
Why are Lyme disease, chronic fatigue syndrome and Mononucleosis misdiagnosed with each other?

Published: March 17, 2024

Source: mariresearch.com

Generated By MARI Research Team

Misdiagnosis or medical error have been around since the first two health conditions with similar symptoms were found, actually even before that, illnesses could be misdiagnosed because the condition is not what it was diagnosed either due to lack of information or because that specific condition was not yet discovered at all.

are Lyme disease, chronic fatigue syndrome and Mononucleosis have their similarities but are very different conditions.

Lyme disease for our first entry, is a bacterial infection that is transported to the human body through infected ticks. According to the National health service or NHS, A circular or oval shape rash around a tick bite can be an early symptom of Lyme disease in some people. The rash from the bite can expand its appearance up to about 3 months post the bite by an infected tick while the minimum is somewhere around 1 to 4 weeks. Centres for disease control and prevention also known as the CDC refers to Lyme disease as a very common vector-borne condition in the United States of America. In Lyme disease, if the infection is left untreated, it can be spread to joints, the heart, and even the nervous system.

Symptoms caused by Lyme disease may vary according to the mayo clinic. The earlier signs and symptoms of Lyme disease can be a red bump which is small and looks like the bite of a mosquito. While a mosquito bite mark is usually appeared at the site of a tick bite or tick removal and will fade away within a few days. However, in early stages of Lyme disease, a Rash will appear in about 3 up to 30 days after the person was bitten by an infected tick. This rash is an expanding inflamed area in which the central area could be cleared from time to time resulting in a bull's eye pattern appearance. This rash is also called erythema migrans which slowly expands over a few days and can spread to about 30 centimeters or 12 inches. Usually erythema migrans does not come with any pain or a feeling of being itchy but it may feel warm when it is touched.

This rash or erythema migrans is known as one of the main hallmarks of this condition but, not every body develops this symptom, while other may be developing it on a few different places on the body.

In this early stage, Lyme disease could also come with Fever, chills, fatigue, body aches, headache, neck stiffness and swollen lymph nodes.

Later symptoms of Lyme disease appear if the condition is left untreated in a few weeks or a few months. Those symptoms still include erythema migrans but this time, the rash will appear on other areas of the infected person's body. severe joint pain and swelling burst are yet another symptom of Lyme disease which will more likely happen to the knees. The pain in the joints here, can move from one joint to another. Neurological problems are also another sign which can appear Weeks, months or even years after infection. What happens here is that the membranes surrounding the person's brain may develop an inflammation - meningitis - or temporarily have one side of their face paralyzed - Bell's palsy - or experience numbness or weakness in the limbs and lastly have impaired movement.

Some other symptoms may also show themselves after many weeks post the infection

- Getting an irregular heartbeat or other issues regarding the heart
- Inflammation in the eye
- Hepatitis or having liver inflammation
- Feeling an extreme fatigue

On the other hand, chronic fatigue syndrome or Myalgic encephalomyelitis which is also called CFS is as many doctors have described it, a complex and sophisticated disorder. Chronic fatigue syndrome or Myalgic encephalomyelitis is as the word "chronic" implies, a long lasting condition that comes with a variety of symptoms and signs, one of which is having a feeling of extreme tiredness.

Chronic fatigue syndrome is not exclusive to a gender or age group and can happen to any one at any age and with any gender, even children. But, according to the National health service, this condition is more common in women than men, while also having a higher tendency of starting development between the age groups of mid-20s and mid-40s.

There are many theories regarding the reason why chronic fatigue syndrome happens but unfortunately, no clear cause has been found yet. Those theories however, range from psychological stress to getting infected with a virus.

Chronic fatigue syndrome has a number of characteristics such as:

- Sleeping does not make the patient refreshed
- Concentration and focus difficulties
- Sleeping trouble
- Getting dizzy which gets stronger with starting to move after lying down or standing up after sitting.

Health professionals believe that it is possible for this condition to be triggered by a mixture of factors.

There is no specific test to take in order to find out if someone has chronic fatigue syndrome or not. Instead, a number of tests are performed in order to rule out other possible conditions with similar symptoms first. The main concentration of treatment for chronic fatigue syndrome or Myalgic encephalomyelitis is to help with symptom improvement.

In chronic fatigue syndrome or CFS, the symptoms are different in each person and the intensity of those symptoms may vary in each day in their lives. Here are some of the most common signs and symptoms of chronic fatigue syndrome or Myalgic encephalomyelitis:

- Fatigue and feeling extremely tired
- Trouble with concentration and memory
- Having a sore throat
- Getting headaches
- Having Lymph nodes in the neck or armpits enlarge
- Muscle pain or joint pain for no reason
- Getting dizzy which gets stronger when you start to move after lying down or standing up after sitting down
- Sleeping doesn't help with energy refreshing
- Having an extreme exhaustion after physical or mental exercise

As said, the main causes of CFS or chronic fatigue syndrome are still not known. It is possible for some people to be born with a predisposition for this condition which can be triggered with a number of factors like:

- Imbalanced hormone levels: Some of the people with chronic fatigue syndrome may also experience abnormal blood levels of hormones from time to time. Hormones which are produced in the hypothalamus, pituitary glands or adrenal glands are mostly believed to be the main reasons. However, how these abnormalities are, is still not known
- Viral infections: chronic fatigue syndrome can develop in some people after getting infected by a virus. It is questioned by many researchers if some viruses are triggering this disorder. Some of those suspicious viruses are the Epstein-Barr virus, human herpes virus 6, but until today, no hard proof has been found regarding the link of these viruses to CFS.
- Conditions related to the Immune system: Those people with have chronic fatigue syndrome seem to have a slightly impaired immune system may have a risk of getting this disorder, but it's not still known if this impairment in the immune system is enough to actually cause the condition or not.
- Physical or emotional trauma: shortly before the symptoms began, an injury, surgery or significant emotional stress has happened to some people, according to their reports and medical history.

According to Centers for disease control and prevention or the CDC, Infectious mononucleosis, or mono, is a contagious disease. Based on research reports from CDC, EBV or Epstein-Barr virus is the most common cause of this condition, but it is possible for other viruses to be associated with causing this disease. Mono is more common within age groups of teens, college students and young adults as about 1 in 4 of them with an EBV infection will eventually develop infectious mononucleosis.

Infectious mononucleosis, or mono is also called the kissing disease. The reason for this common nickname is that it can spread by saliva, and through kissing, but that's not it because you can be exposed to it by sharing a glass or food utensils with someone who has mono. Infectious mononucleosis is an infection for sure but it is not as contagious as some other infections like the common cold.

Compared to teens and young adults, children often have fewer symptoms which can result in the infection to not to be diagnosed. Certain complications like an enlarged spleen are important to be careful about. But getting enough rest and fluids are believed to be the main ingredients of recovery from this disease.

It may take about 4 to 6 weeks until the symptoms show themselves after exposure to the virus.

Common signs and symptoms of mono includes:

- * Fatigue
- * Sore throat
- * Fever
- * Swollen lymph nodes in neck and armpits
- * Headache
- * Skin rash
- * Swollen tonsils
- * Soft, swollen spleen

Lack of information and not having enough knowledge these conditions, their extreme similarity in symptoms and the fact that there are no absolute way of diagnosing them with just one test are the reasons which makes diagnosing these conditions so hard and often leads to misdiagnosis.

resources:

<https://www.mayoclinic.org/diseases-conditions/lyme-disease/symptoms-causes/syc-20374651>

https://www.cdc.gov/lyme/signs_symptoms/index.html

<https://www.cdc.gov/lyme/index.html#:~:text=Lyme%20disease%20is%20caused%20by,skin%20rash%20called%20erythema%20migrans.>

<https://www.nhs.uk/conditions/lyme-disease/>

<https://www.cdc.gov/me-cfs/index.html>

[https://www.mayoclinic.org/diseases-conditions/chronic-fatigue-syndrome/symptoms-causes/syc-20360490#:~:text=Chronic%20fatigue%20syndrome%20\(CFS\)%20is,doesn't%20improve%20with%20rest.](https://www.mayoclinic.org/diseases-conditions/chronic-fatigue-syndrome/symptoms-causes/syc-20360490#:~:text=Chronic%20fatigue%20syndrome%20(CFS)%20is,doesn't%20improve%20with%20rest.)

<https://www.nhs.uk/conditions/chronic-fatigue-syndrome-cfs/>

<https://www.cdc.gov/epstein-barr/about-mono.html>

<https://www.webmd.com/a-to-z-guides/understanding-mononucleosis-causes>

[https://www.mayoclinic.org/diseases-conditions/mononucleosis/symptoms-causes/syc-20350328#:~:text=Infectious%20mononucleosis%20\(mono\)%20is%20often,with%20someone%20who%20has%20mono.](https://www.mayoclinic.org/diseases-conditions/mononucleosis/symptoms-causes/syc-20350328#:~:text=Infectious%20mononucleosis%20(mono)%20is%20often,with%20someone%20who%20has%20mono.)