

MENINGOCOCCAL DISEASE

(Meningococcal meningitis, Meningococemia)



Meningococcal disease includes meningitis (swelling of the tissues that cover the brain and spinal cord) and sepsis (blood infection). Someone with meningococcal disease can have meningitis, sepsis, or both at the same time. Anyone can get meningococcal disease, but it is most common in children under 5 years of age and young adults ages 16 through 23 years.

What causes it?



- ▶ Meningococcal disease is caused by *Neisseria meningitidis* bacteria. *N. meningitidis* bacteria are often found in the nose and throat without causing illness. Most people who come into contact with *N. meningitidis* do not get sick. Only some people become seriously ill, which may be related to societal factors such as overcrowding or smoke exposure, or physical factors such as a weakened immune system that make them more likely to get sick.
- ▶ Meningococcal disease is spread from person to person. *N. meningitidis* bacteria are spread by exchanging respiratory and throat secretions (saliva or spit) during close or lengthy contact (e.g., sharing utensils or kissing), especially if living in the same household.
 - ▶ The bacteria are not as contagious as germs that cause the common cold or the flu. They are not spread by casual contact or by simply breathing the air where a person with meningococcal disease has been.
 - ▶ Someone with meningococcal disease can spread *N. meningitidis* bacteria for several days before they have symptoms. Once people are treated with antibiotics for 24 hours, they are not contagious.
- ▶ There are five serogroups (“strains”) of *N. meningitidis*: A, B, C, W, and Y that cause most disease worldwide. Three of these serogroups (B, C, and Y) cause most of the illness seen in the United States.

What are the signs and symptoms?



Common Symptoms

- ▶ High fever
- ▶ Headache
- ▶ Vomiting
- ▶ Stiff neck
- ▶ Purple or pinpoint red rash
- ▶ Sensitivity to light
- ▶ Sleepiness
- ▶ Confusion


Symptoms in Infants

- ▶ Sluggishness
- ▶ Irritability
- ▶ Vomiting
- ▶ Poor feeding


**Symptoms usually appear three to four days after being exposed, but can start anytime between two and 10 days after exposure. Symptoms may start suddenly and the disease can become severe very quickly. Prompt medical attention is important.*



What are the treatment options?

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- ▶ Antibiotics are used to treat meningococcal disease. It is important that treatment with antibiotics begin as soon as possible.
 - ▶ Even with antibiotic treatment, 10-15% of people infected with meningococcal disease will die. Approximately 11-19% of survivors will have long-term disabilities, such as loss of limb(s), deafness, nervous system problems, or brain damage.
 - ▶ People who had close, direct contact with someone who had meningococcal disease may need to take antibiotics to reduce their chances of becoming sick.
 - ▶ Close contacts include household members, intimate contacts, day care center contacts, and those who are directly exposed to the oral or nasal secretions of someone who is infected.
 - ▶ Kissing as well as sharing eating utensils, smoking materials, or beverage containers can be classified as direct contact.

How can it be prevented?

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- ▶ Keeping up-to-date with recommended immunizations is the best defense against meningococcal disease. There are several vaccines that protect against the different types of *N. meningitidis* bacteria.
 - ▶ Three vaccines (Menomune[®], Menactra[®], and Menveo[®]) protect against four of the five types of *N. meningitidis* bacteria (**serogroups A, C, Y, and W-135**). The Advisory Committee on Immunization Practices (ACIP) recommends children get their first dose of meningococcal vaccine (Menactra[®] or Menveo[®]) when they are between 11 and 12 years and get a booster dose when they are 16 years of age.
 - ▶ Two vaccines (Trumenba[®] and Bexsero[®]) protect against the fifth type of *N. meningitidis* bacteria, **serogroup B**. These were recently licensed for use in the United States. The ACIP recommends the vaccine be given to people aged 16-23 years. The ideal age to vaccinate is between 16 and 18 years, to provide protection when individuals are at greatest risk of getting meningococcal disease.
 - ▶ The meningococcal vaccine should also be given to those who are traveling to areas of the world with high rates of meningococcal disease (e.g., areas of Africa) as well as locations having an outbreak of meningitis.
 - ▶ Avoid kissing or sharing cups, plates, forks, etc. with someone who is sick.

For more information about the vaccine that protects against *N. meningitidis* bacteria, please visit these websites:

http://www.immunize.org/vis/meningococcal_b.pdf

http://www.immunize.org/vis/meningococcal_mcv_mpsv.pdf

