

## Meningitis (*Neisseria meningitidis*)

### *What is meningitis?*

Meningitis is a medical term meaning “inflammation of the meninges” which are the membranes enclosing the human brain and spinal column.

*Neisseria meningitidis* is one of many bacteria that cause the disease. Viruses can cause meningitis as well.

*Neisseria meningitidis* is found without symptoms in people around the world. The bacteria causes illness sporadically, either as isolated cases or epidemics. There are nine types of *N. meningitidis*. Types A, B, and C cause more than 90 percent of meningococcal disease globally.

### *How does it spread?*

Humans are the only known reservoir for *N. meningitidis*. The organism is spread primarily through direct contact from person to person through nasopharyngeal secretions (i.e. mucous from the nose or mouth.)

*N. meningitidis* is extremely sensitive to drying and cooling and rarely survives outside the body for more than a few minutes. It is not easily transmitted through suspended aerosols. If the organism is coughed onto a desk and remains there for a minute or longer, it will dry out and die.

People who have intimate, household or child-care contact with an infected individual are at higher risk of contracting the illness. Intimate contact is defined as direct contact with the nasopharyngeal secretions of an infected person (i.e. through kissing, mouth to mouth resuscitation, sharing eating utensils, sharing smoking materials, sharing beverages.)

### *How serious is N. meningitidis?*

Symptoms include an intense headache, fever, nausea and stiff neck, sometimes accompanied by a rash. Delirium and coma can occur in severe cases.

With early diagnosis and good medical treatment, fatality is less than 12 percent.

In some cases, the bacteria remains in the blood stream, causing a type of “blood poisoning.” The bacteria can also cause pneumonia, septic arthritis and other syndromes.

### *What is the medical treatment?*

Antimicrobial agents to which the organisms are sensitive are usually prescribed for *N. meningitidis* patients. Drugs are chosen in accordance with the patient’s age and pregnancy status as well as the organism’s particular drug sensitivity. Dosage and treatment length vary.

A vaccine is available to people in high-risk groups including military recruits and travelers to areas with high rates of endemic meningococcal disease. The vaccine is effective on eight types of the bacteria. It is not effective on Type B.

### *What can be done to prevent this disease?*

At the onset of an outbreak, health officials follow intervention techniques including: careful surveillance; early diagnosis and immediate treatment of suspect cases and their household and intimate contacts.

Close contacts of an infected individual are typically given a regimen of antibiotics to ward off the bacteria. In an outbreak, health officials sometimes vaccinate those individuals most at risk of contracting the disease. For example, in May 1993, the University of Connecticut vaccinated about 65 percent of its staff, faculty and students after several cases of *N. meningitidis* were reported within a week’s time.

### *For more information ...*

For specific concerns about meningitis, call the  
NH Department of Health and Human Services  
Bureau of Communicable Disease Control  
603-271-4496

or

1-800-852-3345 x4496