

REQUIRED IMMUNIZATIONS

Pre-Kindergarten	4 DTP/DTaP/TD, 3 OPV (Polio), 1 MMR, 3 HEP B, 2 HEP A, 1 VARICELLA
Kindergarten-6th Grade	5 DTP/DTaP/TD, 4 OPV (Polio), 2 MMR, 3 HEP B, 2 HEP A, 1 VARICELLA
All incoming 7th Graders	1 TDAP
8th Grade Students New to the State	1 TDAP



Meningococcal Disease

What is meningococcal disease?

Meningococcal disease is a disease caused by the bacteria *Neisseria meningitidis*, also called meningococcus. This bacteria can infect the blood, causing septicemia. It can also infect the covering of the brain and spinal cord, causing meningitis.

How is this disease spread?

Meningococcal disease spreads by direct contact with the saliva or with respiratory droplets from the nose and throat of an infected person.

Who is at risk of getting this disease?

Some groups of people have a higher risk of meningococcal disease, such as first year college students living in dormitories or new military recruits living in barracks. Other persons at increased risk include household contacts of a person known to have had this disease, immunocompromised people, people without a spleen, and people traveling to parts of the world where meningococcal disease is more common. Exposure to tobacco smoke and having a concurrent upper respiratory infection also increase the risk of meningococcal disease. Infants are at highest risk, but rates decrease after infancy and then increase in adolescence and young adulthood.

What are the symptoms?

Ten percent or more of people are thought to be carrying *Neisseria meningitidis* in their nose and throat without being ill, which is called “asymptomatic carriage”. Of these people, about 1% can develop illness, which may be meningitis or a bloodstream infection called septicemia or meningococemia. As described above, some people can carry the bacteria in their nose and throat without ever becoming ill. Signs of illness may include fever, severe headache, nausea, vomiting, and a rash. People who develop meningitis can have fever, intense headache, nausea, vomiting, stiff neck, and extreme sensitivity to light. It is important to seek care from a healthcare provider as soon as possible if these symptoms appear. Meningococcal disease has a 15% risk of death if it is not treated promptly.

How soon do the symptoms appear?

The symptoms may appear two to ten days after infection, but usually within three to four days.

What is the treatment for meningococcal disease?

Antibiotics, such as penicillin or a cephalosporin such as ceftriaxone, are used to treat meningococcal disease.

Should people who have been around a person infected with meningococcal disease receive treatment?

When meningococcal disease occurs in one person, only the people who have had recent close contact with that person’s respiratory secretions are recommended to receive antibiotics. These include household members, intimate contacts, health care personnel performing mouth-to-mouth resuscitation, day care center playmates, etc. Such people are usually advised to obtain a prescription for a specific antibiotic (rifampin, ciprofloxacin, ceftriaxone, or azithromycin) from their physician. The health department will contact the individuals who are recommended to receive antibiotics, and advise them of options to obtain antibiotics. Casual contacts including classmates, co-workers, or those in a factory setting are not at increased risk of disease when a single person has meningococcal illness. When clusters or outbreaks occur, the health department may expand the recommendations for which groups need to receive antibiotics to prevent possible spread. Antibiotics do not protect people from future exposure to *Neisseria meningitidis*.

Is there a vaccine to prevent meningococcal disease?

Three types of meningococcal vaccines are available in the United States. They are effective against four of the five most common disease-causing types of meningococcal disease: A, C, Y, and W-135. An additional vaccine is now available that protects against serogroup B, but is currently only licensed for high-risk children over ten years of age. Consult with your healthcare provider or the local health department about receiving the vaccine.

Important Information for Parents About Meningococcal Disease and Meningococcal Vaccines from the Oklahoma State Department of Education and the Oklahoma State Department of Health

What is meningitis?

Meningitis is an infection of the spinal cord fluid and the fluid that surrounds the brain. Meningitis is usually caused by a virus or a bacterium. Meningitis caused by a virus is usually less severe and resolves without specific treatment, while meningitis caused by bacteria can be severe and may result in:

- Brain damage,
- Hearing loss,
- Limb amputation or
- Learning disabilities.

What types of bacteria cause meningitis?

There are several types of bacteria that cause meningitis, including:

- *Neisseria meningitidis*
- *Streptococcus pneumoniae*,
- *Group B streptococcal disease*, and
- *Haemophilus influenzae* type B

This information sheet will focus on the disease caused by *Neisseria meningitidis* (Nay-sear-e-a men-in-git-it-dis), which is rare but especially risky for certain ages. Disease caused by *Neisseria meningitidis* is usually referred to as "meningococcus" or "meningococcal disease" (men-IN-jo-kok-ul disease). More information about the other bacteria that cause meningitis can be found at the web sites listed in the box at the end of this information sheet.

Who is at risk from meningococcal disease?

Babies less than a year old have the highest risk for meningococcal disease, but no vaccine is available to protect them. The risk of meningococcal disease increases for adolescents and young adults aged 15 to 22 years, because of behaviors that spread the disease. On average two to three people in this age group get meningococcal disease every year in Oklahoma. More than half of these could be prevented by vaccine.

College freshmen living in dormitories have a greater chance of contracting the disease than other persons their age. Other persons at increased risk include those with immune system problems, those without a spleen, or travelers going to places in the world where the disease is more common.

How is the disease spread?

The disease is spread by droplets in the air and by direct contact with someone who is infected. That includes coughing or sneezing, kissing, sharing a water bottle or drinking glass, sharing cigarettes, lipstick, lip balm – anything an infected person touches with his or her mouth.

Why is meningococcal disease dangerous?

Meningococcal disease is especially dangerous because every year in the United States about 2,500 people are infected and about 300 of those people die in spite of treatment with antibiotics. Of those who live, about 400 a year lose their arms or legs, become deaf, have problems with their nervous systems, become mentally retarded, or suffer seizures or strokes.

If your child has symptoms of meningococcal disease contact your health-care provider immediately.

Signs and Symptoms of Meningitis

- Headache
- Fever
- Chills
- Stiff neck
- Extreme tiredness
- Vomiting
- Sensitivity to light
- Rash of small purplish black-red dots
- Confusion
- Seizures

How can meningococcal disease be prevented?

Vaccines can prevent many but not all types of meningococcal disease. There are two vaccines available in the United States that protect against four of the five most common strains of the meningococcal bacteria.

The newest vaccine, called Menactra, or MCV4, is recommended for:

- All adolescents 11-18 years of age
- College freshmen living in dormitories if not vaccinated previously, and
- Other people at high risk 2 through 55 years of age.

The earlier vaccine, called Menomune, or MPSV4, was effective in older children and teenagers but booster doses were needed every three to five years. The new vaccine protects against the same types of meningococcal bacteria and may not require booster doses. MPSV4 is still used for children 2 through 10 years of age and adults over 55 who are at risk.

Teenagers and young adults can also reduce their risk by taking good care of themselves, by eating a balanced diet, getting enough sleep and exercise, as well as avoiding cigarettes and alcohol.

Is the meningococcal vaccine safe?

Yes, both vaccines are safe; however, there are risks with any vaccine. About half of the people who get the vaccine will have pain and redness where the shot was given, but because the vaccine is not made from the whole bacteria, it cannot cause bloodstream infections or meningitis. A small percentage of people who get the vaccine develop a fever. Vaccines, like all medicines, carry a risk of an allergic reaction, but this risk is very small.

A few cases of Guillain-Barré Syndrome, a serious nervous system disorder, have been reported among people who got the new vaccine, MCV4 (meningococcal conjugate vaccine). At this time, there is not enough evidence to tell if the vaccine caused the disorder. Health officials are investigating these reports.

Does the meningococcal vaccine work?

Yes. The new meningococcal vaccine protects about 90 percent of the people who receive it from meningococcal disease caused by types A, C, Y, and W-135. These types cause almost two-thirds of all meningococcal disease in teenagers in the United States. It does not prevent type B, which causes about one third of the cases in teenagers.

Does the meningococcal vaccine prevent all cases of meningitis?

No. However, 63 percent of the meningitis cases in 18-22 year olds occurring in Oklahoma from 2000 through 2005 could have been prevented by vaccination. The meningococcal vaccine does not include type B. Scientists have not been able to make a vaccine that will protect against type B.

Where can I get the vaccine for my son or daughter?

If your child has health insurance you can obtain the meningococcal vaccine from your regular health-care provider. Local county health departments have the vaccine available at no charge for children who:

- Have no health insurance,
- Are Medicaid eligible,
- Are Native American,
- Or whose health insurance does not pay for vaccines,

and are either 11 through 18 years of age, or who are 2 through 18 years of age and do not have a spleen, or have terminal complement deficiencies, or HIV infection or will be traveling to countries with high rates of meningococcal disease.

Is this vaccine required to attend school in Oklahoma?

Meningococcal vaccine is required for students who are enrolling for the first time in colleges and post-high school educational programs and who will live in dormitories or on-campus student housing. This vaccine is not required for children in elementary or high school in Oklahoma.

Where can I get more information?

For more information contact your healthcare provider or local county health department or visit these Web sites:

National Meningitis Association at www.nmaus.org

Centers for Disease Control and Prevention at <http://www.cdc.gov/meningitis/index.htm>



Oklahoma
State
Department
Of Education



Immunization Service
Oklahoma State
Department of Health

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