

Search

- [Request an Appointment](#)
- [Find a Doctor](#)
- [Find a Job](#)
- [Give Now](#)

- [Log in to Patient Account](#)
- [Translated Content](#)
- [Espanol](#)
- [Portuguese](#)
- [Arabic](#)
- [Mandarin](#)

- [Twitter](#)
- [Facebook](#)
- [Google](#)
- [YouTube](#)
- [Pinterest](#)

Appointments at Mayo Clinic
Mayo Clinic offers appointments in Arizona, Florida and Minnesota and at Mayo Clinic Health System locations.

[Request Appointment](#)

Diseases and Conditions



Meningitis

- [Basics](#)
- [In-Depth](#)
- [Expert Answers](#)
- [Multimedia](#)
- [Resources](#)
- [News From Mayo Clinic](#)

- [Definition](#)
- [Symptoms](#)
- [Causes](#)**
- [Risk factors](#)
- [Complications](#)
- [Preparing for your appointment](#)
- [Tests and diagnosis](#)
- [Treatments and drugs](#)

Causes

By Mayo Clinic Staff

Meningitis usually results from a viral infection, but the cause may also be a bacterial infection. Less commonly, a fungal infection may cause meningitis. Because bacterial infections are the most serious and can be life-threatening, identifying the source of the infection is an important part of developing a treatment plan.

Bacterial meningitis

Acute bacterial meningitis usually occurs when bacteria enter the bloodstream and migrate to the brain and spinal cord. But it can also occur when bacteria directly invade the meninges, as a result

Advertisement

Atrial Fibrillation
Get information on symptoms, diagnosis and treatment at Mayo Clinic.

[Discover resources](#)

of an ear or sinus infection, or a skull fracture, or rarely, after some surgeries.

The Mayo Clinic Diet

What is your weight-loss goal?

5-10 lbs »

11-25 lbs »

25+ lbs »

#1
Hospital
in the Nation



Free E-newsletter

Subscribe to
Housecall

Our general interest e-newsletter keeps you up to date on a wide variety of health topics.

[Sign up now](#)

A number of strains of bacteria can cause acute bacterial meningitis. The most common include:

- **Streptococcus pneumoniae (pneumococcus).** This bacterium is the most common cause of bacterial meningitis in infants, young children and adults in the United States. It more commonly causes pneumonia or ear or sinus infections. There is a vaccine to help reduce the occurrence of this infection.
- **Neisseria meningitidis (meningococcus).** This bacterium is another leading cause of bacterial meningitis. Meningococcal meningitis commonly occurs when bacteria from an upper respiratory infection enter your bloodstream. This infection is highly contagious. It affects mainly teenagers and young adults, and may cause local epidemics in college dormitories, boarding schools and military bases. There is a vaccine to help reduce the occurrence of this infection.
- **Haemophilus influenzae (haemophilus).** Haemophilus influenzae type b (Hib) bacterium used to be the leading cause of bacterial meningitis in children. But new Hib vaccines — available as part of the routine childhood immunization schedule in the United States — have greatly reduced the number of cases of this type of meningitis.
- **Listeria monocytogenes (listeria).** These bacteria can be found in soft cheeses, hot dogs and luncheon meats. Fortunately, most healthy people exposed to listeria don't become ill, although pregnant women, newborns, older adults and people with weakened immune systems tend to be more susceptible. Listeria can cross the placental barrier, and infections in late pregnancy may cause a baby to be stillborn or die shortly after birth. People with weakened immune systems, due to disease or medication effect, are most vulnerable.

Viral meningitis

Each year, viruses cause a greater number of cases of meningitis than do bacteria. Viral meningitis is usually mild and often clears on its own. A group of viruses known as enteroviruses is responsible for most viral meningitis cases in the United States. These viruses tend to circulate in late summer and early fall. Viruses such as herpes simplex virus, HIV, mumps, West Nile virus and others also can cause viral meningitis.

Chronic meningitis

Chronic forms of meningitis occur when slow-growing organisms invade the membranes and fluid surrounding your brain. Although acute meningitis strikes suddenly, chronic meningitis develops over two weeks or more. Nevertheless, the signs and symptoms of chronic meningitis — headaches, fever, vomiting and mental cloudiness — are similar to those of acute meningitis.

Fungal meningitis

Fungal meningitis is relatively uncommon and causes chronic meningitis. Occasionally it can mimic acute bacterial meningitis.

Atrial Fibrillation

Get information on symptoms, diagnosis and treatment at Mayo Clinic.

Discover
resources



Mayo Clinic is a not-for-profit organization. Proceeds from website advertising help support our mission. Mayo Clinic does not endorse non-Mayo products and services.

[Advertising & Sponsorship Policy](#) | [Opportunities](#)

Mayo Clinic Store

Check out these best-sellers and special offers on books and newsletters from Mayo Clinic.

[Try Mayo Clinic Health Letter FREE!](#)

[Mayo Clinic Book of Alternative Medicine](#)

[Get a better night's sleep with this three-](#)

However, this form of meningitis isn't contagious from person to person. Cryptococcal meningitis is a common fungal form of the disease that affects people with immune deficiencies, such as AIDS. It's life-threatening if not treated with an antifungal medication.

In 2012, fungal meningitis made the news because contaminated corticosteroid injections caused a multistate outbreak. Fungal meningitis cases were associated with contaminated medication injected into the spine for back or neck pain.

Other meningitis causes

Meningitis can also result from noninfectious causes, such as chemical reactions, drug allergies, some types of cancer and inflammatory diseases such as sarcoidosis.

[← Symptoms](#)

[Risk factors →](#)

[f Share](#)

[t Tweet](#)

March 19, 2013

[References](#) 



YOU ARE...
THE CAMPAIGN FOR MAYO CLINIC

Mayo Clinic is a not-for-profit organization. Make a difference today.

[Learn more](#)

GIVE NOW 

Products and Services

[Mayo Clinic Membership](#)

[Newsletter: Mayo Clinic Health Letter](#)

[Book: Mayo Clinic Family Health Book, 4th Edition](#)

See also

[Anthrax](#)

[Coxsackievirus in children: How serious is it?](#)

[Lyme disease](#)

[step action plan](#)

[Reduce the impact of stress on your health](#)

[An authoritative and approachable guide to going gluten-free](#)

Ads by Google

Ads by Google



¿Buscando Trabajo?

aflac.com/BilingualRecruiting

Carrera de Agente de Ventas Bilingüe.
Encuentre Más Info Aquí.

Arrest Records Now Online

spyfly.com

Search For Any Name Free. We Have Full Criminal Records.

Best Older Women Haircuts

hair.stylebistro.com

See pictures of the hottest hair styles for older women.

Optimization for your Mac

macpaw.com/Mac_Optimization

Optimize performance of your Mac! Learn what slows down your Mac.

Other Topics in Patient Care & Health Info

[Healthy Lifestyle](#)

[Symptoms A-Z](#)

[Diseases and Conditions A-Z](#)

[Tests and Procedures A-Z](#)

[Drugs and Supplements A-Z](#)

[Appointments](#)

[Patient and Visitor Guide](#)

[Patient Online Services](#)

[Home](#) > [Diseases and Conditions](#) > [Meningitis](#) > [Basics](#) > [Causes](#)

CON-20019713

[REQUEST APPOINTMENT](#)

[GIVE NOW](#)

[CONTACT US](#)

[ABOUT MAYO CLINIC](#)

[EMPLOYEES](#)

[SITE MAP](#)

[ABOUT THIS SITE](#)

Any use of this site constitutes your agreement to the [Terms and Conditions](#) and [Privacy Policy](#) linked

A single copy of these materials may be reprinted for noncommercial personal use only. "Mayo," "Mayo

We comply with the [HONcode standard for trustworthy health information](#): [verify here](#).

below.

[Terms and Conditions](#)

[Privacy Policy](#)

[Notice of Privacy Practices](#)

Clinic," "MayoClinic.org," "Mayo Clinic Healthy Living," and the triple-shield Mayo Clinic logo are trademarks of Mayo Foundation for Medical Education and Research.



© 1998-2015 Mayo Foundation for Medical Education and Research. All rights reserved.