

University of Mary Washington

Student Health Center

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Instructions for Treatment of Mononucleosis

- **Mononucleosis is caused by a virus.**
Antibiotics do not help mono but may be prescribed for secondary bacterial infections.
- **Email your professors.**
Let them know that you have mononucleosis.
- **Drink lots of liquids.**
Cold or cool liquids reduce inflammation and soothe your throat. Stay hydrated.
- **Avoid hot drinks.**
Heat temporarily masks throat pain but worsens inflammation and pain several hours later.
- **Take Ibuprofen** if needed for pain
Avoid Tylenol as it can be hard on your liver. The maximum dose of Ibuprofen is 800 mg (four of the 200 mg pills) every 8 hours. Alternatively, you may take 600 mg every six hours. Ibuprofen can upset your stomach.
- **Take a vitamin** every day.
Your body needs extra vitamin C, zinc, magnesium and B vitamins for healing.
- **Eat a well balanced diet.**
Avoid sugars and starchy foods and eat plenty of lean meats, good fats and vegetables.
- **Don't drink alcohol.**
It impairs your immune system and will delay your healing.
- **Avoid contact sports** for one month.
A hard blow to the left upper abdomen could rupture your spleen.
- **Get 8 to 10 hours of sleep** per night and take naps during the day as needed.
You will be tired but you don't have to be confined to your bed. Staying mobile, going to class and walking will help you recover faster.
- **Give yourself permission to be tired.**
You will feel better and worse for several months while recovering from mono. During the times you feel more tired, reduce your commitments and rest more.
- **If you cannot swallow or have difficulty with breathing** (because of the big tonsils), go to the emergency room.

Mononucleosis

What is Mononucleosis?

Infectious mononucleosis is also known as glandular fever and simply ... mono. The Epstein-Barr virus (EBV), a member of the herpes family of viruses, is responsible for mono and can be found anywhere in the world. By the time you reach your late 30s, you have a 95% chance of being infected with the virus. Virtually every adult you know has been infected! ... yet ... most will be unable to remember ever having the disease.

Why is this? Many children, especially in lesser developed countries, contract the virus when young. They have no symptoms or only a mild, brief illness that cannot be distinguished from other childhood viruses. In the United States though, children are less likely to get the virus and more likely to become infected later during adolescence. When you become infected with EBV as a teenager, you have a 35 to 50% chance of developing infectious mononucleosis.

An EBV infection is not always mono?

Infectious mononucleosis is a distinct syndrome, a collection of signs and symptoms which we recognize and call mono. You can have a mild EBV infection without the classic syndrome of mono. An estimated 60 to 80% of college students have had an EBV infection but the illness was so mild that they were not diagnosed with mono.

What are the Symptoms of Mono?

Mono typically presents with the sudden onset of a high fever, a severe sore throat similar to strep throat and swollen lymph glands in the front and/or back of the neck. As with any viral infection, you may have severe fatigue. You may also have swollen glands in your armpit or groin, headaches, general body aches, chills, dizziness, loss of appetite, swollen eyelids, and red spots or white patches on the back of the throat.

EBV attacks your B-lymphocytes, a special type of white blood cell usually found in lymph nodes. For this reason your lymph nodes swell, especially the ones in your throat ... your tonsils. B-lymphocytes are also found in the spleen and liver and these organs can swell too.

Because of the severe sore throat, you may receive an antibiotic. If this antibiotic is ampicillin or amoxicillin, you have a 90% chance of breaking out in a pink rash all over your body. This is not a penicillin allergy. Without taking amoxicillin, you have a 10% chance of developing the rash.

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What are the complications of Mono?

- **Difficulty breathing or swallowing**
Your tonsils may swell enough to block your throat making it difficult to breath or swallow. You may need to take steroids for this.
- **Hepatitis**
Most people develop inflammation of the liver, also known as hepatitis. This is temporary and rarely causes a serious problem. No treatment is necessary for this though an occasional patient will have a short period of jaundice (yellow skin).
- **An enlarged spleen**
Most people develop an enlarged spleen (the organ on the left upper side of your abdomen). If you strain hard or receive a blow over the spleen, it can rupture. You would then need your spleen taken out. Although a ruptured spleen is rare (less than 1 in a 1000), it's wise to be aware of the signs and call your doctor right away ... if you have pain in the left upper part of your abdomen, feel lightheaded, feel like your heart is beating fast and hard, bleed more easily than usual and have trouble breathing. A ruptured spleen is most likely to occur during the second to fourth week of the illness.
- **Rare complications**
Very rarely you may develop inflammation of the heart muscle (myocarditis), inflammation of the brain (aseptic meningitis or encephalitis) or paralysis of the muscles from Guillain-Barré syndrome. Almost no one every dies from this disease ... though you might feel that you are going to! Even rarer complications are lymphoma or a nose-mouth cancer later in life.
- Mono does not cause miscarriages or birth defects in pregnant women. There are no known associations between active EBV infection and problems during pregnancy, such as miscarriages or birth defects.

How Long Does Mono Last?

The symptoms of mono can linger. You will usually be sick with the high fever and severe sore throat for one to two weeks, occasionally up to four weeks. You will have an up and down course over the next one to four months as you will get better and then a little worse and then better again. Fatigue from mono can last for many more months.

You can carry the mono virus in a few cells in your throat and blood for the rest of your life. This virus may reactivate from time to time and make you contagious without any symptoms.

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How Do You Get Mono?

Yep, it's known as the kissing disease. Transmission of the virus usually comes from contact with saliva of an infected person ... and usually they do not know they are carrying the virus. While kissing is the most common way to get the virus, in theory, any contact with infectious saliva can do it. Saliva can get onto hands, toys, food, cups, eating utensils and toothbrushes. This is not a common way to spread the disease though, as it is most unusual for classmates and family to get the illness. Most patients have no idea where they picked the virus up.

Once exposed to the virus, it can take as little as one week but more typically 30 to 50 days for the mono syndrome to start. During that time you may feel vaguely ill.

Can I Prevent Other People From Getting Mono?

Don't kiss them, share drinking glasses or toothbrushes. The virus is transmitted by saliva, not by touch. Most of the people you are around probably have already had the infection and are not at risk for developing the disease again. There is no vaccine or drug to prevent mono and you were spreading the virus around before your symptoms developed.

How Do You Make the Diagnosis?

Suspicion. A teenager or young adult who presents with a severe sore throat, fever and tender, swollen neck glands either has strep throat or mono. A rapid strep test can determine if strep is present. There is a rapid mononucleosis blood test called a Monospot but this test is often not helpful when you first present to the office. While the strep test detects the presence of the strep on a swab, the mono test detects the presence of antibodies in your blood. It takes probably five days or more of high fever and severe sore throat before you make antibodies. Thus, a negative mono test during the first five days is useless. We can only prove you have mono with the test. We can't prove that you don't have mono!

Sometimes a complete blood count (CBC) gives clues that mono is present. You will have an excess number of "*atypical lymphocytes*". If your symptoms are really suspicious for mononucleosis, yet the mono test is repeatedly negative, you may have an infection with another virus that imitates mono such as toxoplasmosis and CMV or cytomegalovirus.

Additional blood work to directly test antibodies can be done to distinguish mono, toxoplasmosis and CMV.

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What is the Treatment for Mono?

Mono is caused by a virus. Antibiotics do not kill viruses. Therefore, we do not prescribe antibiotics for mono. Though some antiviral drugs are effective for other herpes virus infections such as fever blisters and shingles, they are not effective for mono.

All we can do is treat the symptoms and wait for your body to recover. In severe cases, we will prescribe prednisone or another steroid to shrink your tonsils and glands. This is not done with every case and is not a standard recommended treatment. It can make you better quicker though. Here is a summary of the treatment:

- Rest when your body needs it. At one time, the standard treatment of mono was bedrest for one month. Unfortunately, one of the problems with bedrest is that it makes you more tired! You should do activities as you feel you can. Don't plan long or exhausting trips. Sleep when your body tells you to sleep.
- Do the basics ... school, rest and sleep. Cut back your schedule.
- If you have a fever, stay home.
- You do not need to be quarantined.
- Drink plenty of fluids but avoid alcohol.
- Eat a regular well balanced diet.
- The sore throat pain is hard to treat. Avoid hot drinks. Though they may be temporarily soothing, your throat will hurt more later. Throat lozenges are of minimal help. Sip on cold liquids, popsicles and frozen desserts to cool the throat. Remember that heat intensifies pain and ice numbs it.
- Take acetaminophen (Tylenol, Datril) or ibuprofen (Advil, Motrin, Nuprin) for fever and pain. Do not take aspirin as this may be associated with Reye's syndrome.
- You do not need an antibiotic unless you also have an additional bacterial infection such as strep throat.
- To avoid a ruptured spleen, avoid strenuous exercise and any contact sports (including "rough housing" for at least one month after you recover.
- It may take 3 to 6 months for an athlete to regain their former conditioning.
- Do not share eating or drinking utensils or your toothbrush. Wash your hands before preparing food and after going to the bathroom.
- Do not donate blood for at least six months.

What Are Some Other Resources?

A very good Internet sound and slide show on mononucleosis (and many other diseases) can be found at www.Medlineplus.gov. This is sponsored by the National Institutes of Health and the U.S. National Library of Medicine. This is good reliable information.