

When Can We Stop Social Distancing and Wearing Masks?

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Part of “the new normal” involves new habits, including social distancing, wearing masks, frequent handwashing, and more actions individual people can take. Going forward, this document will refer to these actions by their technical name: **non-pharmaceutical interventions, or NPIs for short.**

These practices significantly interfere with the spread of the virus. However, social distancing also has many downsides, including its contribution to reduced and delayed access to other forms of healthcare and intensified socioeconomic disparities. For these reasons, and more, many people are looking forward to a time when we don’t have to do these things anymore.

But when is it safe to do so? Nobody wants another false start followed by another wave, especially in Ontario. This document will summarize some relevant studies that answer this question. All in all, an effective vaccination plan is the way back to “normal”, so Ontario can loosen and lift public health measures in a way that won’t cause a resurgence of the virus.

One study that weighs in on this topic was done by the ECRI, an independent, non-profit organization that is trusted for unbiased and evidence-based healthcare information. The ECRI is based in the United States, but the information about the virus is relevant to Ontario. These health experts claim that social distancing will become less necessary as more of the population is vaccinated.

This study reads: “In principle, social distancing ... would prevent additional deaths; however, mathematical models that simulate transmission indicate that mortality flattens quickly after herd immunity and that further gains from social distancing would be minimal.” Put simply, when looking at data that predicts how the virus will spread, the number of deaths will quickly drop after a significant portion of the population is vaccinated. At this point, there would not be as many benefits from social distancing as there are currently.

The study adds: “However, if the vaccine prevents disease but not spread by asymptomatic carriers the relationship between vaccination and mortality is linear, and social distancing yields benefits until the population is fully vaccinated.” In other words, if the vaccine does not prevent asymptomatic carriers from spreading the virus, then the number of deaths will not drop quickly. The decrease in deaths would correspond with the increase in vaccination, which will be more gradual. In this case, then social distancing would still be very beneficial until the population is fully vaccinated.

The percentage of the population that needs to be vaccinated for a population to safely stop doing NPIs depends on the region and the effectiveness of available vaccines. So, what about Ontario? Luckily, there is a mathematical model that predicts how the virus will spread in Toronto, which was created with COVID-19 case data from Toronto between March and December 2020.

This mathematical model is explained in a study, which was done by the Public Health Agency of Canada, Toronto Public Health, the Departments of Mathematics and Statistics at both York University and the University of Montreal, as well as the Centre for Diseases Modeling at York University.

This study used mathematical equations to predict different timelines for the spread of COVID-19 based on different vaccination distribution plans. Their framework accounts for the fact that many factors are not certain, including the period of immunity that one dose of the vaccine will provide.

Their findings suggest that vaccinating two-thirds ($2/3$) of the population with a vaccine that is at least 70% effective may be able to control COVID-19 spread, as long as NPIs are not relaxed at the same time. This study found that continuing with NPIs while vaccines are being distributed, and even after most of the population has been vaccinated, will be a key factor in preventing another widespread resurgence of the virus.

According to their projections, if NPIs are relaxed while vaccines are being given out, the number of infections will go up again, even if 60% of the population is given a vaccine that is 70% effective.

However, a resurgence in the virus would be prevented if 60% of the population is given a vaccine that is 70% effective provided that NPIs are not relaxed until **8 months** after 60% of the population is given a vaccine that is 70% effective.

This study ran multiple scenarios about the possible levels of effectiveness of vaccines and differing lengths of immunity that one shot provides. In all of these scenarios, they saw that, when compared to relaxing NPIs sooner, postponing the relaxation of NPIs for **8 months** after vaccinating 60% of the population resulted in cases and deaths decreasing by about 30% by June 2022.

Since this data is based on Toronto, which has been the epicentre of the virus in the province, it is safe to assume that this timeline would be appropriate for the rest of the province as well. As of April 17th, 2021, 24.21% of Canadians have received at least one dose of the vaccine, and 2.37% of Canadians are fully vaccinated. Meanwhile, 23.71% of people in Ontario have received at least one dose of the vaccine as of April 17th 2021. Clearly, it will still be a while until we can return to “the old normal” and stop these habits of social distancing, wearing masks, frequent handwashing, and more. However, at the very least, there is a safe end date in sight.

Sources:

1. The ECRI study: https://d84vr99712pyz.cloudfront.net/p/pdf/covid-19-resource-center/covid-19-clinical-care/covid-resource_returntonormal_v2.pdf
2. The mathematical model study with Toronto as a case study: <https://www.medrxiv.org/content/10.1101/2021.01.25.21250505v1.full>
3. Statistics on the percentage of vaccinated Canadians and Ontarians: <https://health-infobase.canada.ca/covid-19/vaccination-coverage/>

If you or someone you know uses Augmentative and Alternative Communication (AAC), and requires resources related to COVID-19, please contact Sarah (sarah.nydp@gmail.com) and she can assist you in accessing and/or creating various communication tools.

If you think you may be experiencing symptoms of COVID-19, take the self-assessment at www.ontario.ca/coronavirus. Follow all directions from your medical provider or your local health unit at the following phone numbers:

Telehealth Ontario: 1-866-797-0000

Toronto Public Health: 416-338-7600

Peel Public Health: 905-799-7700

Durham Region Health Department: 905-668-7711

York Region Public Health: 1-877-464-9675

Please refer back to previous updates as lots of important information has been provided that may still be relevant. If you have any questions or require more information on how you can protect yourself and those around you from the COVID-19 virus, please contact our Outreach

Communication Facilitator Sarah, at 416-222-4448 or

sarah.nydp@gmail.com