

## What It Is and How It Spreads

### MENINGOCOCCAL DISEASE

- Meningococcal disease is a serious illness caused by a bacteria. It is the leading cause of bacterial meningitis in children 2-18 years old in the United States. Meningitis is an infection of the brain and spinal cord coverings. Meningococcal disease can also cause blood infections.
- About 2,600 people get meningococcal disease each year in the U.S. 10-15% of these people die in spite of treatment with antibiotics. Of those who live, another 10% lose their arms or legs, become deaf, have problems with their nervous systems, become mentally retarded or suffer seizures or strokes.
- Anyone can get meningococcal disease. But it is most common in infants less than one year of age and in people with certain medical conditions. College freshmen, particularly those who live in dormitories, have a slightly increased risk of getting meningococcal disease.

You or your child could catch measles, mumps or rubella by being around someone who has the disease. They spread from person to person through the air.

### MEASLES

- Measles virus causes rash, cough, runny nose, eye irritation and fever.
- It can lead to ear infection, pneumonia, seizures (jerking and staring), brain damage and death.

### MUMPS

- Mumps virus causes fever, headache and swollen glands.
- It can lead to deafness, meningitis (infection of the brain and spinal cord covering), painful swelling of the testicles or ovaries and, rarely, death.

### RUBELLA (GERMAN MEASLES)

- Rubella virus causes rash, mild fever and arthritis (mostly in women).
- If a woman gets rubella while she is pregnant, she could have a miscarriage or her baby could be born with serious birth defects.

### HEPATITIS B

The hepatitis B virus (HBV) can cause short-term (acute) illness that leads to:

- loss of appetite
- diarrhea and vomiting
- tiredness
- jaundice (yellow skin or eyes)
- pain in muscles, joints and stomach

It can also cause long-term (chronic) illness that leads to:

- liver damage (cirrhosis)
- liver cancer
- death

About 1.25 million people in the U.S. have chronic HBV infection. Each year it is estimated that:

- 80,000 people, mostly young adults, get infected with HBV
- More than 11,000 people have to stay in the hospital because of hepatitis B
- 4,000 to 5,000 people die from chronic hepatitis B

Hepatitis B virus is spread through contact with the blood and body fluids of an infected person. A person can get infected in several ways, such as:

- by having unprotected sex with an infected person
- by sharing needles when injecting illegal drugs
- by being stuck with a used needle on the job
- during birth when the virus passes from an infected mother to her baby

About 1/3 of the people who are infected with hepatitis B in the United States don't know how they got it.

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# NORTHERN OKLAHOMA COLLEGE

# NOC

## NORTHERN OKLAHOMA COLLEGE

## Risks and Benefits of Vaccinations

MENINGOCOCCAL VACCINE

MEASLES VACCINE

MUMPS VACCINE

RUBELLA VACCINE

HEPATITIS B VACCINE

## How Can I Learn More?

Ask your doctor or nurse. They can give you the vaccine package insert or suggest other sources of information.

- Call your local or state health department's immunization program.
- Contact the Centers for Disease Control and Prevention (CDC):  
English Call 1-800-232-2522 or 1-888-443-7232  
Español Call 1-800-232-0233
- Visit the National Immunization Program's website at <http://www.cdc.gov/nip>
- Visit the National Center for Infectious Disease's meningococcal disease website at [http://www.cdc.gov/ncidod/dbmd/diseaseinfo/meningococcal\\_g.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/meningococcal_g.htm)
- Visit the CDC's Division of Viral Hepatitis website at <http://www.cdc.gov/hepatitis>

Information provided by

**U. S. DEPARTMENT OF HEALTH & HUMAN SERVICES**  
Centers for Disease Control and Prevention  
National Immunization Program



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## MENINGOCOCCAL VACCINE

Meningococcal vaccine can prevent 2 of the 3 important types of meningococcal disease in older children and adults. Meningococcal vaccine is not effective in preventing all types of the disease. But it does help to protect many people who might become sick if they don't get the vaccine.

Drugs such as penicillin can be used to treat meningococcal infection. Still, about 1 out of every 10 people who get the disease dies from it, and many others are affected for life. This is why it is important that people with the highest risk for meningococcal disease get the vaccine.

### Who should get meningococcal vaccine and when?

Meningococcal vaccine is not routinely recommended for most people.

People who should get the vaccine include:

- U.S. Military recruits
- People who might be affected during an outbreak of certain types of meningococcal disease.
- Anyone traveling to, or living in, a part of the world where meningococcal disease is common, such as West Africa
- Anyone who has a damaged spleen, or whose spleen has been removed.
- Anyone who has terminal complement component deficiency (an immune system disorder).

The vaccine should also be considered for:

- Some laboratory workers who are routinely exposed to the meningococcal bacteria.

The vaccine may also be given to college students who choose to be vaccinated. College freshmen, especially those who live in dormitories, and their parents should discuss the risks and benefits of vaccination with their health care providers.

Meningococcal vaccine is usually not recommended for children under two years of age. But under special circumstances it may be given to infants as young as 3 months (the vaccine does not work as well in very young children). Ask your health care provider for details.

### Some people should not get meningococcal vaccine or should wait.

- People should not get meningococcal vaccine if they have ever had a serious allergic reaction to a previous dose of the vaccine.
- People who are mildly ill at the time the shot is scheduled can still get meningococcal vaccine. People with moderate or severe illnesses should usually wait until they recover. Your provider can advise you.
- Meningococcal vaccine may be given to pregnant women.

### What are the risks from meningococcal vaccine?

- A vaccine, like any medicine, is capable of causing serious problems, such as severe allergic reactions. The risk of the meningococcal vaccine causing serious harm, or death, is extremely small.
- Getting meningococcal vaccine is much safer than getting the disease.
- Mild problems**
- Some people who get meningococcal vaccine have mild side effects, such as redness or pain where the shot was given. These symptoms usually last for 1-2 days.
- A small percentage of people who receive the vaccine develop a fever.

## MEASLES, MUMPS AND RUBELLA VACCINES

### Why get vaccinated?

- Measles, mumps and rubella are serious diseases.
- Measles, mumps and rubella (MMR) vaccine can prevent these diseases.
- Most children who get their MMR shots will not get these diseases. Many more children would get them if we stopped vaccinating.

### Who should get MMR vaccine and when?

Children should get 2 doses of MMR vaccine:

- The first at 12-15 months of age
- and the second at 4-6 years of age.

These are the recommended ages. But children can get the second dose at any age, as long as it is at least 28 days after the first dose.

Some adults should also get MMR vaccine:

- Generally, anyone 18 years of age or older, who was born after 1956, should get at least one dose of MMR vaccine, unless they can show that they have had either the vaccines or the diseases.
- Ask your doctor or nurse for more information.
- MMR vaccine may be given at the same time as other vaccines.

### Some people should not get MMR vaccine or should wait.

- People should not get MMR vaccine who have ever had a life-threatening allergic reaction to gelatin, the antibiotic neomycin or a previous dose of MMR vaccine.
- People who are moderately or severely ill at the time the shot is scheduled should usually wait until they recover before getting MMR vaccine.
- Pregnant women should wait to get MMR vaccine until after they have given birth.
- Women should avoid getting pregnant for 4 weeks after getting MMR vaccine.

Some people should check with their doctor about whether they should get MMR vaccine, including anyone who:

- Has HIV/AIDS or another disease that affects the immune system
- Is taking cancer treatment with x-rays or drugs
- Is being treated with drugs that affect the immune system, such as steroids, for 2 weeks or longer.
- People who recently had a transfusion or were given other blood products should ask their doctor when they may get MMR vaccine
- Ask your doctor or nurse for more information.
- Has any kind of cancer
- Has ever had a low platelet count (a blood disorder)

### What are the risks from MMR vaccine?

A vaccine, like any medicine, is capable of causing serious problems, such as severe allergic reactions. The risk of MMR vaccine causing serious harm, or death, is extremely small.

- Getting MMR vaccine is much safer than getting any of these three diseases.
- Most people who get MMR vaccine do not have any problems with it.

#### Mild Problems

- Fever (up to 1 person out of 6)
- Mild rash (about 1 person out of 20)
- Swelling of glands in the cheeks or neck (rare) If these problems occur, it is usually within 7-12 days after the shot. They occur less often after the second dose.

#### Moderate Problems

- Seizure (jerking or staring) caused by fever (about 1 out of 3,000 doses)
- Temporary pain and stiffness in the joints, mostly in teenage or adult women (up to 1 out of 4)
- Temporary low platelet count, which can cause a bleeding disorder (about 1 out of 30,000 doses)

#### Severe Problems (Very Rare)

- Serious allergic reaction (less than 1 out of a million doses)
- Several other severe problems have been known to occur after a child gets MMR vaccine. But this happens so rarely, experts cannot be sure whether they are caused by the vaccine or not. These include: deafness, long-term seizures, coma or lowered consciousness, permanent brain damage.

## HEPATITIS B VACCINE

### Why get vaccinated?

- Hepatitis B is a serious disease.
- Hepatitis B vaccine can prevent hepatitis B.
- It is the first anti-cancer vaccine because it can prevent a form of liver cancer.

### Who should get hepatitis B vaccine and when?

- 1) Everyone 18 years of age and younger
- 2) Adults over 18 who are at risk

Adults at risk for HBV infection include:

- people who have more than one sex partner in 6 months
- men who have sex with other men
- sex contacts of infected people
- people who inject illegal drugs
- health care and public safety workers who might be exposed to infected blood or body fluids.
- household contacts of persons with chronic HBV infection
- hemodialysis patients

If you are not sure whether you are at risk, ask your doctor or nurse.

### Some people should not get hepatitis B vaccine or should wait.

- People should not get hepatitis B vaccine if they have ever had a life-threatening allergic reaction to baker's yeast (the kind used for making bread) or to a previous dose of hepatitis B vaccine.
- People who are moderately or severely ill at the time the shot is scheduled should usually wait until they recover before getting hepatitis B vaccine.
- Ask your doctor or nurse for more information.

### What are the risks from hepatitis B vaccine?

- A vaccine, like any medicine, is capable of causing serious problems, such as severe allergic reactions. The risk of hepatitis B vaccine causing serious harm, or death, is extremely small.
- Getting hepatitis B vaccine is much safer than getting hepatitis B disease.
- Most people who get hepatitis B vaccine do not have any problems with it.

#### Mild problems

- soreness where the shot was given, lasting a day or two (up to 1 out of 11 children and adolescents and about 1 out of 4 adults)
- mild to moderate fever (up to 1 out of 14 children and adolescents and 1 out of 100 adults)

#### Severe problems

- serious allergic reaction (very rare)

## What if there is a moderate or severe reaction to a vaccine?

### What should I look for?

Any unusual conditions, such as a serious allergic reaction, high fever or behavior changes. Signs of a serious allergic reaction include difficulty breathing, hoarseness or wheezing, hives, paleness, weakness, a fast heart beat or dizziness within a few minutes to a few hours after the shot. A high fever or seizure, if it occurs, would happen 1 or 2 weeks after the shot.

### What should I do?

- Call a doctor, or get the person to a doctor right away.
- Tell your doctor what happened, the date and time it happened and when the vaccination was given.
- Ask your doctor, nurse, or health department to file a Vaccine Adverse Event Reporting System (VAERS) form or
- Call VAERS yourself at 1-800-822-7967 or visit their website at <http://www.vaers.org>