

## **Virus Vs. Bacteria Symptoms**

### **Introduction**

Headache, runny nose, sore throat, fever? You may wonder how best to relieve your symptoms, but first you need to know if your aches and pains are caused by a viral or bacterial infection. If it's bacteria, you can use antibiotics to kill the infection and relieve your symptoms. If it's a virus, though, rest, fluids and medications for your symptoms are the best treatment. Viruses can't be killed by antibiotics.

### **Virus Symptoms**

Most viral infections include the common cold, flu, upper respiratory infections, chickenpox and diseases such as AIDS. According to Mayo Clinic internist James M. Steckelberg, M.D., viral infections don't respond to antibiotics and only survive through living hosts -- humans, animals or plants. Viruses are smaller than bacteria and after they invade the body, they use cells to reproduce and continue attacking the body.

Symptoms include cough, low-grade fever, runny nose, sore throat and trouble sleeping. In cases of the flu, additional symptoms can include high fever, chills, body aches, nausea or vomiting. Viruses often attack multiple areas of the body, producing more of the above symptoms. The best treatment is plenty of fluids, rest, and some over-the-counter medications used to treat symptoms such as fever and sore throat.

### **Bacteria Symptoms**

Bacterial infections include strep throat, urinary tract infections, ear infections and pneumonia. Duke's Pediatric Residency Program Director Betty Staples, M.D., says that bacteria respond to antibiotics because bacteria usually attack a specific area of the body, and usually the infection is killed shortly after treatment.

Symptoms include those similar to virus symptoms, such as cough, runny nose and sore throat. However, the viral symptoms usually last longer, beyond 10 to 14 days, and often get worse after a couple of days instead of better. Other symptoms may include diarrhea, headache, sinus pain and frequent urination.

Bacteria are single-celled organisms that live in many environments and don't require a living host to multiply. Some bacteria are good and help the body in daily functions.

### **Misconceptions**

Both viruses and bacteria can cause pneumonia, meningitis and diarrhea. Though bacteria can be killed by antibiotics and vaccines, bacteria multiply and mutate more often than viruses; therefore, bacteria often become resistant to known antibiotics and vaccines if over-prescribed. It's important that you always take all of the prescribed medication and listen to your doctor's instructions.

While viruses can't be killed by antibiotics, antiviral drugs can be used to reduce the recovery period for the flu. However, they are ineffective for a cold.

The Mayo Clinic staff says that the simplest and best protection against germs is washing hands frequently, using warm water and scrubbing hands back and front, between fingers, wrists and under fingernails for at least 20 seconds.

You can also use alcohol-based sanitizers, but be sure they contain at least 60 percent alcohol or they may be ineffective at preventing infection. Make sure to rub hands together with the sanitizer at least 25 seconds or until dry

### **Key Concepts**

1. bacteria
2. virus
3. symptoms

### **References**

1. [Mayo Clinic: Bacterial infection vs Viral infection](http://www.mayoclinic.com/health/infectious-disease/AN00652) [<http://www.mayoclinic.com/health/infectious-disease/AN00652>]
2. [DukeHealth.org: Bacterial Infection or Virus?](http://www.dukehealth.org/health_library/advice_from_doctors/your_childs_health/bacterial_infections) [[http://www.dukehealth.org/health\\_library/advice\\_from\\_doctors/your\\_childs\\_health/bacterial\\_infections](http://www.dukehealth.org/health_library/advice_from_doctors/your_childs_health/bacterial_infections)]
3. [Mayo Clinic: Hand washing: Do's and don't](http://www.mayoclinic.com/health/hand-washing/HQ00407/METHOD=print) [<http://www.mayoclinic.com/health/hand-washing/HQ00407/METHOD=print>]