

Coronavirus: Will hot drinks protect you from Covid-19?

Richard Gray

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There is some strange advice circulating about how to stay safe from coronavirus. BBC Future looks at whether there is any evidence to support one particularly common claim.

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A hot drink can offer comfort, especially on a chilly day. It can act as a [salve for a troubled mind](#), and can make us feel [closer to other people](#). It can even help us [cool down in hot weather](#).

But while many people might seek out a cup of coffee, a mug of tea or a hot toddie to help them in these difficult times, one thing a hot drink won't do is protect you from Covid-19.

There have been many claims to the contrary circulating widely on social media and in private messaging apps – one of the many [fake pieces of health advice](#) that are being shared. One claim that hot water would be enough to protect people from the virus even led the United Nations Children's Fund (Unicef) to issue a statement to say that [it had not come from them](#).

“There is no evidence that hot drinks will protect against viral infections,” says Ron Eccles, an expert in respiratory diseases at Cardiff University in the UK and former director of the Common Cold Centre.

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Eccles has conducted research in the past on the apparent effects of drinking hot liquids when suffering from cold and flu. He found that while a hot drink might bring some relief from the symptoms of a cold, it was likely partly due to the effect it had on promoting secretions of saliva and mucus in the mouth and nose, which soothe inflammation. But he also concluded that there was likely to be a [strong placebo effect involved too](#).



While a hot drink might not protect you from Covid-19, maintaining good social distancing measures can (Credit: Getty Images)

The hot drink does not, however, get rid of the virus causing the infection in the first place.

In the case of Sars-CoV-2, the coronavirus that causes the disease Covid-19, BBC Future has already examined how drinking water doesn't [offer any protection against the new coronavirus](#). The virus cannot simply be washed away by drinking water or gargling liquid regularly.

While it can enter the body through the nose and mouth in tiny droplets coughed out by other people who are infected, it primarily tends to [infect cells of the respiratory tract](#). These cells carry an enzyme on their surface that the virus needs in order to get inside them.

Inhaling these droplets will transport them down towards the lungs – away from anywhere that can be reached by a mouthful of liquid.



The temperatures needed to kill Covid-19 are high enough to scald us and cause serious injury (Credit: Getty Images)

It's easy to see how climbing into a bath that hot, as some fake advice has suggested, would be hard to stand for long, and [likely do more harm than good](#). Even if you could stay in water hot enough, it isn't going to kill any of the virus already inside your body. This is because, regardless of how hot you are on the outside, your body works hard to keep its temperature inside at around 37C (98.6F). You are more likely to burn yourself and do serious harm than kill the virus.

Raising your core body temperature even to [40C \(104F\) can lead to severe heat stroke](#). Body temperatures higher than this [can lead to death](#) unless treated quickly.

Some misleading claims also state that compounds in tea can have a protective effect against the Covid-19 virus, but [there is no scientific evidence to support this](#), as the BBC has [reported](#)

[elsewhere](#).

So that hot drink may be soothing. But as ever, the best way to protect yourself from the Covid-19 virus is to abide by social distancing measures, wash your hands with soap and water after touching potentially infected surfaces and follow the most up-to-date [official medical advice](#).

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