

## Frequently Asked Questions

### What is meningitis?

Meningitis is an inflammation of the meninges (the covering of the brain and spinal cord). Meningitis can be caused by infection from viruses and bacteria (germs). These germs usually cause everyday illness, such as an ear infection or pneumonia. It is not known why one person gets meningitis when others exposed to the same germs do not get as sick, or don't get sick at all. Sometimes funguses, cancers, head injuries or other factors can cause meningitis, but cases from these sources are rare.

In general, meningitis caused by a virus is less serious than meningitis caused by bacteria.

### Which viruses can cause meningitis?

About 90% of viral meningitis cases are due to common stomach viruses called enteroviruses, but other viruses can also cause viral meningitis. In many cases, the specific virus that caused the meningitis is not identified. Meningitis caused by other viruses such as measles, herpes and West Nile is rare, but can be serious. Enteroviruses are passed from person to person through stool or saliva (spit), but most people who come in contact with enteroviruses do not develop an infection. This is because their immune system fights the virus. When people develop an infection from an enterovirus, they may get an upset stomach, a cold, or rash with a low fever.

### Which bacteria cause meningitis?

Many different kinds of bacteria can cause meningitis. Laboratory tests identify which bacterium is responsible. Some of the most common bacteria known to cause meningitis are described below.

*Neisseria meningitidis* are bacteria that can cause meningococcal disease, a very severe form of meningitis and/or blood infection. About 15% of people carry these bacteria in their throats without getting sick. In rare cases, however, the bacteria pass through the throat lining and infect the meninges and/or blood. These bacteria can be spread through saliva during kissing, sharing of food, drinks or cigarettes, and sneezing or coughing. People who have come in direct contact with the saliva of a person with meningitis from *Neisseria meningitidis* may need to take antibiotics for protection. People who have not had direct contact with a person with meningitis from *Neisseria meningitidis* are not at greater risk, and do not need preventive medicine. There are vaccines that can prevent meningococcal meningitis.

*Haemophilus influenzae type b (Hib)* can also cause meningitis. In the past, Hib was the most common cause of bacterial meningitis. There is a vaccine that stops infants and young children from getting this kind of meningitis. Certain people who have direct contact with the saliva of a person with meningitis from Hib may need to take preventive medicine.

*Streptococcus pneumoniae* are bacteria that can cause pneumococcal meningitis. These bacteria are found in the throat, and most people do not get sick from them. People with weak immune systems, and those who are very young or over 65, are at risk for getting pneumococcal meningitis or pneumonia. Although this bacterium can be passed from person to person, meningitis caused by *Streptococcus pneumoniae* is not considered contagious. People with direct contact with someone who has pneumococcal meningitis do not need to get preventive medicine. Pneumococcal vaccine is recommended for babies and senior citizens to prevent infections caused by *Streptococcus pneumoniae*.

Other bacteria can cause meningitis, but these cases are rare and usually not spread from person to person.

### **Who gets meningitis?**

Meningitis occurs in people of all ages, but it is more common in children and people over 65. Additionally, people with weak immune systems are more at risk for meningitis. Smoking, second-hand smoke and crowded living conditions also increase the risk for some kinds of meningitis.

### **What are the symptoms of meningitis?**

The early symptoms of meningitis may include fever, headache, body aches, fatigue & sleepiness. Later symptoms that may occur are nausea, vomiting, confusion, stiff neck, and sensitivity to light. In babies, the symptoms include fever, fussiness, refusal to eat, difficulty waking up, and swelling of the soft spot on the baby's head.

### **How is meningitis diagnosed?**

A health care provider diagnoses meningitis by observing the patient's symptoms and testing blood and spinal fluid.

### **What is the treatment for meningitis?**

The type of treatment depends on the germ that caused the meningitis. All patients with bacterial meningitis and many with viral meningitis will be treated in the hospital. In general, there are no medications to fight the germs that cause viral meningitis, so treatment is usually aimed at easing the symptoms. This includes rest, fluids, and fever-reducing medicine. Bacterial meningitis requires close monitoring in the hospital and treatment with medicines. Additionally, ventilator assistance, kidney dialysis or other supportive treatments may be needed.

### **Can people with meningitis pass the illness to others?**

Most cases of meningitis result from infections that are contagious. The germs usually spread from person to person in tiny drops of fluid from the throat and nose of someone who is infected. This could be a person with meningitis or another infection caused by that germ. People can become infected when they touch the drops and then touch their own noses or mouths. Sharing food, drinking glasses, eating utensils, or tissues, may spread the germs too.

Some germs are spread through a person's stool. A person who comes in contact with the stool, such as when changing a diaper, may get the infection that way.

Most often, meningitis germs are spread between people who have direct contact, such as those who live together or people who are exposed by kissing or sharing eating utensils. Casual contact at school or work with a person who has meningitis usually will not spread the germ.

Getting infected with one of the germs that can cause meningitis does not automatically mean a person will get meningitis. In most cases, the germ will simply cause a cold, upset stomach or ear infection.

### **Can meningitis be prevented?**

Many of the viruses and bacteria that can cause meningitis are common. Good personal hygiene is important to prevent **any** infection. Washing hands thoroughly and often, especially before eating and after using the bathroom, is your first line of defense against the spread of many illnesses. Not sharing food drinks, or eating utensils can help stop the spread of meningitis germs as well. Safe and effective vaccines are available to protect against bacterial meningitis.

## **Where can I get more information on meningitis?**

- Your health care provider
- Your local health department
- NJ Department of Health <http://www.nj.gov/health>
- Centers for Disease Control & Prevention <http://www.cdc.gov>

This information is intended for educational purposes only and is not intended to replace consultation with a health care professional.  
Adapted from Centers for Disease Control and Prevention.

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