



# Medicine for Managers

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## Long Covid – what we know

The SARS-CoV-2 virus, causes Covid 19. It is one of a family of viruses called coronaviruses. It spreads through droplet transmission when an infected person coughs, sneezes or talks. It produces the typical features of viral illness including temperature, cough and breathlessness. Most people recover but a proportion of people have symptoms which persist for more than twelve weeks, not explained by any alternative diagnosis.

There are usually a group of symptoms, which may fluctuate over time and which can affect many of the body systems.

The condition is referred to as **Long Covid**.

Data review suggests that the mean duration of long Covid is about nine months although some of the patients are still suffering symptoms after a year.

*It seems to affect more women than men, whereas those people with severe acute Covid are more commonly men.*

The features of long Covid are varied and include **fatigue** (which is present in most patients), persisting **respiratory symptoms** (breathlessness particularly on exertion, and cough), **muscle or body aches**, **headache**, **sleeplessness**, **loss of smell and taste**, **nasal congestion**, continuing **bowel disturbances**

including nausea and diarrhoea and many others.

Perhaps the most severe form of long Covid is the development of **myalgic encephalomyelitis** (ME) and **chronic fatigue syndrome** (CFS), which has been recognised following a number of other viral illnesses.

Symptoms specifically associated with ME/CFS include principally **fatigue** and **weakness**, **intolerance to exercise**, **sleeping problems**, **sensitivity to light**, **cognitive defects** (often described as brain fog), **headache** and **tender lymph nodes**.

The so-called brain-fog is often the most troublesome of the neurological or psychological symptoms and it can have a high impact on memory.

People also describe considerable difficulty in focusing and paying attention. Research has suggested that the mechanism behind the development of brain fog may be the depletion of the chemical **serotonin** which is a chemical

messenger transmitting information between nerve connections in the brain.

The same chemical is also associated with digestion and sexual desire, which may also be adversely affected. Interestingly, many viruses affect levels of brain and other body chemicals but the levels normally bounce back once the infection is overcome.

Covid-19, however, seems uniquely to attack the serotonin levels.

In a recent study at Imperial College, London, it was found that people suffering from Covid-19 suffered a three-point drop in IQ for up to a year or more but those with more severe or long-lasting infection had cognitive deficits up to a 9-point drop in IQ.

The largest deficits were in memory and reasoning. The severity of the deficit depended on the infecting Covid variant. There is ongoing research to establish in more detail the consequences of the virus on brain function

ME/CFS, though really debilitating many post Covid patients, is not unique to Covid and is also a feature of infection with the Epstein Barr virus (which causes glandular fever) and influenza and some other less common viral illnesses such as Ebola virus.

Another feature is the development of a persistent *tachycardia* (increased heart rate), often associated with myocarditis (damage to the heart muscle itself).

The rate increase has no functional explanation and it is associated with dizziness and increased feeling of un-wellness. It is not understood why such complications may develop but, globally, the numbers of sufferers are into the millions. It is often severe and long term. A key feature of

the Covid ME/CFS (and also of some sufferers of long Covid itself) is the post-exertional exacerbation of symptoms after either physical or mental exertion. Some patients find their ability to undertake any exercise at all extremely limited.

Recently published research has also identified an additional characteristic of Covid-19 and particularly of long Covid on women's sex lives.

A study in Vermont has shown that women who had had Covid displayed reduced desire, arousal, lubrication, orgasm and more pain during intercourse.

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*Globally, research is being intensively undertaken but so many questions remain unanswered.*

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The picture of the SARS-CoV-2 infection, the development of the Covid infection itself and the progression in some to post-Covid infection and ME/CFS is very variable and does not follow any currently predictable pattern.

It is speculated that long Covid itself is not a single disease but a syndrome and a mixture of different disease effects. Certainly, the fact that the post-Covid symptoms may be multi-organ could indicate some kind of chronic inflammation.

There is also the question of how the infected individual's immune system actually defends the body against the infection.

It is unclear whether there is any autoimmune reaction (the immune system acting against the body itself) or whether the immune system is in

any way disrupted. It is also unclear whether the virus itself may become dormant in the body and is subsequently reactivated.

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*The development of vaccinations has altered the risk of long Covid. Research suggests that two doses of vaccine reduced the risk of the development of the prolonged form by up to 60%, and, with appropriate booster doses, possibly by more.*

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The picture has been further complicated by the subsequent development of variants and the incidence of long Covid appears to have diminished over time.

However, it has not fallen to nil and is still identified with the later **delta** and **omicron** variants, even in patients who have been vaccinated.

Although much research continues in the area, the recommendation is that all eligible people should continue to have their booster vaccinations when offered.

Covid-19 is still only 4½ years old and, although the healthcare professions know much more about it now, there are still considerable gaps in understanding of the disease and its sequelae, complicated by the heterogenous nature of the disease, and which the vast amount of current research is beginning to penetrate.

Those researchers are only at the beginning of the identification of the pathological and immunological pathways, methods of effective diagnosis and better treatment.

I wanted to finish with something profound. Should we be worried about Covid-19 and its ongoing consequences?

The American humorist Erma Bombeck wrote:

*“Worry is like a rocking chair. It gives you something to do, but never gets you anywhere”.*

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