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# Meningococcal Disease

## Frequently Asked Questions

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### 1. What is Meningococcal Disease?

Meningococcal disease refers to any illness that is caused by the type of bacteria called *Neisseria meningitidis*, which is also known as meningococcus. About 1 out of 10 people are carriers of the bacteria in the back of their nose and throat but have no signs or symptoms of the disease. The bacteria can sometimes, for reasons not fully understood, overwhelm the body's defenses allowing infection to spread through the bloodstream to the brain and other parts of the body. This is known as meningococcal disease.

### 2. Who is at most risk for Meningococcal Disease?

The following people are more susceptible to Meningococcal Disease:

- Infants, adolescents, and young adults
- People at colleges, universities and boarding schools.
- Immunocompromised people
- Travelers to areas in the sub-Saharan meningitis belt (Ethiopia, Chad, South Sudan, Nigeria, Burkina Faso, Cameroon, Guinea, Gambia, Senegal)
- Muslim pilgrims travelling to Saudi Arabia for Haj and their contacts

### 3. How is Meningococcal Disease transmitted?

Carriers or infected persons transmit the bacteria to other people via droplets of respiratory or throat secretions. Close and prolonged contact – such as kissing, sneezing or coughing on someone, or living in close quarters (such as a dormitory, sharing eating or drinking utensils) with an infected person or carrier – can facilitate the spread of the disease. People cannot contract meningococcus by casual contact or breathing the air where an infected person may have been. The average incubation period is 4 days, but can range between 2 and 10 days. There is no animal reservoir for *Neisseria meningitidis* and it only infects humans.

### 4. What are the signs and symptoms of Meningococcal Disease in humans?

Meningococcal disease can present as meningitis when it affects the brain and spinal cord, or septicaemia when it affects the blood.

#### Meningococcal meningitis

When the bacteria infect the protective membranes covering their brain and spinal cord, known as the meninges, they swell cause symptoms such as sudden onset of fever, headache, and stiff neck. Other symptoms include nausea, vomiting, photophobia (increased sensitivity to light) and altered mental status (confusion). The symptoms of meningococcal meningitis can appear quickly or over several days but they usually develop within 3-7 days after exposure. In newborns and infants, the classic symptoms of fever, headache, and neck stiffness may

be absent or difficult to notice. The infant may appear to be slow or inactive, irritable, vomiting or feeding poorly. Meningococcal meningitis can lead to brain damage or hearing loss and in some cases can be fatal.

### **Meningococcal septicaemia**

This is the more dangerous illness caused by the *Neisseria meningitidis* bacteria. In meningococcal septicemia, the bacteria enter the bloodstream and multiply, damaging the walls of the blood vessels and causing bleeding into the skin and organs. Symptoms may include fever, fatigue, vomiting, cold hands and feet, chills, severe body pain, rapid breathing, diarrhoea and a dark purple rash. Meningococcal septicaemia can lead to permanent disabilities such as amputation of toes, fingers, or limbs or severe scarring as a result of skin grafts but can also be fatal with death occurring in only a few hours.

## **5. How is Meningococcal Disease diagnosed?**

It is very important that meningococcal disease is diagnosed and treated as quickly as possible. Treatment should be commenced as soon as the disease is suspected and clinicians should not delay treatment by waiting for laboratory confirmation. If meningococcal disease is suspected, samples of blood and cerebrospinal fluid (taken via a lumbar puncture) are sent to the laboratory for testing to confirm the diagnosis and report on which antibiotics may be suitable to use in treatment.

## **6. How is Meningococcal Disease treated?**

Meningococcal disease is potentially fatal and should always be viewed as a medical emergency. Admission to a hospital or health centre is necessary and treatment should begin as soon as meningococcal disease is suspected. There is a range of antibiotics that are effective against *Neisseria meningitidis*, including penicillin, ampicillin, chloramphenicol and ceftriaxone and the WHO recommends ceftriaxone in areas with limited health infrastructure and resources. It is important to note that in some cases, the damage to the body is too severe to prevent disability or death, therefore a high index of suspicion and early treatment is vital. In addition to treating an infected patient, all close contacts are traced and immunised or given antibiotic chemoprophylaxis to prevent them from developing and/or spreading the disease.

## **7. How can Meningococcal Disease be prevented?**

Meningococcal disease can be prevented by vaccination and maintaining healthy habits, like getting plenty of rest and not coming into close contact with people who are sick. Vaccination against *Neisseria meningitidis* is not part of the routine vaccination schedule (Expanded Programme of Immunization) but may be given in the event of an outbreak. The vaccine is also given as needed to high-risk groups such as severely immunocompromised people, pilgrims to Saudi Arabia and laboratory workers.

## **8. Where can I find out more information**

### **For Healthcare Workers:**

- **Medical/clinical and laboratory related queries:**
  - Contact the NICD Hotline +27 82 883 9920 (for use by healthcare professionals only)

Guidelines and other useful resources are available on the NICD website: [www.nicd.ac.za](http://www.nicd.ac.za)