Medical Xpress

What is chronic fatigue syndrome?

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Chronic fatigue is often misunderstood by the general public and medical professionals alike. Credit: Flickr / Arne Coormans

Chronic fatigue syndrome, or myalgic encephalomyelitis, is a highly debilitating, but often misunderstood, disorder.

As its name suggests, the illness is characterised by profound fatigue, muscle and joint pain, and impaired memory and concentration. Sufferers also experience impaired cardiovascular function, gut disorders, and sensory dysfunction, such as noise intolerance and problems with balance.

The symptoms tend to be so deliberating and severe that chronic fatigue patients often experience family and social breakdown and isolation.

Many cases can continue for months or years, and often symptoms don't improve with rest.

Chronic fatigue syndrome was trivialised for years due to the lack of scientific evidence supporting its diagnosis, and dismissed as the "yuppie flu". Sufferers continue to endure the stigma of a condition that is often poorly recognised by the medical community and treated with scepticism by family, friends, and co-workers.

All this despite the fact that chronic fatigue is thought to have a global prevalence rate of 0.2 to 2.6% . A conservative estimate puts the number of people in Australia with chronic fatigue disorder at 180,000.

Chronic fatigue predominantly affects young adults between the ages of 20 and 40 years. The female-to-male diagnosis ratio is six-to-one but why the disorder is more prevalent in women than men is unknown.

Managing chronic fatigue syndrome can be as complex as the illness itself. There is no cure and no prescription drugs have been developed specifically for chronic fatigue syndrome, making it very difficult to treat. Symptoms can also vary over time.

People with chronic fatigue syndrome should closely monitor their health in conjunction with their doctor to create an individualised treatment program that best meets their needs. This program should be based on a combination of therapies that address symptoms, coping techniques and ways to manage normal daily activities.

It's crucial that we discover a biological basis for chronic fatigue so we can start working out ways to better treat the condition.

Diagnosis is a lengthy and expensive process, as a host of other diseases that share symptoms have to be excluded. Given that diagnosis is

notoriously difficult, finding unique markers of the illness has been a focus of research for over 20 years.

Researchers have observed significant differences between the immune cells of chronic fatigue sufferers and healthy people. This discovery could potentially lead to the identification of chronic fatigue biomarkers (examinable biological indicators that can be used for diagnosis).

This, in turn, could lead to the development of tests that detect chronic fatigue rather than having to rely on reported symptoms.

Other researchers have identified a strong association between chronic fatigue syndrome and a deregulated (or ill-functioning) immune system, which might point to the underlying mechanism of the disorder.

In sufferers of chronic fatigue, the researchers observed that the function of "natural killer cells"—immune cells that have the ability to kill off infected cells in the body – was reduced. This means they're unable to remove pathogens effectively and efficiently.

And Australian researchers have discovered changes in a number of other immune cells that are required to fight viruses in people with chronic fatigue.

In particular, they've have identified specific changes to the gene that controls these cells, and the receptors that activate them. This suggests there is a possible explanation as to why these cells are able not functioning effectively and efficiently.

Collectively, these results provide the first steps towards a system for the early diagnosis of chronic fatigue. They may also provide evidence that these changes in immune function are involved in the cause of the disorder.

But while the findings have the potential to bring relief to many chronic fatigue sufferers, research is still in its preliminary stages. At this juncture, researchers are testing these potential biomarkers against a number of other diseases to ensure they're unique to chronic fatigue syndrome patients.

With a better understanding of the biological causes of chronic fatigue, we can not only tackle the symptoms of chronic fatigue, but the stigma as well.

Source: The Conversation

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