

Meningococcal Disease – who needs clearance antibiotics?

Meningococcal disease is caused by a bacteria called *Neisseria meningitidis* sp. These meningococci live in the back of the throat. They are fragile, fastidious about colonisation sites, and die very easily. Meningococci are NOT passed around like coughs and colds. Meningococci are acquired through prolonged close contact.

The incubation period for developing meningococcal disease is up to seven days (usually three to five days).

Clearance antibiotics should only be given to the following people (see box below) who have had contact with the case seven days prior to the onset of the case's illness. They should be commenced as soon as possible after diagnosis.

Household contacts are defined as those people living in the same house and include recent visitors who stayed overnight, in the seven days preceding the onset of the case's illness.

Dormitory contacts (boarding schools, military barracks, school camps, and hostels) in the seven days preceding the onset of the case's illness.

Intimate contacts such as boyfriend/ girlfriend/ sexual partner.

Medical, nursing, or paramedical staff who have performed mouth-to-mouth resuscitation or intubation or suction or similar intimate treatment with a case of meningococcal disease *prior to being started on therapeutic antibiotics*.

It is important to remember that clearance antibiotics are to prevent further spread of infection and are not a treatment for meningococcal disease. Contacts of cases must be alert for signs and symptoms, whether or not clearance antibiotics have been administered.

The risk of meningococcal disease in close contacts, whilst higher than the general population, is still very low. The risk is highest in the first seven days after a case and falls rapidly during the following weeks. If antibiotic prophylaxis is not given, the absolute risk to an individual in the same household, one to 30 days after an index case is about one in 300. The increased risk in household members may be due to a combination of genetic susceptibility in the family, increased exposure to virulent meningococci and environmental factors.¹

Meningococcal carriage and disease

Carriage of meningococci (all strains included) is relatively common.

The incubation period for meningococcal disease is up to seven days. People who do not develop the disease in the seven days after colonisation may become asymptomatic 'carriers'.

Meningococci are likely to have been acquired from an asymptomatic person (carrier) who either: lives in the same household or is a sexual partner of the sick person. Children tend to acquire their disease from adults (in their household) whereas teenagers and adults are more likely to acquire their disease from close friends.

Note that most strains of meningococci do not cause disease, but instead provide protection. Other protective bacteria such as Lactamias (*Neisseria lactamica* spp) also colonise the nasopharynx. By giving chemoprophylaxis when it is not needed, these bacteria, which are protective, are also eradicated. People can carry meningococci, with no ill effects, sometimes for many months. Carriage produces protection. There is no evidence to suggest carriers will suddenly become cases after weeks or months of carriage.

Clearance antibiotics should only be given to those people who are at risk of either being the source of disease in the case, or of having acquired the invading organism from the case. This is to prevent further transmission.

Which contacts do not need clearance antibiotics?

Non intimate kissing contacts, even if on the mouth

Work, school, playgroup or occasional childcare contacts

People who have shared cigarettes, bongs, food, drink (including sharing drink bottles), lip balm, communion cup, musical instruments or whistles.

Sharing the same aeroplane, train, bus or car for a period less than 8 hours

What happens during outbreaks?

When there are two or more cases in four weeks of exactly the same strain in a childcare centre, school or university, all students and staff in the same class or in the same group as the case will be given clearance antibiotics. If serogroup C disease is identified a vaccination campaign may be instituted.

¹ Public Health Laboratory Service Meningococcus Forum: Guidelines for public health management of meningococcal disease in the UK. September 2002. Guidelines are available on www.phls.co.uk/publications/cdph/issues/CDPHvol5/No3/Meningoccal_Guidelines.pdf