

PUBLIC HEALTH FACT SHEET

MENINGOCOCCAL DISEASE AND COLLEGE STUDENTS

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What is meningococcal disease?

Meningococcal disease is caused by infection with bacteria called *Neisseria meningitidis*. These bacteria can infect the tissue (the “meninges”) that surrounds the brain and spinal cord and cause meningitis, or they may infect the blood or other body organs. In the US, about 2,600 people per year get meningococcal disease and 10-15% die despite receiving antibiotic treatment. Of those who survive, 10% may lose limbs, become deaf, have seizures or strokes, or have other problems with their nervous system.

What is *Neisseria meningitidis*?

There are a number of different subgroups, called “serogroups,” of *N. meningitidis*; 13 of these serogroups are known to be able to cause serious disease in humans, but 5 (A, B, C, Y and W-135) cause most disease. About 5 to 15% of people carry these bacteria in their noses and throats, but do not get sick from them. These people are called “carriers.” In rare cases, the bacteria may get into the blood and travel to other organs, or the tissue surrounding the spine and brain and cause severe illness.

What are the symptoms of meningococcal disease?

Signs and symptoms of meningococcal disease include a sudden onset of fever, stiff neck, headache, nausea, vomiting, and/or mental confusion. Changes in behavior such as confusion, sleepiness, and unresponsiveness are important symptoms of illness. A rash may also be present. Anyone who has these symptoms should be seen by a healthcare provider immediately.

How are the bacteria spread?

These bacteria are passed from person-to-person through saliva (spit). You must be in close contact with an infected person’s saliva in order for the bacteria to spread. Close contact includes activities such as kissing, sneezing, coughing, sharing water bottles, sharing eating/drinking utensils or sharing cigarettes with someone who is infected.

Who is at most risk for meningococcal disease?

People who will be traveling to certain parts of the world where the disease is very common are at risk as are military recruits who live in close contact. Children and adults with damaged or removed spleens or an immune disorder called “terminal complement deficiency” are also at risk. These people should get meningococcal vaccine to protect them. Meningococcal vaccine may also be given during an outbreak situation, which is rare in the United States. People who live in crowded settings, such as college dormitories, are also at greater risk of infection.

Are students in college at risk for meningococcal disease?

College freshmen, in particular those who live in residence halls or dormitories, are at a modestly increased risk for meningococcal disease as compared to individuals of the same age not attending college.¹ The closed setting, combined with high-risk behaviors (such as alcohol consumption, exposure to cigarette smoke, sharing food or beverages, and activities involving the exchange of saliva), may put college students at a greater risk for infection. All college students and their parents should discuss meningococcal disease and the benefits of vaccination with their healthcare provider.

Is there a vaccine against meningococcal disease?

Yes, there is a vaccine, available in the US that protects against 4 of the 13 serogroups (subgroups) of *N. meningitidis* that cause serious disease. It is a purified vaccine containing the material that coats the bacteria (capsular polysaccharide). Protection from the meningococcal polysaccharide vaccine is not lifelong. It lasts about 3 to 5 years in healthy adults (some people may be protected longer.) The vaccine is not recommended for children under 2 years of age.

How complete is the protection with the vaccine?

The currently available vaccine provides protection against four serogroups of the bacteria, called groups A, C, Y and W-135. These four serogroups account for approximately two-thirds of the cases that occur in the US each year. Most of the remaining one-third of the cases are caused by serogroup B, not contained in the vaccine.

Is the meningococcal vaccine safe?

Meningococcal vaccine, like any other vaccine, may cause some minor discomfort (redness and pain) at the injection site, but serious problems such as an allergic reaction are rare. A small percentage of people may develop a fever after the shot.

Should students receive the meningococcal vaccine prior to entering college?

Some colleges require meningococcal vaccine for college entry. The Advisory Committee on Immunization Practices (ACIP) of the Centers for Disease Control and Prevention recommends that providers of medical care to incoming and current college freshmen (in particular, those freshmen who live in residence halls or dormitories) inform students and their parents about meningococcal disease and the benefits of vaccination. ACIP also recommends that vaccination be provided or made easily available to freshmen students wishing to reduce their risk of meningococcal disease. The Massachusetts Department of Public Health encourages vaccination against meningococcal disease for college freshmen, particularly for those who will be living in dormitories or other similar settings.

Where can a college student get vaccinated?

If you are a college student and want to be vaccinated with meningococcal vaccine, contact your healthcare provider. In addition, your university or college health services may be able to provide you with vaccine. Healthcare providers may order the vaccine directly from the vaccine manufacturer (Aventis Pasteur, Inc. 1-800-VACCINE).

Where can I get more information?

- Your doctor, nurse or health clinic
- The Massachusetts Department of Public Health, Division of Epidemiology and Immunization at (617) 983-6800 or toll-free at (888) 658-2850 or on the MDPH website at <http://www.mass.gov/dph>
- Your local health department (listed in the phone book under government)

¹ MMWR, Prevention and Control of Meningococcal Disease and Meningococcal Disease and College Students, 49(RR-7); June 30, 2000, 1-20.