

Live Well to

Learn Well

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## What is meningitis?

Your “meninges” are the protective membranes that cover both your brain and spinal cord. “Meningitis” is the inflammation of the meninges. Such inflammation can be caused by viruses and bacteria, as well as other organisms. The cause of the meningitis determines its severity and how it will be treated.

- Viral meningitis is common and contagious, but it is rarely serious or fatal. It does not require antibiotics.
- Bacterial meningitis is rare, often comes on suddenly, and can progress rapidly to serious, potentially life-threatening disease.

## What is meningococcal disease?

Meningococcal disease is a severe infection of either the blood or the meninges.

- When the infection is in the blood, it is called meningococcemia.
- When the infection is in the meninges, it is called meningococcal meningitis.

Both of these infections are caused by a bacterium called *Neisseria meningitidis*. This bacterium has at least 13 different serogroups (types). Five of these serogroups (A, B, C, Y, and W-135) cause almost all meningococcal disease.

## How common is it?

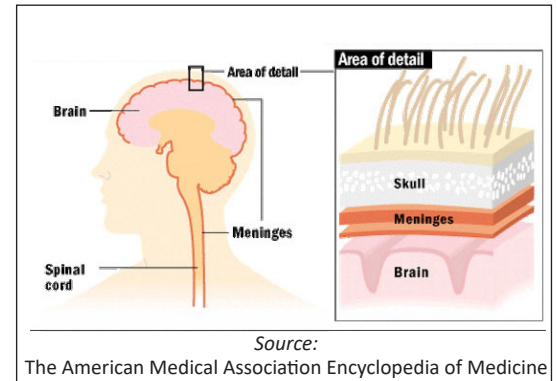
Meningococcal disease is rare, striking annually about 1 in every 100,000 people in the general U.S. population. However:

- The rate of meningococcal infection for students living in residence halls in the U.S. is about 2 in every 100,000 students.
- The rate of infection is highest among first year students living in residence halls, with about 5 in every 100,000 freshmen infected. This higher risk is due to the fact that students live with many other people and may be exposed to bacteria they have not previously encountered.

Data also suggest that certain behaviors — exposure to passive and active smoking, bar patronage, and excessive alcohol consumption — may increase the risk for contracting the disease.

## What are the symptoms of bacterial meningitis?

Early symptoms of meningococcal disease may include fever, headache, body aches and feeling very tired or sleepy. Other symptoms that may



Source:  
The American Medical Association Encyclopedia of Medicine

*The meninges are the protective membranes covering your brain and spinal column.*

occur are: stiff neck, nausea, vomiting, confusion, sensitivity to light, and rash.

*NOTE: If a flu-like illness takes a rapid turn for the worse and is accompanied by any of the symptoms listed above, a person should seek immediate medical assistance.*

## How is meningococcal meningitis transmitted?

*Neisseria meningitidis* bacteria are spread through the exchange of respiratory and throat secretions like saliva and mucus, and situations in which there is very close contact, such as:

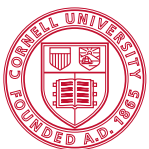
- kissing
- sharing utensils, food or drinks, lip balms, water bottles
- sharing cigarettes or smoking devices
- uncovered face-to-face coughing or sneezing

Fortunately, these bacteria are not as contagious as what causes the common cold or the flu. They are not spread by casual contact with an infected person (such as in a classroom, dining room, bar, rest room) or by breathing the air where a person with meningococcal disease has been.

## Is there a vaccine for meningococcal disease?

Yes, and vaccination offers the best protection against the disease.

- Quadrivalent conjugate vaccines protect against A, C, Y, and W-135 types of meningococcal bacteria.
- Serogroup B meningococcal vaccines, though not given routinely, are an important step forward for controlling serogroup B meningococcal disease, especially in outbreak settings.



## Who should consider vaccination?

The U.S. Centers for Disease Control and Prevention recommend vaccination of:

- all adolescents against meningococcal disease with two doses of meningitis-2015 conjugate vaccine (MCV4), usually given at ages 12 and 16. If the first dose was administered before age 16, a second dose should be administered before enrollment in college. (If the first dose is given at or after age 16, one dose is sufficient.)
- students living in residence halls or similar housing.
- students who socialize in groups (such as sorority and fraternity members, members of athletic teams, others who attend bars and large parties) may be at higher risk.

The serogroup B meningococcal vaccines are recommended for people 10 years or older who are identified as being at increased risk, either because of certain medical conditions or a local outbreak of serogroup B meningococcal disease.

New York State Public Health Law requires that all students taking 6 or more credits provide information indicating that they have either been vaccinated or choose not to be at this time. Cornell students do this through the new student requirements process.

## Can I get vaccinated at Cornell?

Meningococcal vaccination is available at Cornell Health.

- The cost of recommended vaccines is covered by Cornell's Student Health Plan (SHP).
- Students with private health insurance are responsible for the cost.

Call for information about vaccines, related costs, or to set up an appointment. You can also schedule an appointment online through myCornellHealth.

## How else can one reduce the risk of contracting meningococcal disease?

Maximize your body's own immune system response. A lifestyle that includes a balanced diet, adequate sleep, appropriate exercise, and reduction of stress is important. (Not realistic here at Cornell? Do your best! Even small improvements may help.)

- Avoid inhalation of cigarette smoke, excessive alcohol consumption, and, if possible, upper respiratory tract infections.
- Avoid exposure to oral secretions by not sharing things that have touched others' mouths (see list above).
- Protect others by covering your nose and mouth when you cough or sneeze.
- Clean your hands frequently and thoroughly.

## Concerned about exposure?

Here's what you need to know if you are concerned about a possible exposure to someone who has been diagnosed with meningococcal disease:

- The county and state health departments work closely with the patient (when possible), friends, and family members to identify everyone who may have had very close contact with the patient during the "incubation period" (most commonly 3 to 4 days before the onset of symptoms).
- "Very close contact" means sharing the same drinking utensil (cup, glass, can, or jug); eating from the same piece of pizza or other foods; sharing eating utensils or eating snack foods out of the same bowl; sharing a cigarette, lip balm, or lipstick; kissing; being in the direct path of respiratory droplets sprayed by coughing or sneezing.
- Close contacts should be evaluated by a health care professional and treated as soon as possible with preventive or "prophylactic" antibiotics, such as one-dose ciprofloxacin ("cipro").

## How can I find more information?

If you have concerns about your health or questions about meningococcal disease, please call us at 607-255-5155 to talk with a health care provider.

### Other trusted resources:

- Tompkins County Whole Health: 607-274-6604
- Search "meningitis" on any of these websites:
  - New York State Department of Health [[health.ny.gov](http://health.ny.gov)]
  - American College Health Association [[acha.org](http://acha.org)]
  - U.S. Centers for Disease Control and Prevention (CDC) [[cdc.gov](http://cdc.gov)]