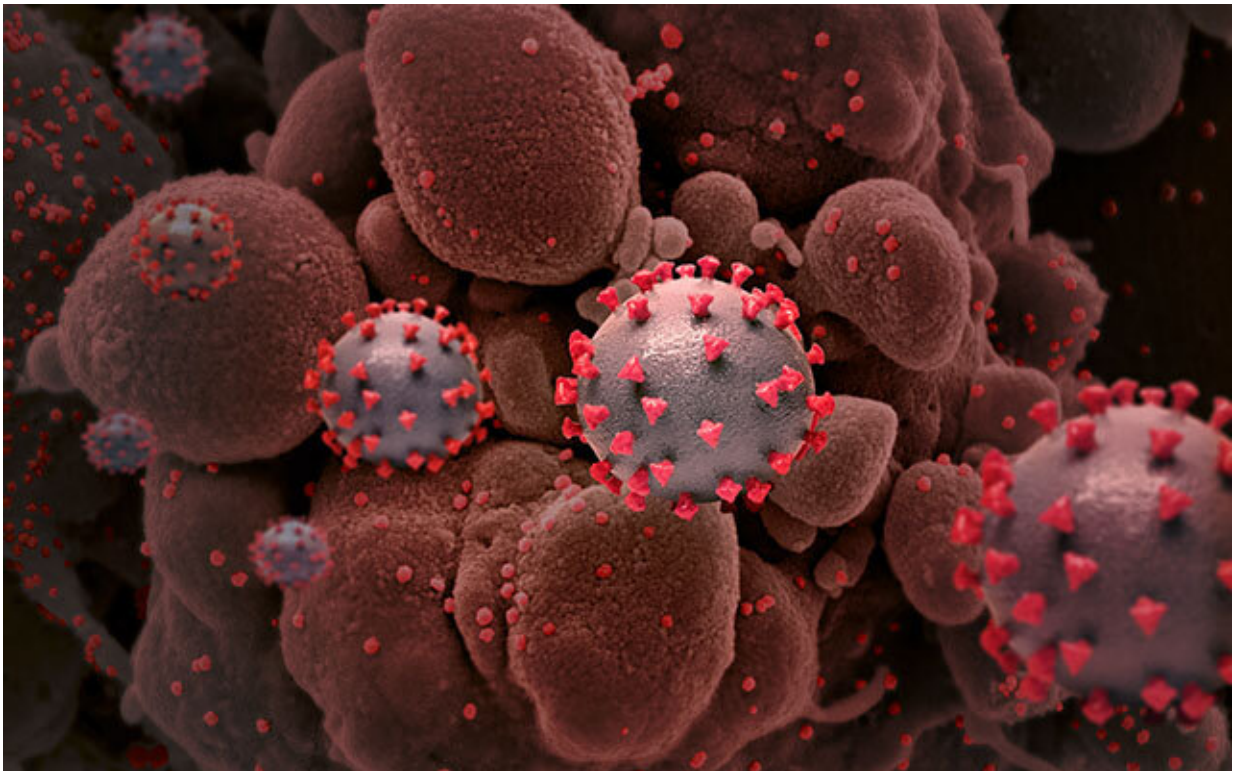


New study finds SARS-CoV-2 can infect testes

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Creative rendition of SARS-CoV-2 particles (not to scale). Credit: National Institute of Allergy and Infectious Diseases, NIH

Researchers at the University of Texas Medical Branch have observed that SARS-CoV-2, the virus that causes COVID-19, can infect the testes of infected hamsters. The findings, published in the journal

Microorganisms, could help explain symptoms some men with COVID-19 have reported and have important implications for men's health.

As the pandemic goes on, clinicians continue to report their findings that COVID-19 affects more than just the lungs. Some patients have reported testicular pain and some reports have shown decreases in testosterone, a key hormone produced in the testes. Autopsies have also shown significant disruption of the testes at the [cellular level](#), including the presence of immune cells.

"Given the magnitude of the COVID-19 pandemic, it is critical to investigate how this disease can impact the testes, and the potential consequences for disease severity, [reproductive health](#), and sexual transmission," said Dr. Rafael Kroon Campos, the study's lead author and postdoctoral fellow in the laboratory of Dr. Shannan Rossi at UTMB.

The Rossi lab has been studying Zika virus infection in the testes for years and wondered if SARS-CoV-2 could cause a similar disease. Hamsters are commonly used to model COVID-19 in humans since they develop similar signs of disease. Virus was detected in the testes of all infected hamsters during the first week but tapered off. The authors think this may represent what could occur in men with mild to moderate COVID-19 disease.

"These findings are the first step in understanding how COVID-19 impacts the male [genital tract](#) and potentially men's reproductive health," said Rossi, an associate professor in the Departments of Pathology and Microbiology & Immunology. "We have much more to do before we have the full picture. Moving forward, we will investigate ways to blunt this impact, including using antivirals, antibody therapies and vaccines."

Future studies also include modeling conditions associated with severe COVID-19, such as pre-existing conditions like obesity and diabetes and SARS-CoV-2 variants of concern, the study authors said.

More information: Rafael K. Campos et al, SARS-CoV-2 Infects Hamster Testes, *Microorganisms* (2021). [DOI: 10.3390/microorganisms9061318](https://doi.org/10.3390/microorganisms9061318)

Provided by University of Texas Medical Branch at Galveston

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