

BACTERIAL MENINGITIS

What is meningitis?

Meningitis is an inflammation of the covering of the brain and spinal cord---also called the meninges. It can be caused by viruses, parasites, fungi, and bacteria. Viral (aseptic) meningitis is common; most people recover fully. Medical management of viral meningitis consists of supportive treatment and there is usually no indication for the use of antibiotics. Parasitic and fungal meningitis are very rare. Bacterial meningitis is very serious and may involve complicated medical, surgical, pharmaceutical, and life support management.

There are two common types of bacteria that cause meningitis:

- *Strep pneumoniae* causes pneumococcal meningitis; there are over 80 subtypes that cause illness
- *Neisseria meningitidis*—meningococcal meningitis; there are 5 subtypes that cause serious illness—A, B, C, Y, W-135

What are the symptoms?

Someone with meningitis will become very ill. The illness may develop over one or two days, but it can also rapidly progress in a matter of hours. Not everyone with meningitis will have the same symptoms, but any of the following are possible. Children (over 1 year old) and adults with meningitis may have:

- Severe headache
- High temperature
- Vomiting
- Sensitivity to bright lights
- Neck stiffness, joint pains
- Drowsiness or confusion

**In both children and adults, there may be a rash of tiny, red-purple spots or bruises caused by bleeding under the skin. These can occur anywhere on the body. They are a sign of blood poisoning*

(septicemia), which sometimes happens with meningitis, particularly the meningococcal strain.

What is the risk of getting bacterial meningitis?

The risk of getting bacterial meningitis in all age groups is about 2.4 cases per 100,000 population per year. However, the highest risk group for the most serious form of the disease, meningococcal meningitis, is highest among children 2 to 18 years old.

How serious is bacterial meningitis?

If it is diagnosed early and treated promptly, the majority of people make a complete recovery. In some cases it can be fatal or a person may be left with a permanent disability, such as deafness, blindness, amputations or brain damage (resulting in mental retardation or paralysis) even with prompt treatment.

How is bacterial meningitis spread?

Fortunately, none of the bacteria that cause meningitis are as contagious as diseases 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. The germs live naturally in the back of our noses and throats, but they do not live for long outside the body. They are spread when people exchange saliva (such as by kissing; sharing drinking containers, utensils, or cigarettes). The germ **does not** cause meningitis in most people. Instead, most people become **carriers** of the germ for days, weeks or even months. Being a carrier helps to stimulate the body's natural defense system. The bacteria rarely overcomes the body's immune system and causes meningitis or another serious illness.

How can bacterial meningitis be prevented?

Do not share food, drinks, utensils, toothbrushes, or cigarettes. Limit the number of persons you kiss. Vaccines against pneumococcal disease are recommended both for young children and adults over 64. A vaccine against four meningococcal serogroups (A, C, Y, W-135) is available. These four groups cause the majority of meningococcal cases in the United States. This vaccine is recommended by some groups for college students, particularly freshmen living in dorms or residence halls. The vaccine is safe and effective (85-90%). It can cause mild side effects, such as redness and pain at the injection site lasting up to two days. Immunity develops within 7 to 10 days after the vaccine is given and lasts for up to 5 years.

What you should do if you think you or a friend might have bacterial meningitis?

Seek prompt medical attention.

How is bacterial meningitis diagnosed?

The diagnosis is usually based on a combination of clinical symptoms and laboratory results from spinal fluid and blood. Spinal fluid is obtained by a lumbar puncture (spinal tap).

For more information

Your school nurse, family doctor, and the staff at your local or regional health department office are excellent sources for information on all communicable diseases. You may also call your local health department or Regional Texas Department of Health office to ask about meningococcal vaccine. Additional information may also be found at the web sites for the Centers for Disease Control and Prevention: www.cdc.gov and the Texas Department of Health: www.tdh.state.tx.us.