Viral Meningitis

Viral meningitis is generally less severe and resolves without specific treatment.

Causes
Most viral meningitis cases in the United States, especially during the summer months, are caused by enteroviruses; however, only a small number of people with enterovirus infections actually develop meningitis.

Other viral infections that can lead to meningitis include
- Mumps
- Herpesvirus, including Epstein-Barr virus, herpes simplex viruses, varicella-zoster virus (which also causes chicken pox and shingles), measles, and influenza
- Viruses spread through mosquitoes and other insects (arboviruses)
- In rare cases LCMV (lymphocytic choriomeningitis virus), which is spread by rodents, can cause viral meningitis

Risk Factors
Viral meningitis can affect anyone. But infants younger than 1 month old and people whose immune systems are weak are at higher risk for severe infection. People who are around someone with viral meningitis have a chance of becoming infected with the virus that made that person sick, but they are not likely to develop meningitis as a complication of the illness.

Factors that can increase your risk of viral meningitis include:
- Age
  - Viral meningitis occurs mostly in children younger than age 5.
- Weakened immune system.
  - There are certain diseases, medications and surgical procedures that may weaken the immune system and increase risk of meningitis.

Transmission
Enteroviruses, the most common cause of viral meningitis, are most often spread from person to person through fecal contamination (which can occur when changing a diaper or using the toilet and not properly washing hands afterwards). Enteroviruses can also be spread through respiratory secretions (saliva, sputum, or nasal mucus) of an infected person. Other viruses, such as mumps and varicella-zoster virus, may also be spread through direct or indirect contact with saliva, sputum, or mucus of an infected person. Contact with an infected person may increase your chance of becoming infected with the virus that made them sick; however you will have a small chance of developing meningitis as a complication of the illness.
Signs & Symptoms

Meningitis infection is characterized by a sudden onset of fever, headache, and stiff neck. It is often accompanied by other symptoms, such as

- Nausea
- Vomiting
- Photophobia (sensitivity to light)
- Altered mental status

Viral meningitis is an infection of the meninges (the covering of the brain and spinal cord) that is caused by a virus. Enteroviruses, the most common cause of viral meningitis, appear most often during the summer and fall in temperate climates.

Viral meningitis can affect babies, children, and adults. It is usually less severe than bacterial meningitis and normally clears up without specific treatment. The symptoms of viral meningitis are similar to those for bacterial meningitis, which can be fatal. Because of this, it is important to see a healthcare provider right away if you think you or your child might have meningitis.

Symptoms of viral meningitis in adults may differ from those in children:

**Common symptoms in infants**

- Fever
- Irritability
- Poor eating
- Hard to awaken

**Common symptoms in adults**

- High fever
- Severe headache
- Stiff neck
- Sensitivity to bright light
- Sleepiness or trouble waking up
- Nausea, vomiting
- Lack of appetite

The symptoms of viral meningitis usually last from 7 to 10 days, and people with normal immune systems usually recover completely.

**Diagnosis**

If meningitis is suspected, samples of blood or cerebrospinal fluid (near the spinal cord) are collected and sent to the laboratory for testing. It is important to know the specific cause of meningitis because the severity of illness and the treatment will differ depending on the cause.

The specific causes of meningitis may be determined by tests used to identify the virus in samples collected from the patient.
Treatment
There is no specific treatment for viral meningitis. Antibiotics do not help viral infections, so they are not useful in the treatment of viral meningitis. Most patients completely recover on their own within 7 to 10 days. A hospital stay may be necessary in more severe cases or for people with weak immune systems.

Prevention
People with certain viral infections can sometimes develop meningitis. There are no vaccines for the most common causes of viral meningitis. Thus, the best way to prevent it is to prevent viral infections. However, that can be difficult since sometimes people can be infected with a virus and spread the virus even though they do not appear sick. Following are some steps you can take to help lower your chances of becoming infected with viruses or of passing one on to someone else:

- Wash your hands thoroughly and often, especially after changing diapers, using the toilet, or coughing or blowing your nose.
- Clean contaminated surfaces, such as doorknobs or the TV remote control, with soap and water and then disinfect them with a dilute solution of chlorine-containing bleach.
- Avoid kissing or sharing a drinking glass, eating utensil, lipstick, or other such items with sick people or with others when you are sick.
- Make sure you and your child are vaccinated. Vaccinations included in the childhood vaccination schedule can protect children against some diseases that can lead to viral meningitis. These include vaccines against measles and mumps (MMR vaccine [http://www.cdc.gov/vaccines/pubs/vis/default.htm#mmr]) and chickenpox (varicella-zoster vaccine [http://www.cdc.gov/vaccines/pubs/vis/default.htm#varicella]).
- Avoid bites from mosquitoes and other insects that carry diseases that can infect humans.
- Control mice and rats. If you have a rodent infestation in and/or around your home, follow the cleaning and control precautions listed on CDC’s website about LCMV [http://www.cdc.gov/ncidod/dvrd/spb/mnpages/dispages/lcmv.htm] (Lymphocytic choriomeningitis virus).

Related Links
- Mumps [http://www.cdc.gov/mumps/index.html]
- MMR Vaccine [http://www.cdc.gov/vaccines/pubs/vis/default.htm#mmr]
- Chickenpox [http://www.cdc.gov/chickenpox/index.html]
- Chickenpox Vaccine [http://www.cdc.gov/vaccines/pubs/vis/default.htm#varicella]
- Arboviruses [http://wwwdev.cdc.gov/ncidod/dvbid/arbor/arbdet.htm]
- Lymphocytic Choriomeningitis Virus [http://www.cdc.gov/ncidod/dvrd/spb/mnpages/dispages/lcmv.htm]