

# Worried about coronavirus? Pay attention to your gut

May 7 2020, by Martin Veysey

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Credit: AI-generated image ([disclaimer](#))

When we think of the symptoms of coronavirus, we think of the lungs—people on ventilators or with nasty coughs, struggling to breathe. That's because a COVID-19 positive patient often presents with fever, persistent cough, muscle pain and fatigue.

But the [molecule](#) which the virus attacks in our bodies—Angiotensin Converting Enzyme 2 or ACE2—is present not just in our lungs, but in our [gastrointestinal tract](#) as well. This is what could be behind the significant number of cases in which patients show gastrointestinal symptoms such as diarrhea, nausea and vomiting.

A [recent commentary](#) in *Gut*, a *British Medical Journal* publication, highlighted important [evidence](#) from China which showed that if a patient presents with gastrointestinal issues, like diarrhea, nausea and vomiting, more than a quarter of them may not have respiratory symptoms.

Unlike previous work, which had shown that less than 4% of COVID-19 patients had gastrointestinal symptoms, this study put the rate at 11%. Others have suggested that [the rate](#) may be as high as 60%.

In these small studies, the researchers also linked patients with gastrointestinal presentations to poorer outcomes. When they compared them to those without gastrointestinal symptoms, patients had more severe disease, higher fevers and a greater risk of liver injury.

In a separate study of those with a [mild form](#) of COVID-19, researchers compared those who had gastrointestinal or respiratory symptoms, or both, with those presenting only with respiratory symptoms. They found that 23% of patients had gastrointestinal presentations alone, while 57% had both a gut and a respiratory illness. It also took longer for those with digestive symptoms to clear the virus.

## **Gut invaders**

It is interesting to note that the [first case of novel coronavirus reported in the US](#) had two days of nausea and vomiting and episodes of diarrhea in addition to their respiratory symptoms. The virus was detected in

samples from this patient's nose, their throat but also isolated from stool samples collected.

[Analysis of specimens](#) taken from the gastrointestinal tract of 95 COVID-19 patients has identified the virus in the esophagus, stomach, duodenum and rectum. The virus also showed up in about half of the stool samples collected.

The suggestion is that the [gastrointestinal symptoms](#) are caused by the virus invading the ACE2-containing cells that are found throughout the bowel. This together with the presence of the virus in the stool suggest the gastrointestinal tract as another possible route of infection and transmission.

It appears that [SARS-CoV-2 is detectable in the stool](#) for several days after it has cleared from respiratory tract samples. So patients who have recovered from COVID-19 or are asymptomatic could be shedding virus into their stool without knowing it, potentially increasing the risk of transmission to others.

## **Why your microbiome matters**

Why do symptoms in your gut mean you might get a worse case of COVID-19? It's likely that the composition of your microbiome—the millions of bacteria and other organisms that usually live in our gastrointestinal tract—is a critical part of [how an individual responds to COVID-19](#).

One group of researchers created a [risk score](#) based on biomarkers in the blood that can be increased or decreased depending on the composition of your microbiome. They found that the higher the score, the worse the outcome from COVID-19. This association was stronger for older individuals. It may be that the health of our gut bacteria has a critical

role in how our immune system reacts to the disease.

So it's important to maintain a healthy microbiome to fight COVID-19.

How do you do that? The key is to eat to feed your microbiome. Eating plant-based food you cook yourself and limiting ultra-processed and take-away foods are to be commended, while supplementing your diet with natural probiotics such kombucha, kimchi and natural yogurt. This will optimize your microbiome, not just for COVID-19, but for your long-term health as well.

## **Gut feeling**

With the pandemic continuing, we should all pay more attention to our guts. Much of the focus to date has been on ventilators, intensive care and the respiratory consequences of the novel [coronavirus](#) infection. However, if you have new onset sickness and vomiting or diarrhea, and no other explanation, it may be COVID-19 and you may need to seek help.

And if it's true that the gastrointestinal tract is another source for [virus](#) transmission in both symptomatic and asymptomatic individuals, it remains paramount that people follow the advice to [stay home and stay safe](#) with a combination of shielding, social distancing and regular hand-washing.

Finally, it is worth considering how to maintain a healthy [microbiome](#) in these challenging and unprecedented times—eating well may just make a difference to your COVID-19 outcome.

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