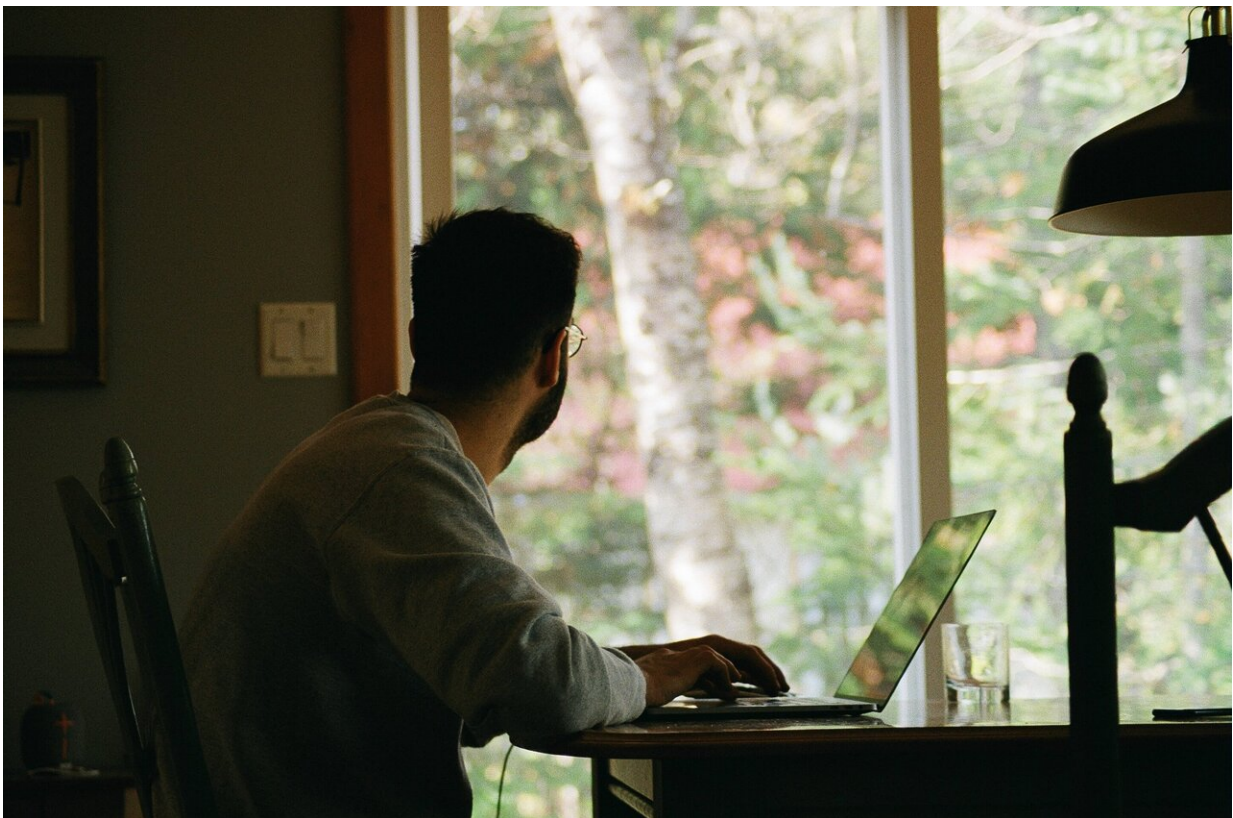


Lockdown led to high levels of stress and anxiety among pancreas and islet transplant patients, study finds

September 14 2022



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Fear of becoming severely ill with COVID-19 caused high rates of stress and anxiety during lockdown in people who had pancreas or islet

transplants to treat type 1 diabetes, reveals new research being presented at the annual meeting of the European Association for the Study of Diabetes (EASD) in Stockholm, Sweden (19-23 Sept).

Almost half of the transplant patients didn't leave their house at all during the period studied. The study also found that control of blood sugar levels worsened over the lockdown period.

Pancreas and [islet transplants](#) can treat type 1 diabetes (T1D) by transplanting beta cells, insulin-producing cells from the pancreas, allowing the recipients to make their own insulin again.

However, multiple factors, including T1D itself and the [immunosuppressant drugs](#) they needed to take to prevent rejection of their transplant, put them at high risk of severe COVID-19.

"We know that [lockdowns](#) affect both mental and physical health of everyone and wanted to see if the effects were even greater in people at high risk of severe COVID-19," says medical doctor and researcher Dr. Cyril Landstra (female), of the Department of Internal Medicine, Leiden University Medical Centre, Leiden, the Netherlands.

Dr. Landstra and colleagues compared behavioral, mental and physical effects of the first Dutch nationwide lockdown in people with T1D with and without pancreas or islet transplants.

The 51 transplant recipients had an average age of 55, had diabetes for an average of 42 years and had an average BMI of 23.3 kg/m².

The 272 participants without transplants had an average age of 53, diabetes duration of 27 years and BMI of 25.2 kg/m².

In the spring of 2020, around eight to ten weeks into the lockdown, all of

the participants filled in a detailed survey about how the lockdown was affecting their behavior. They were also asked to look back at their behavior before the lockdown. Questions included how often they left their house and their reasons for leaving their house.

They were also surveyed on whether they had noticed changes in their levels of [anxiety](#), stress and fear of COVID-19 infection, physical activity and weight during lockdown.

The transplant recipients were around three times as likely as those without transplants to say they'd stopped going out for groceries during lockdown (52.1% vs. 18.3%) and, although staying at home was never mandatory in the Netherlands, 45.8% (vs. 14%) of transplant recipients reported not having left their house at all, which is again almost three times higher than in patients with T1D alone.

The research also revealed that a pancreas or islet transplant was the most important predictor of not leaving the house during lockdown.

The researchers say, "A pancreas or islet transplant contributed more to people not leaving their home than any other factor we looked at, including age, fear of infection and health conditions such as heart disease, making it the biggest determinant of social isolation."

26.8% of the transplant recipients reported increased insulin use, 40% less physical activity, 41.7% weight gain, 29.2% increased anxiety and 33.3% increased stress since the start of lockdown.

Levels of fear of contracting COVID-19 were 70% higher in the transplant recipients than in those without [transplants](#).

The study also compared HbA1c (average blood sugar levels over several months) and continuous glucose monitoring (blood sugar sensor) results

during lockdown to measurements taken before lockdown.

This revealed that glycemic control (control of [blood sugar levels](#)) improved during lockdown in those without a transplant but worsened in the transplant patients.

Dr. Landstra says, "The lockdown measures were implemented to shield vulnerable groups, including pancreas and islet transplant recipients, from contracting COVID-19.

"The lockdown, however, had some deleterious effects, including weight gain and deterioration of blood sugar control in the transplant patients—both of which are associated with more severe COVID-19.

"It's important that patients and health care professionals are aware of these unintended consequences and also that patients are aware that they can reduce their risk of severe COVID-19 through better diabetes self-management and a healthy lifestyle."

The research was conducted before COVID-19 vaccines were available. However, the vaccines work less well in [pancreas](#) and islet [transplant patients](#) and so the researchers believe their findings are still of importance today.

Provided by Diabetologia

Citation: Lockdown led to high levels of stress and anxiety among pancreas and islet transplant patients, study finds (2022, September 14) retrieved 22 July 2023 from <https://medicalxpress.com/news/2022-09-lockdown-high-stress-anxiety-pancreas.html>

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