

## Relationship between Diabetes and COVID-19 Summary

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Since the COVID-19 pandemic began, evidence has revealed that people with diabetes (PWD) are not more likely to contract COVID-19 than people without type 1 or type 2 diabetes. But if they do get COVID-19, adults living with diabetes are at greater risk of developing serious symptoms and complications, like pneumonia, and they are almost three times more likely to die in hospital.

Recently, a new theory has been reported [in the media](#) that the link between diabetes and COVID-19 might be a two-way relationship: diabetes may affect the development of serious complications of the virus and the virus may affect the development of diabetes. Some researchers and clinicians are hypothesizing that people with COVID-19 may be at greater risk of developing type 1 or type 2 diabetes. The reality is that knowledge of COVID-19 is still evolving, and the rigorous research needed to fully understand this *potential* two-way relationship will take time to complete. However, there are a few things we *do* know that might help us understand what is being reported.

- If someone who has COVID-19 receives a first-time diagnosis of diabetes, it might be that they had type 2 diabetes before contracting COVID-19 and were just not aware of it. In Canada, as many as 1.5 million people may have type 2 diabetes and not know it. That's because not everyone has equal access to health care, and not everyone is aware of the warning signs of diabetes. If you're wondering if you might be at risk of type 2 diabetes, take this [quick online test](#).
- Some people who develop elevated blood sugar levels after contracting COVID-19 may only have it temporarily while their body fights the virus, or due to medications used to treat the infections (such as dexamethasone). Once they have recovered from COVID-19, their blood sugar levels may return to pre-illness levels. Cases like this were observed during SARS—the first coronavirus outbreak in 2002-2004—and those patients' blood sugar levels returned to normal when they got better.
- While some research shows that viruses may play a role in precipitating type 1 diabetes, it usually takes months or years after having a virus. Again, more research is needed to fully understand the link.

To summarize, we need more research to understand this potential two-way relationship: can COVID-19 *cause* diabetes or is it just *occurring in* some people who are also developing diabetes? Important first steps have been taken toward teasing out the true nature of this relationship. An international group of leading diabetes researchers has created a global registry of COVID-19-related diabetes. Diabetes Canada will continue to monitor the research and provide updates and interpretation of this complex, ever-evolving situation. Meanwhile, we can all do our part to reduce our risk of contracting COVID-19 and of spreading the virus. Follow local public health guidelines, such as:

- Observing physical distancing rules
- Wearing a mask
- Practicing good hand hygiene
- Get a COVID-19 vaccine when you're eligible.



Diabetes Canada encourages adults living with type 1 or type 2 diabetes to receive the COVID-19 vaccine when it is accessible, in consultation with your health-care provider. The benefits of being vaccinated outweigh potential risks that could be associated with these vaccines. All the vaccines approved for use in Canada dramatically reduce the risk of hospitalization, severe illness, and death due to COVID. People living with both type 1 and type 2 diabetes were included in the vaccine clinical trials, with no increase in adverse events reported in these participants. There is no single vaccine that is better than others in people with diabetes. For more information on how, when, and where to get vaccinated, you can consult [this page](#) and click on the link to your province or territory. Our FAQ about COVID-19 and diabetes can be found on our [website](#).

If you have diabetes and you become unwell for any reason, it is important that you [practice sick day management](#). That includes staying in touch with your diabetes care team.