



Infectious Mononucleosis

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What is it?

Infectious mononucleosis (mono) is a syndrome characterized by malaise (feeling poorly), fever, fatigue, sore throat, and often significant lymphadenopathy (swelling of glands). The gland swelling occurs primarily in the front of the neck and can be quite impressive. Swelling of glands in the back of the neck can also occur, and this finding is relatively specific to mono. Other mono symptoms, similar to a bad cold, include cough and congestion, and a rash may occur. Usually in the first week of illness, mono looks like a bad cold or strep throat. A doctor may check a throat swab looking for strep throat, and if it is negative, assume that it is a virus expecting improvement over seven to 10 days.

Symptoms

If the illness is mono, usually during the second week, symptoms stay about the same, and often abdominal pain can occur secondary to an enlarged spleen (causing pain and tenderness in the upper left side of abdomen) or inflamed liver (causing pain in the right upper side of abdomen).

Generally by the third week of illness, the systemic symptoms of mono (fever, sore throat, swollen glands, and cough) are improving. Spleen enlargement typically persists through four to six weeks, and liver inflammation, if it occurs, usually improves along the same time course. Significant fatigue typically persists longer, lasting as long as six months. Studies have shown that most athletes complain of fatigue for about three months following the onset of mono with a range of one to six months.

Causes

Mono is caused most frequently by infection with the Epstein-Barr virus (EBV), but less commonly, infection with cytomegalovirus (CMV). Primary infection with EBV can occur at any age but typically only causes mono if the infection occurs between ages 15-25. Otherwise EBV can cause normal “cold” symptoms or sometimes no symptoms at all. Once you are infected with EBV, the incubation period (time before you get sick) is one to two months, so if you do get mono, it is hard to determine when or from whom you contracted the virus.

EBV is not especially contagious (less so than a “cold” virus or chickenpox), so more often than not, casual contact does not cause infection. It is sometimes called the “kissing disease” because “sharing saliva” is a pretty good way to contract the virus. Living in close quarters and frequent social gatherings are good environments to spread EBV, so college students and traveling teams are at risk. Sharing water bottles is another good way to spread EBV and other infections, so it should be avoided.

Testing

If your doctor suspects mono they will check a blood test called the monospot. This test will only identify mono caused by EBV (not CMV). A person must have mono for a period of time before the test turns positive, so a monospot in the first week of mono is likely to be negative. By the second week, it is positive about half the time, and in the third week, it is positive 90 percent of the time. For this reason, a negative test in the first week or two should be repeated if the mono symptoms persist.

A blood test looking for IGM antibodies to EBV or CMV will be positive in the first week of illness, but unlike the monospot it can't be run in the physician's office so the results are not immediately available and it is more expensive.

Treatment

Treatment for mono is supportive. Antiviral medications have not been shown to be useful and antibiotics don't help because it isn't a bacterial infection. In fact, amoxicillin which may be given to treat a presumed strep throat will often cause a significant rash. If tonsils are sufficiently swollen to impair swallowing then prednisone may be helpful and any concern for airway compromise from swollen tonsils is a medical emergency.

In week two to three, a doctor may be able to feel a swollen spleen. While rupture of an enlarged spleen is not at all common, the risk of this life-threatening complication must be taken seriously. Nearly all cases of splenic rupture occur within the first four weeks and can be caused by simple exercise or straining. Once four to six weeks is reached and spleen size is normal, athletes can slowly start returning to exercise.

Remember, in addition to increasing the risk of spleen injury, returning to activity too quickly often worsens fatigue, so slow progression of training is recommended. Return to soccer with any level of fitness can sometimes take three to six months.

In conclusion, mono is a syndrome most often caused by EBV that primarily affects adolescents and young adults. The diagnosis can be confirmed with a monospot test reliably by the third week of illness. The most concerning features relevant to soccer participation are splenic enlargement in the first two to six weeks that limits participation secondary to risk of splenic rupture and significant fatigue often lasting three months or more. Treatment is supportive and a physician with experience treating athletes with mono should be consulted to assist with diagnosis and management.