



Meningococcal Meningitis

What is Meningococcal meningitis?

Meningococcal meningitis is a severe and potentially fatal infection of the blood and meninges (membranes that cover the brain and spinal cord) caused by the bacteria *Neisseria meningitidis*. There are 6 major serogroups of meningococcal: A, B, C, W, X, and Y.

How is it transmitted?

Meningococcal is spread from person to person through close contact with an infected person's saliva or respiratory secretions (e.g. by coughing, sneezing, or from objects freshly soiled with infected respiratory secretions). The risk of transmission is higher with closer contact. Outbreaks can occur in college dorms, childcare centres, and other types of close living facilities.

Where is the risk?

In Canada, the risk of getting the disease is low at about 1 in 100,000 people. The most at risk of severe disease includes children under 5 years of age, people living in crowded living conditions, adolescents 15 to 18 years of age, people with specific genetic risk factors, smokers, people living with HIV, and people with another respiratory tract infection. In Canada serogroup B causes the majority of disease.

The highest risk is in the "meningitis belt" of Sub-Saharan Africa during the dry season from December-June where the risk of getting the disease is 1,000 in 100,000 people (see map). The risk for travellers is highest for those visiting the meningitis belt during an outbreak who have prolonged contact with the local population. Serogroup A is the highest risk in Africa, but serogroups C, X, and W are also found. There have also been outbreaks of meningitis during the Hajj pilgrimage to Saudi Arabia.

What are the symptoms?

Many healthy people can carry the meningococcal bacteria in their nose and throat without developing disease. If the bacteria invades the body this causes invasive meningococcal disease which can be fatal. Symptoms can occur 1-10 days after exposure and can include sudden onset of headache, fever, rash, stiffness of the neck, nausea, vomiting, sensitivity to light, or altered mental status. If left untreated without antibiotics more than 70% of people will die from the disease. One third of those who recover will be left with permanent disabilities such as deafness, brain damage, problems of the nervous system and seizures, or amputation of one or more of the limbs.

How can I prevent meningococcal meningitis?

Vaccination is the best way to prevent meningitis disease. There are vaccines to protect against 5 serogroups of meningitis. In Canada infants are routinely vaccinated for meningitis C. In BC adolescents in grade 9 also receive a booster for meningitis A,C,Y,W-135. This is called a quadrivalent vaccine as it protects against 4 serogroups. There is also a vaccine available for meningitis B but it is not routinely.

A quadrivalent meningitis vaccine for serogroups A,C,Y,W-135 is recommended for most travellers to the “meningitis belt” or for other countries experiencing epidemics. Talk to your travel health specialist to determine if the meningitis vaccine is recommended for your trip.

This vaccine is also *required* for all pilgrims entering Saudi Arabia for Hajj or Umrah given no more than 3 years and at least 10 days before arrival.

Reactions to the vaccines are usually mild and temporary. These reactions may include soreness, redness and swelling at the injection site, headache, muscle soreness, fever, chills or nausea.