option, how can this disease be prevented?

Meningococcal disease can be prevented by not sharing eating and drinking utensils, cigarettes, lipstick, food, sports water bottles or other items that may have saliva on them. You should cover your mouth and nose with a tissue when coughing or sneezing.