

## Key aspects briefly summarized

- Meningococcal disease is a very severe, life threatening bacterial infection that can lead to death within a few hours if untreated.
- Transmission occurs from person to person by droplets. The risk is higher for travelers to regions with seasonal epidemics (meningitis belt in sub-Saharan Africa).
- The disease can be prevented by one dose of four-valent meningococcal vaccine and protection lasts for at least 5 years.

## Infectious agent / Disease

Meningococcal disease is a very severe, life threatening infection caused by bacteria called *Neisseria meningitidis*. Patients with meningococcal infection typically have sudden onset of fever, chills and headache rapidly followed by other symptoms like skin rash, nausea, vomiting, tiredness or confusion. Immediate medical attention and antibiotic treatment is needed.

## Occurrence / Risk areas

Meningococcal infections occur worldwide. The highest incidence is observed during seasonal epidemics in the dry season (December – June) in the so-called “meningitis-belt” in sub-Saharan Africa. There is also a higher risk of infection in situations with overcrowding or close contacts to many people, especially participants in the Hajj or Umrah pilgrimages in Saudi Arabia. Everyone can be infected, but young children and persons with certain medical conditions or treatments (e.g. non-functional spleen) are at higher risk for meningococcal infection.

## Transmission

The bacteria are transmitted from person to person by droplets, mostly through close personal contact such as living together or kissing.

## Symptoms

Meningococcal disease typically presents as meningitis or septicemia. Patients have sudden onset of fever, headache and malaise rapidly followed by other symptoms such as stiff neck, limb pain, rash, confusion, diarrhea and vomiting. Meningococcal infections are very serious and can be deadly within a few hours.

## Treatment

Patients with meningococcal disease need immediate medical attention and rapid intravenous antibiotic treatment. Severe complications such as breathing problems, low blood pressure, seizures or tissue necrosis can occur and need specific treatment.

## Prevention

For travelers to epidemic areas and persons with risk factors, vaccination is the best way to prevent meningococcal disease. One dose of a four-valent meningococcal conjugate vaccine (e.g. Menveo®) protects against the majority of meningococcal infections from 7-10 days after vaccination. The protection lasts for at least 5 years and the vaccine is licensed from the age of two years. Younger children can be vaccinated off label (i.e. not within the official recommendations); under the age of 12 months, a three-dose schedule is indicated. In case of recurrent exposure or continued risk, a booster dose is recommended every 5 years. For pilgrimages to Saudi Arabia (Hajj / Umrah), meningococcal vaccine (booster dose every 3-5 years, depending on vaccine) is mandatory. The vaccine is well tolerated, transient side effects such as fever, injection site pain, headache or tiredness can occur, but disappear by their own within a few days after vaccination.

## Further Information

Meningococcal vaccination is recommended in Switzerland as a complementary vaccination for children between 2 – 4 years and for adolescents between 11 – 15 years. Furthermore, it is recommended as a risk group vaccination for persons with certain medical conditions, for persons with close contact to a patient with meningococcal disease and for travelers to endemic areas. For more detailed information on the disease and Swiss national recommendations (in German, French, Italian) see:

<https://www.bag.admin.ch/bag/de/home/krankheiten/krankheiten-im-ueberblick/meningokokken-erkrankungen.html>