How can meningococcal disease be prevented?

Risk of transmission of meningococcal infection can be reduced by practicing good hygiene.

- Cover noses and mouths when sneezing or coughing
- Discard used tissues promptly
- Wash hands thoroughly
- Avoid sharing cigarettes, straws, cups, glasses, toothbrushes, or eating utensils. *Eating and drinking utensils can be used by others only after they have been washed.*

It is recommended that household contacts and others who have had close personal contact with infected persons receive a short course of certain antibiotics, which kill bacteria living in throat secretions. Because the recommendations for use of preventive antibiotics vary according to the specific situation, it is best to consult a physician or local health department for advice. Even if an antibiotic is taken, close contacts should be observed and any sign of disease promptly evaluated by a physician.

CDC recommends vaccination with a meningococcal conjugate vaccine for all preteens and teens at 11 to 12 years old, with a booster dose at 16 years old. Teens and young adults (16 through 23 years old) also may be vaccinated with a serogroup B meningococcal vaccine. All current college and university students should receive meningococcal vaccination in accordance with current guidelines from the Center for Disease Control and Prevention Advisory Committee on Immunization Practices.

Meningococcal vaccine is effective against types of *Neisseria meningitidis* that are covered by the vaccines such as serogroups A, C, W, Y, and B. Vaccines help protect against meningococcal disease and usually work well, but not all cases can be prevented.

In studies demonstrating the efficacy of meningococcal conjugate vaccines:

- **Menactra® in preteens and teens:** Between eight and nine people out of every 10 vaccinated had a protective immune response one month after completing the series
- **Menactra® in adults:** Between seven and nine people out of every 10 vaccinated had a protective immune response one month after completing the series
- **Menveo® in preteens and teens:** Between seven and nine people out of every 10 vaccinated had a protective immune response one month after completing the series
- **Menveo® in adults:** Between seven and nine people out of every 10 vaccinated had a protective immune response one month after completing the series

In studies demonstrating the efficacy of serogroup B meningococcal vaccines:

- **Besexero® in preteens, teens, and young adults:** Between six and nine people out of every 10 vaccinated had a protective immune response one month after completing the series
- **Trumenba® in preteens, teens, and young adults:** Eight people out of every 10 vaccinated had a protective immune response one month after completing the series

Additional Questions?

Additional questions or concerns regarding meningococcal disease or vaccination against the disease should be directed to your health care provider.

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Meningococcal Disease

What Parents and Students Need to Know.

IDPH
Illinois Department of Public Health

What is meningococcal disease?

Meningococcal disease is a bacterial infection. It occurs commonly in two forms:

- inflammation of the membranes covering the brain and spinal cord (meningococcal meningitis); and/or
- severe blood infection (meningococcemia).

The bacterium that causes meningococcal disease, *Neisseria meningitidis*, first infects the mucous membranes of the nose and throat, usually without any symptoms. In fact, five-ten percent of the population may carry the bacteria at any given time without becoming ill. In a small proportion of infected persons, the bacterium passes through the mucous membrane and reaches the blood stream, causing meningococcal meningitis or meningococcemia. When illness occurs, it does so within four days of exposure, but can develop as long as 10 days later. The disease is most common during winter and spring.

How is meningococcal disease spread?

Meningococcal infection is not highly contagious. Transmission from person to person occurs through direct contact with nose and throat secretions.

An infected person can transmit the disease by:

- Coughing or sneezing directly into the face of others.
- Kissing a person on the mouth.
- Sharing a glass or cup.

Because it is possible to harbor the bacteria in the nose and throat without developing symptoms, healthy people, as well as people who are ill, may spread the bacteria to others. The bacteria is not transmitted by casual contact, such as sitting in the same room as an infected person or passing an infected person in a hallway or on a sidewalk.

Meningococcal Disease

What are the symptoms of meningococcal disease?

Meningococcal disease usually starts with a sudden onset of fever and headache. A stiff neck may be present and later a red rash may develop. Nausea and vomiting also can occur, but alone, are not sufficient to suggest meningococcal disease. In newborns and small infants, the classic findings of fever, headache, and neck stiffness may be absent or difficult to detect. The infant may show only extreme listlessness, irritability, poor feeding and sometimes vomiting. In severe cases, as the disease progresses, both infants and older patients may have seizures and decreased alertness advancing to coma.

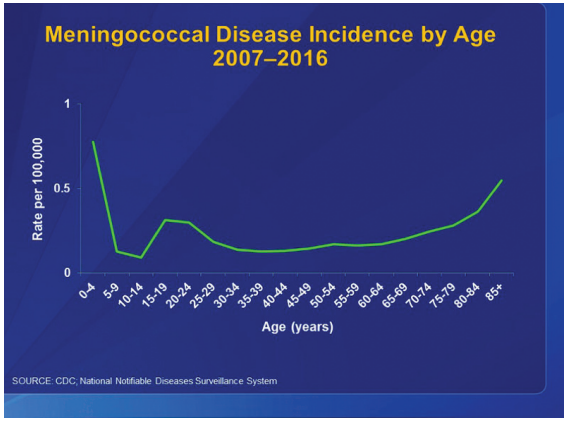
How is meningococcal disease diagnosed?

Meningococcal disease is very serious and can be deadly in a matter of hours. Early diagnosis and treatment of the disease are very important. Meningococcal disease can be difficult to diagnose because the signs and symptoms are often similar to less serious illnesses. If a medical provider suspects someone has meningococcal disease, they will collect samples of blood or cerebrospinal fluid (fluid that is near the spinal cord). The samples are then tested to determine if the illness is caused by an infection. If *Neisseria meningitidis* bacteria are in the samples, laboratorians can grow (culture) the bacteria. Growing the bacteria in the laboratory allows doctors to know the specific type of bacteria that is causing the illness. Knowing this helps doctors decide which antibiotic will work best. Other tests can sometimes detect and identify the bacteria if cultures do not.

Who is most susceptible to meningococcal disease?

Meningococcal disease is primarily a disease of young children. Infants, adolescents, and young adults have the highest rates of meningococcal disease in the United States *(see figure 1)*. Adults at increased risk of meningococcal disease include those who have recently been brought together as a group and housed under crowded living conditions, such as in barracks or institutions. College freshmen, particularly those living in dormitories, are at modestly increased risk. Household contacts of cases are at the greatest risk of developing meningococcal disease. Most people are not susceptible to meningococcal disease because they have had prior exposure and have become immune.

Fewer than 10 percent of all meningococcal disease cases are fatal. Death occurs more often in meningococcemia (as high as 17 percent) than in meningococcal meningitis (approximately seven percent).



(Figure 1)

How is meningococcal disease treated?

Cases of meningococcal disease require immediate medical treatment by a physician. Intravenous penicillin and other antibiotics are used to treat meningococcal disease, once diagnosed.