

# WHAT YOU SHOULD KNOW ABOUT THE MENINGOCOCCAL VACCINE

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## What is meningococcal disease?

- Meningococcal disease is a serious illness. It is often caused by bacteria.
- It is not very common in the United States.
- It is the main cause of meningitis for children between the ages of 2 and 18.
- Meningitis is an infection of the fluid surrounding the brain and spinal cord.

## Why is prevention important?

- Anyone can get meningococcal disease.
- One out of every 10 people with meningococcal disease die.
- Survivors can lose their arms or legs. Some can become deaf or mentally disabled.
- Vaccination is crucial for people at high risk.

## Who is high-risk for meningococcal disease?

- Infants less than one year of age
- Patients with a weak immune system
- Anyone traveling to Africa, Saudi Arabia or other parts of the world where the disease is common

## Who should get the vaccine?

- Anyone at high risk (see above)
- Children between the ages of 11 and 18. This includes college freshmen living in dormitories.
- Smokers
- U.S. military recruits
- Anyone who has a damaged spleen, or whose spleen has been removed
- Anyone who might have been exposed during an outbreak

## Who should not get the vaccine?

- Anyone who has an allergy to a vaccine. Let your doctor know if you have any allergies.
- Anyone who is severely ill at the time the shot is scheduled. People with a mild illness usually can get the vaccine.
- Anyone with a history of Guillain-Barre Syndrome (GBS), a disorder that can lead to paralysis



## What are possible side effects to the vaccine?

- Some mild side effects may occur, such as fever, redness or pain.
- Some rare but more severe side effects may occur. First is the possibility of a serious allergic reaction. Watch for signs of trouble breathing, dizziness, high fever or the appearance of hives. Another side effect to watch out for is GBS. Look for any signs of weakness in the legs, arm or facial paralysis.
- Go to the ER right away if you notice any of these severe symptoms.

## Want more information?

Visit the Centers for Disease Control and Prevention (CDC) Web site at: [www.cdc.gov/vaccines/pubs/vis/downloads/vis-mening.pdf](http://www.cdc.gov/vaccines/pubs/vis/downloads/vis-mening.pdf).

## References

Centers for Disease Control and Prevention [Internet]. Atlanta (GA). Vaccine Information Statement [updated 2010 Feb 1]. : Meningococcal Vaccine; [updated 2008 Jan 28; cited 2010 Feb 2]; [about 4 screens]. Available from: <http://www.cdc.gov/vaccines/pubs/vis/downloads/vis-mening.pdf>

**For more information, ask your pharmacist!**

This information is provided by Michigan Pharmacists Association and:

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Meningococcal disease is associated with the *Neisseria meningitidis* bacterium. There are at least 13 different known subtypes of this bacterium, five of which are known to be the most invasive (A, B, C, Y and W-135).

Meningococcal disease is very serious, with 9-12 percent of patients dying even when treated with appropriate antibiotic therapy. For those who survive, up to 20 percent are impacted for life with permanent hearing loss, loss of limbs or brain damage. Fortunately, meningococcal disease is relatively rare in the United States.

Those at most risk for meningococcal disease include infants, those with certain medical conditions and travelers to certain parts of the world. The disease is found to be the most common in children less than one year of age. People who are immunocompromised due to immune system disorders (e.g., terminal complement component deficiency) or who have damaged or missing spleens are at a higher risk of contracting the disease. Finally, people traveling to places with a higher prevalence of the disease, such as Africa and Saudi Arabia, are also at higher risk.

Other factors may lead to a higher likelihood of developing meningococcal disease as well, such as having an underlying chronic illness, smoking history or exposure, and living in a crowded household. This is why college freshmen living in dormitories are at an increased risk of meningococcal disease.

There are two meningococcal vaccines available in the United States. One is made from the outer polysaccharide capsule of the bacteria, while the other contains antigens conjugated to the diphtheria toxoid protein. Neither vaccine contains any live bacteria. The polysaccharide vaccine or "MPSV4" (Menomune®), is used for patients two years and older. It provides adequate protection against four of the five invasive subtypes. This vaccine is injected into the fat of the upper arm. The conjugate vaccine, or "MCV4" (Menactra®), is used in patients between two and 55 years of age. This vaccine provides a longer lasting protection and covers the same subtypes as the previous vaccine. This vaccine is given intramuscularly. Unfortunately, no vaccine protects against subtype B, which is known to cause one-third of all meningococcal cases in the United States.

MPSV4 can be given to children between the



ages of three to 23 months under certain circumstances, such as when short-term protection is needed against a particular serotype of meningococcal disease. These children should receive two doses within a three month span.

Only one dose of the vaccine is needed for most people, depending on their risk and the age they received their first dose. Those who remain at risk should be revaccinated within three years, if they received their first dose before seven years of age. Otherwise, there should be a minimum of five years between doses.

There are particular groups that should be vaccinated against meningococcal disease. MCV4 is highly recommended for those aged 11 to 18 years of age or those at higher risk. The higher risk groups are those described above, as well as military recruits, and people in contact with the bacterium, either in laboratories or during an outbreak.

Patients who have had a known allergic reaction when given this vaccine should not receive another dose. In addition, those who are moderately or severely ill or those with a history of Guillain-Barre Syndrome should not receive the meningococcal vaccines.

There are some mild side effects possible from this vaccine, including pain or redness at the injection site. These symptoms are more common with MCV4 than MPSV4 and

can last up to two days after injection.

There is a rare possibility of more severe reactions occurring, including serious allergic reactions and the nervous system disorder known as Guillain-Barre Syndrome. If a patient does encounter a severe reaction, a Vaccine Adverse Event Reporting System (VAERS) form\* (can be obtained from <http://vaers.hhs.gov/esub/index>) should be filed. For further information, visit the VAERS Web site at: <http://vaers.hhs.gov/professionals>.

Pregnancy is not considered a contraindication to either vaccine. No adverse effects among pregnant women or newborns have been reported with MPSV4 when given during pregnancy. MCV4 has not been studied extensively during pregnancy.

## References

- Centers for Disease Control and Prevention [Internet]. Atlanta (GA). Vaccine Information Statement [updated 2010 Jan 21]. : Meningococcal Vaccine; [updated 2008 Jan 28; cited 2010 Jan 21]; [about 4 screens]. Available from: <http://www.cdc.gov/vaccines/pubs/vis/downloads/vis-mening.pdf>
- Immunization Action Coalition (IAC) [Internet]. Saint Paul (MN). Vaccine Information for Health Care Professionals [updated 2010 Jan 21]. : Meningococcal: Questions and Answers; [updated 2009 Sept; cited 2010 Jan 21]; [about 2 screens]. Available from: <http://www.immunize.org/catg.d/p4210.pdf>