

Mononucleosis

Mononucleosis is often referred to as mono or the “kissing disease”. It is caused by the Epstein-Barr virus (EBV) which is a herpesvirus. It is spread by intimate contact between susceptible persons and people shedding the EB virus. The virus has never been found on an environmental surface which suggests that humans are the major reservoir.

The Epstein-Barr virus often infects children due to their intense personal contact and poor personal hygiene. However, less than 10% of children actually develop a clinical infection. Symptomatic infection is typically seen in the 15 to 24 year age range. Mononucleosis is relatively uncommon in adults.

Transmission:

1. Primarily through saliva
 - a. Usually the virus is shed for about 6 months
 - b. Shedding of the virus has been seen to occur intermittently for decades.
2. Sexual transmission
 - a. Virus can be found in cells of the female cervix and in male seminal fluid.

Symptoms

It may take 4 to 8 weeks after exposure to the virus for the first symptoms to appear. The most common symptoms are:

- Fever (temperature over 100.4°F)
- Sore throat
- Enlarged lymph nodes in the neck
- Fatigue - which can be severe and last for several months
- Spleen enlargement
 - The spleen which sits in the upper left abdomen becomes enlarged in about half the people with mono.
 - If the spleen does enlarge, it can rupture with or without trauma which is a life-threatening complication.
 - Anyone with enlargement of the spleen should not lift heavy objects or engage in sports activities for a few weeks.
- Rash
 - A generalized red, raised rash which is itchy can be seen occasionally.

- A rash almost always occurs if the person takes amoxicillin during the infection. It can also occur with some other drugs but is not seen as often.
- Development of a rash when given an antibiotic while someone has mononucleosis does not mean that the person is allergic to that drug.
- Neurological syndromes occur occasionally and usually are seen two to four weeks or more after initial symptoms onset. These neurological syndromes include:
 - Encephalitis
 - Meningitis
 - Cranial nerve palsies, etc.
- Other – since EBV can affect other organs it has been associated with other diseases including
 - Hepatitis and gallbladder problems
 - Pneumonia
 - Kidney problems
 - Pancreatitis
 - Inflammation of the heart muscle

Diagnosis

Mononucleosis is suspected based on a person's symptoms and examination. It is then confirmed with a blood test. Blood tests may not turn positive during the first weeks of symptoms so may need to be repeated.

Other laboratory abnormalities often seen include a high white blood cell count with mostly lymphocytes (a type of white blood cell) seen. Liver tests are also often abnormally elevated.

Treatment

The goal of treatment is to ease symptoms while the body fights the infection. Antibiotics are not helpful because mononucleosis is caused by a virus. There are no antiviral medications that will treat mononucleosis.

- **Pain and fever** – sore throat, muscle aches, fever can all be treated with over-the-counter medications such as acetaminophen and nonsteroidal anti-inflammatory drugs (NSAID's) such as ibuprofen. Aspirin should not be given to young children because of possible liver complications.
- **Rest** – mononucleosis causes severe fatigue therefore it is important to get adequate rest though complete bed rest is not necessary.
 - The fatigue usually lasts 2 to 4 weeks
 - In some, the fatigue may last for months

- **Diet** – loss of appetite is normal and will improve as the infection improves. However drinking adequate fluids and preventing dehydration is important.

Recovery

- Most people with mononucleosis recover completely with symptoms improving within one to two weeks.
- Return to school or work can occur as soon as the person is feeling better.
- Athletes should not participate in sports for at least three to four weeks.

Prevention

- There is no vaccine available to prevent Epstein-Barr virus infection.
- Since it is spread through saliva, close contact with others should be avoided.
 - Do not share utensils (fork, spoon, knife)
 - Do not drink from the same cup or glass