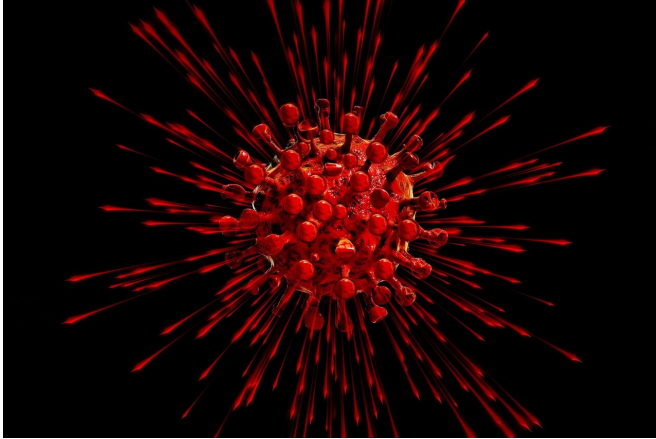


Coronavirus damages the endocrine system

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People with endocrine disorders may see their condition worsen as a result of COVID-19, according to a new review published in the *Journal of the Endocrine Society*.

"We explored the previous SARS outbreak caused by the very similar virus SARS-CoV-1 to advise endocrinologists involved in the care of patients with COVID-19," said Noel Pratheepan Somasundaram of the National Hospital of Sri Lanka in Colombo, Sri Lanka. "The virus that causes COVID-19—SARS-CoV-2—binds to the ACE2 receptor, a protein which is expressed in many tissues. This allows the virus to enter [endocrine cells](#) and cause the mayhem associated with the disease."

SARS-CoV-2 can cause loss of smell and gain entry to the brain. In past coronavirus infections such as the SARS epidemic in 2003, many patients developed a post-viral syndrome with fatigue. This could in part be caused by adrenal insufficiency, a condition where the [adrenal glands](#) do not make enough cortisol, as a result of damage to the pituitary system. During the SARS epidemic, patients who developed adrenal insufficiency typically recovered within one year.

"Testing for cortisol deficiency and treating patients with steroids may become a vital treatment strategy," Somasundaram said. "Very recent studies have demonstrated lowered mortality in severely-ill patients with COVID-19 treated with the steroid dexamethasone."

COVID-19 also could lead to new cases of diabetes and worsening of existing diabetes. The SARS-CoV-2 virus attaches to ACE2, the main entry point into cells for coronavirus, and disrupts insulin production, causing high blood glucose levels in some patients. The authors highlight the need for strict glucose monitoring in patients with COVID-19 as a measure to maximize recovery.

"People with vitamin D deficiency may be more susceptible to coronavirus and supplementation could improve outcomes, though evidence on the subject is mixed," Somasundaram said.

More information: Noel Pratheepan Somasundaram et al. The Impact of SARS-Cov-2 Virus Infection on the Endocrine System, *Journal of the Endocrine Society* (2020). [DOI: 10.1210/jendso/bvaa082](#)

Provided by The Endocrine Society

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