Meningococcal Disease: Neisseria Meningitidis
University Health Services

What is meningococcal disease?
Meningococcal meningitis and meningococcemia are two forms of meningococcal disease. Meningococcal meningitis is an infection of the tissue (called the "meninges") that surrounds the brain and spinal cord. Meningococcemia is an infection of the blood and may also involve other organs. These illnesses are both caused by bacteria called Neisseria meningitidis.

What is Neisseria Meningitidis?
Neisseria meningitidis is a bacterium. It only affects people, not animals. About 10 to 20% of people carry these bacteria in their noses and throats, but do not get sick from them. These people are called "carriers." Rarely, the bacteria may get into the blood or the tissue surrounding the spine and brain and cause severe illness.

How are the bacteria spread?
The bacteria are spread from person to person through saliva (spit). You must be in close contact with a sick person's saliva in order for the bacteria to spread. Close contact includes activities such as kissing, sneezing, coughing, sharing water bottles, sharing eating or drinking utensils, or sharing cigarettes with someone who is sick.

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How is meningococcal disease diagnosed?

Persons showing signs and symptoms of illness are diagnosed by checking their spinal fluid (meningitis) or blood (meningococcemia). It may take up to 72 hours to have test results. Sometimes a doctor can make an earlier diagnosis by looking at a person's spinal fluid under a microscope.

What are the signs and symptoms of illness?

Meningitis:

Anyone who has the symptoms should contact their doctor right away. Signs and symptoms of meningitis include a sudden onset of a high fever, a stiff neck, headache, nausea, vomiting, and/or mental confusion. Changes in behavior such as confusion, sleepiness, and being hard to wake up are important symptoms. A rash may be present, often involving the palms of the hands and soles of the feet.

In babies, the only signs of this illness may be acting more tired than usual, acting more irritable than usual, and eating less than usual. Babies with meningitis will usually have a fever, but this is not a reliable sign of illness.

Meningococcemia:

Signs and symptoms of meningococcemia include a sudden onset of fever, chills, and feeling unusually weak and tired. A rash may be present, often involving the palms of the hands and soles of the feet. Anyone who has these symptoms should contact their doctor right away.

How are these illnesses treated?

Antibiotics are used to treat people with both (meningococcal) meningitis and meningococcemia. People who have had close contact with the sick person any time during the two weeks before she/he became ill may also need to take antibiotics. Treatments to prevent the disease for all close contacts would be implemented up to two weeks after onset of the first case but preferable as soon as possible within the first 24 hours.
Why do close contacts of a sick person need to be treated?

Close contacts of a person who has meningococcal disease are treated with antibiotics because the bacteria may be spread from the sick person to other people through contact with the saliva (spit) of the sick person. Close contact means shared living or sleeping areas, as with a family member or room-mate, or direct close medical care, especially providing respiratory care or resuscitation efforts. The antibiotics will kill the bacteria and prevent illness.

Is there a vaccine to protect me from getting sick?

There is a vaccine (shot) against meningococcal disease. It is now recommended for 11 to 12 year old children, college freshmen living in dormitories and travelers who visit countries where meningococcal diseases are common.

What should I do if I have had contact with a person who has a meningococcal illness?

If you have had close contact with a person who has been diagnosed with a meningococcal illness you should call your health care provider and get an antibiotic. If you have had contact with an ill person, but have not had close contact, you should be aware of the symptoms of illness and contact your doctor immediately if you have any of these symptoms.

Are there times when I would not have to take antibiotics after close contact with a sick person?

Meningitis can be caused by different organisms, including other bacteria and viruses. Only certain types of meningitis require treatment of the sick person's close contact. In order to reduce the risk of harmful side-effects and possible development of resistant germs, antibiotics should be taken only when needed based on your doctor's review of test results.
What should I do if I am an employee of Wexner Medical Center and think I was exposed?

Contact Epidemiology at (614) 293-8556. They are available on-call 24 hours a day. They will investigate the exposure and determine whether or not you should seek treatment.

If treatment is needed, come to University Health Services on the 2nd Floor of McCampbell Hall at 1581 Dodd Drive or call (614) 293-8146 between the hours of 7:30 AM – 4:00 PM Monday through Friday. Please bring a completed accident or illness report with you. This form is available on OneSource (employee intranet) on the University Health Services website. It is important to always report all exposures to infectious disease to the Department of Clinical Epidemiology.

Adapted from: Massachusetts Department of Public Health, Bureau of Communicable Disease Control - Division of Epidemiology and Immunization

Talk to your doctor or others on your health care team if you have questions. You may request more written information from the Library for Health Information at (614) 293-3707 or email: health-info@osu.edu.