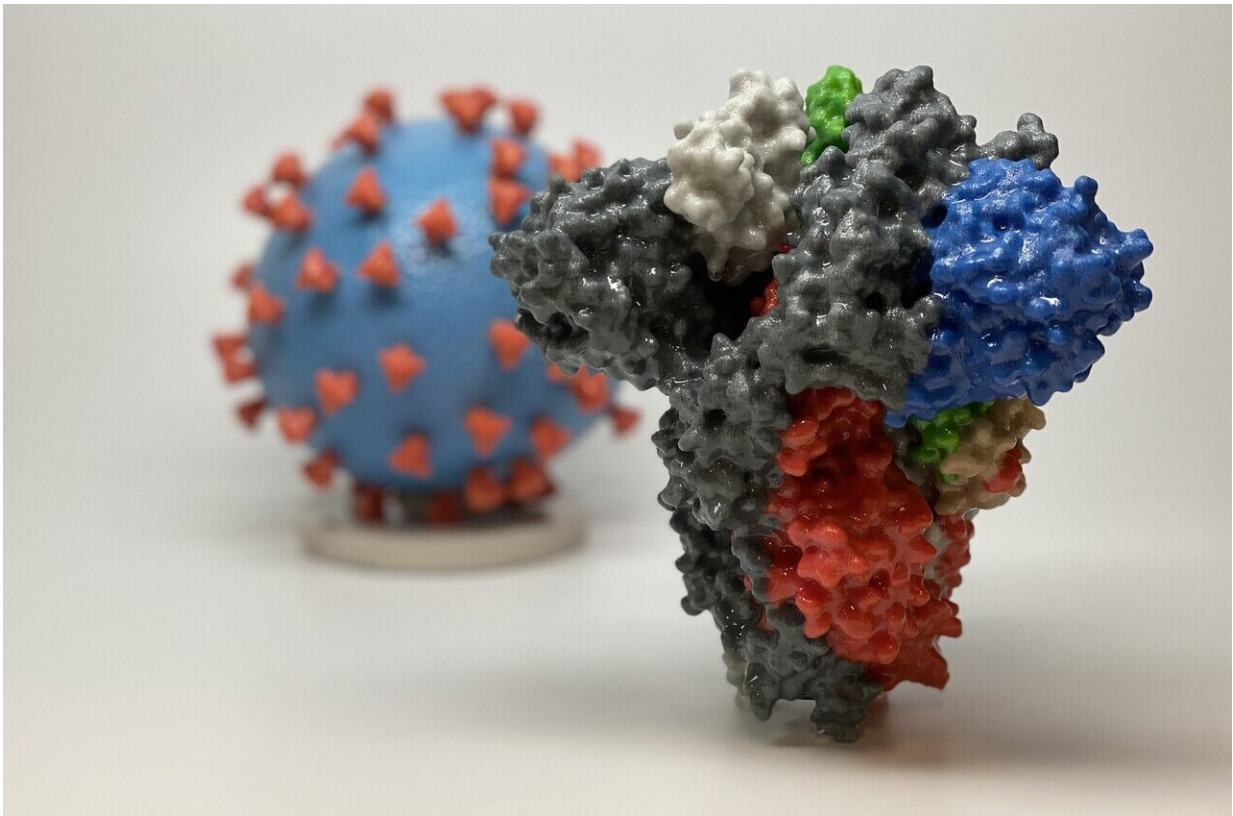


What have we learned from COVID-19 in persons with type 1 diabetes?

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3D print of a spike protein of SARS-CoV-2, the virus that causes COVID-19—in front of a 3D print of a SARS-CoV-2 virus particle. The spike protein (foreground) enables the virus to enter and infect human cells. On the virus model, the virus surface (blue) is covered with spike proteins (red) that enable the virus to enter and infect human cells. Credit: NIH

While diabetes is established as a risk factor for severe SARS-CoV2 infection several important specific aspects need to be considered for people with type 1 diabetes. In contrast to older persons with diabetes, children, adolescents and young adults with type 1 diabetes are not at risk for unfavourable outcomes.

However in a special session on COVID-19 at this year's Annual Meeting of the European Association for the Study of Diabetes (EASD), Prof. Catarina Limbert of the University Center of Central Lisbon and Hospital Dona Estefania, Lisbon, Portugal, will a new review of viruses that are known to contribute to the new onset of type 1 diabetes and new evidence that SARS-CoV2 infection needs to be added to this list.

"Until now, larger multicentre studies did not find a rise in the number of new cases during the pandemic months compared to the same period in years before," she explains. "Nevertheless, the COVID-19 crisis has increased the severity at onset of type 1 diabetes with a doubling of people being admitted with [diabetic ketoacidosis](#) during the lockdown."

A population study of 23,804 COVID-19 related deaths in England during 1 March 2020—1 May 2020 revealed that the odds of dying in hospital with COVID-19 was higher in people with type 1 diabetes (3.5 times) compared to type 2 diabetes (2 times). However, the average age at death was 78 years in type 2 diabetes and 72 in type 1 diabetes. It appears, that in type 1 diabetes, only older people aged over 50 years), with longer duration of the disease (80% with more than 15 years of disease) and worse glucose control (glycated haemoglobin / HbA1c >10%) are at higher risk of severe clinical outcomes of COVID-19.

Moreover, according to an early report by the US Centers for Disease Control and Prevention (CDC) from the United States with data from 149 082 COVID-19 cases, only 1.7% were among children

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