

Fact Sheet

Meningococcus

What causes meningococcal disease?

Meningococcal disease is caused by the bacterium *Neisseria meningitidis*. It has five subtypes: A, B, C, Y, and W-135.

How does meningococcal disease spread?

The disease is spread person-to-person through the exchange of respiratory and throat secretions (for example by coughing, kissing, or sharing eating utensils). Meningococcal bacteria can't live for more than a few minutes outside the body, so the disease is not spread as easily as the common cold or influenza.

How long does it take to show signs of meningococcal disease after being exposed?

Meningococcal bacteria can make a person extremely ill by infecting the blood (septicemia) or by infecting the fluid of the spinal cord and around the brain (meningitis). Symptoms of either can develop in just a few hours or they may take one to two days. Because this disease progresses quickly, it is important to be diagnosed and start treatment as soon as possible.

What are the symptoms of meningococcal disease?

The most common symptoms are high fever, chills, lethargy, and a rash. If meningitis is present, the symptoms will also include headache and neck stiffness (which may not be present in infants): seizures may also occur. In overwhelming meningococcal infections, shock, coma, and death can follow within several hours, even with appropriate medical treatment.

How serious is meningococcal disease?

Meningococcal disease (caused by *Neisseria meningitidis*) is serious. About 10-15% of persons with meningococcal disease die. Of those who recover, 10-15% suffer from permanent hearing loss, limb loss, brain damage, or other serious after-effects.

How is meningococcal disease diagnosed?

The diagnosis is made by taking samples of blood and spinal fluid from a person who is possibly infected. The spinal fluid is obtained by performing a spinal tap, where a needle is inserted into the lower back. Any bacteria found in the blood or spinal fluid is grown in a medical laboratory and identified.

Meningococcal disease is relatively rare in the U.S., and the symptoms can be mistaken for other illnesses, which unfortunately can lead to delayed diagnosis and treatment.

Can't meningitis be caused by a virus too?

Yes, the word "meningitis" refers to inflammation of the tissues covering the brain and spinal cord. This inflammation can be caused by viruses and fungi, as well as bacteria. Viral meningitis is the most common type: it has no specific treatment but is usually not as serious as meningitis caused by bacteria.

Is there a treatment for meningococcal disease?

Bacterial meningitis can be treated with antibiotics. It is critical to start treatment early. Even with treatment, approximately 10-15% of patients die.

How common is meningococcal disease in the United States?

There are nearly 3,000 cases of meningococcal disease each year in the United States. The disease is most common in children less than than one year of age and in persons with certain medical conditions.

What persons are at special risk for meningococcal disease?

Persons at risk include infants, travelers to places where meningococcal disease is common (for example, certain countries in Africa and Saudi Arabia), people with damaged or missing spleens, and people with certain blood diseases.

Other factors make it more likely an individual will develop meningococcal disease, including having a previous viral infection, living in a crowded household, having an underlying chronic illness, and being exposed to cigarette smoke (either directly or second-hand).

College freshmen who live in dormitories are at an increased risk of meningococcal disease compared with others their age.

How common is meningococcal disease in the world?

Meningococcal disease is common in certain parts of the world, especially sub-Saharan Africa which is known as the "meningitis belt." Between 1996-1997, 213,658 cases with 21,830 deaths were reported in west African countries.

Can you get meningitis more than once?

Yes. Meningitis can be caused by different subtypes of the meningococcal bacterium, by other bacteria such as *Streptococcus* and *Haemophilus*, as well as by viruses and fungi. Even being vaccinated against *Neisseria meningitidis* or having had the disease will not protect you against these other sources of infection.

If a child in daycare is diagnosed with meningococcal disease, can anything be done to protect the other children?

Individuals who have been exposed to a person with bacterial meningitis can be protected by being started on a course of antibiotics immediately (ideally within 24 hours of the patient being diagnosed). This is usually recommended for household contacts and children attending the same daycare or nursery school. Older children (attending elementary school, high school, church, etc.) aren't usually considered "exposed" unless they have had some intimate contact with the infected person (kissing or sharing a glass, for example).

In addition to the antibiotic treatment, vaccination may be recommended for people two years of age and older if the person's infection is caused by meningococcus type A, C, Y, or W-135, all of which are contained in the meningococcal vaccine.

This fact sheet is for information only and is not meant to be used for self-diagnosis or as a substitute for consultation with a health care provider. If you have any questions about the disease described above or think that you may have this infection, consult a health care provider.

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