

## **Meningococcal Vaccines**

### **What is meningococcal disease?**

Meningococcal disease is potentially fatal and should always be viewed as a medical emergency. It is caused by bacteria. There are several subgroups with the labels A, B, C, Y, and W-135. Regardless of which subgroup causes the disease, the signs and symptoms are the same. There is a sudden onset of fever, intense headache, nausea and vomiting, stiff neck, and a rash. In the past, the high mortality rate has often been associated with the difficulty in diagnosing this disease that rapidly progresses. The presence of a stiff neck and a rash should be seen by a doctor as soon as possible.

It is important to know the onset of symptoms in children less than two years old are slower and nonspecific and neck stiffness may be absent.

About 75 percent of the cases present as meningitis, an inflammation of the brain and spinal chord. Another percent present as septicemia, an infection of the blood, and the remaining percent usually present with pneumonia-like symptoms and joint infections.

### **How is it transmitted?**

It is spread like a cold, from the saliva or sneezing and coughing of an infected person. Kissing, and sharing cups and toys can expose a person to infection. The bacteria often live harmlessly in the nose and throat and 25 percent of people carry the bacteria without becoming ill. A person can transmit the disease up to seven days before becoming ill and up to one day after antibiotic treatment is started. B and C strains are responsible for most disease in the Americas and Europe while A and C cause most disease in sub-Saharan Africa. W-135 is prevalent in Saudi Arabia and Burkina Faso.

### **What is the risk to me?**

Over half of meningococcal cases affect infants, children and adolescents under 19 years of age. Infants and children under 5 years of age are at greatest risk. Over-crowding in schools, daycares and camps increase the risk. For the traveler, the risk is greatest in the 'meningitis belt' of Africa from Mali in the west to Ethiopia in the east during the dry season (December to June). There have been major outbreaks in the last few years in Africa and proof of immunization is required for entry to Saudi Arabia for the Hajj pilgrimage.

### **How can I protect myself?**

Vaccination along with good sanitary measures is recommended for maximum protection against this disease.

**Meningococcal vaccines:**

There are two families of vaccines and the best one for you depends on the type of exposure you may encounter.

**a) Quadrivalent A/C/Y/W-135 Vaccine (MENOMUNE or MENACTRA)**

This vaccine is recommended for travel abroad, particularly to the meningitis belt of Africa and any other areas outside of North America experiencing outbreaks. This vaccine provides protection against the four subgroups of the disease. Menomune needs to be administered every 5 years to maintain an effective level of antibodies. Menactra appears to provide life-long protection.

**b) Meningitis C Vaccine (NEISVAC-C or MENJUGATE)**

This vaccine is provided free to the most susceptible age groups in Ontario (young children and adolescents) because the C strain is often responsible for clusters of outbreaks in schools and communities. This vaccine appears to provide life-long protection against this strain of the disease. It will not protect you against the other strains of the disease and is inadequate for travelers who may be exposed to other strains in other countries. There is no vaccine to protect against the B strain of the disease.

**What are the possible side effects?**

Most reactions are mild and may include soreness, redness, itching, or rash where the needle was given. Occasionally, headache, irritability, drowsiness, nausea or diarrhea may occur.

More severe reactions are rare but can occur anytime up to three days of getting the needle. These should be reported immediately to your doctor or emergency department. They include:

- hives,
- swelling of the mouth and throat,
- trouble breathing, hoarseness, or wheezing,
- high fever (over 40°C or 104°F),
- convulsions or seizures, and
- other serious reaction to the vaccine.

**You should NOT have the vaccine if you:**

- currently have a fever or active illness,
- have had a severe reaction to another vaccine, or
- are allergic reaction to any of the components of the vaccine.

Pregnant women should not receive the vaccine unless the risk of the disease is imminent.