

## Meningococcal disease

**Meningococcal disease is a rare, but potentially devastating infection in travellers most prevalent in the 'meningitis belt' of sub-Saharan Africa particularly during the dry season**

Meningococcal disease is a rare, but potentially devastating infection. It is caused by the bacteria *Neisseria meningitidis* of which there are 6 disease-causing strains called serogroups (A, B, C, W, Y and X). Approximately 10 percent of the general population of the UK are thought to carry *N. meningitidis* in the lining of the nose and throat. Spread between individuals occurs through coughing, sneezing, kissing or during close contact with a carrier. Carriers do not have symptoms, but can develop disease when bacteria invade the bloodstream from the nasopharynx (area at the back of the nose and throat). Invasive disease is a rare but serious outcome usually presenting as septicaemia (blood poisoning) or meningitis (infection of the lining of the brain).

In most parts of the world meningococcal disease occurs as occasional cases in individuals or in small clusters. The disease is most common in the 'meningitis belt' of sub-Saharan Africa, which extends across the dry savannah regions from Senegal in the west, to Ethiopia in the east. These outbreaks occur particularly during the dry season and whilst previously most dominant serogroup, outbreaks due to serogroup A have virtually disappeared since the introduction of large vaccination campaigns. Serogroups W, C and X are still responsible for localised epidemics and occasionally widespread epidemic waves.

Following several large outbreaks associated with pilgrimage to the Kingdom of Saudi Arabia all those travelling for the Hajj or Umrah and seasonal workers to this area, are currently required to show proof of vaccination with quadrivalent vaccine (protecting against the A, C, W and Y serogroups) in order to obtain a visa.

Invasive meningococcal disease usually presents as meningitis or septicaemia. Symptoms of meningitis include: sudden onset of fever, intense headache, neck stiffness, nausea and vomiting. Symptoms of septicaemia include: fever, chills, confusion and a rash. Both conditions may progress rapidly and are serious diseases with high risk of complications and fatality.

### Prevention

Individuals should seek advice about their risk of meningitis prior to travel. Meningococcal disease in travellers is primarily a risk for those visiting areas prone to outbreaks or an area where a known outbreak is occurring. Travellers visiting such locations who are at particular risk include:

- Long-stay travellers who have close contact with the local population.
- Healthcare workers.
- Those visiting friends and relatives.
- Those travelling for Hajj and Umrah.
- Those who live or travel 'rough' such as backpackers.
- Individuals with no spleen or a poorly functioning spleen.
- Individuals with certain immune deficiencies.

### Meningococcal disease vaccines

Meningococcal vaccinations are administered as part of the routine NHS vaccination schedule. Meningococcal group C vaccination was the first meningococcal vaccination to be added to the schedule in 1999. Both meningococcal group B (Bexero®) and the quadrivalent meningococcal vaccine (protective against serogroups A,C,W and Y) have been offered to children from autumn 2015. [See NHS vaccination schedule](#). Travellers visiting higher risk regions are recommended to have the conjugate ACWY vaccine (Menveo®, Nimenrix® or MenQuadfi®) if their planned activities put them at increased risk (see above).

## Meningococcal disease vaccination schedules for travel

Age	ACWY schedule
Birth to less than one year*	<ul style="list-style-type: none"><li>• First dose of 0.5ml</li><li>• Second dose of 0.5ml one month after the first dose</li></ul>
From one year of age (including adults)	Single dose of 0.5ml

UK Health Security Agency Meningococcal: the green book, Chapter 22

**\*If the infant has already had two MenC vaccinations then two MenACWY conjugate vaccines should also be given.**

Please note the manufacturers information may differ to the 'Green book' as of May 2022, Nimenrix® is licensed from 6 weeks of age, MenQuadfi® from 12 months of age and Menveo® from 2 years of age. The use of these vaccines in some infant age groups is off-license, following UK Health Security Agency, Immunisation against infectious disease, the 'Green book' (see resources).

## Resources

- More detailed information can be found in our [meningococcal disease factsheet](#)
- [UKHSA: Immunisation against infectious disease. the 'Green book' Meningococcal Chapter 22](#)
- [UKHSA Meningococcal disease: guidance, data and analysis](#)
- [MHRA Drug Safety Update: Off-label or unlicensed use of medicines: prescribers' responsibilities](#)
- Further details on the vaccines can be found on the [Summary of Product Characteristics \(SPC\) on the electronic medicines compendium](#)