

Canadians' awareness of when they have COVID-19, May to August 2022

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The COVID-19 pandemic continues to impact the daily lives of Canadians as the country enters its third winter of the pandemic. Statistics Canada, in partnership with the Public Health Agency of Canada (PHAC) and Canada's COVID-19 Immunity Task Force (CITF), conducted a second cycle of the Canadian COVID-19 Antibody and Health Survey to better understand the spread and long-term impacts of COVID-19. This unique survey combines self-reported information about past and current infections with physical measures obtained from testing a representative sample of Canadians for the virus using a polymerase chain reaction (PCR) test, as well as a test to detect antibodies from vaccination and infection. This combined information on the survey allows for a better understanding of how often infections go undetected or unsuspected by Canadians.

There are a number of data sources that have been used to monitor the rates of COVID-19 infection since the start of the pandemic. [Available national data on reported cases of COVID-19 collected by the PHAC through the provinces and territories](#) focuses on people who tested positive for SARS CoV-2, the virus that causes COVID-19, generally based on a PCR test, and who reported the results to public health authorities. The PCR test is currently considered the "gold standard" test for detecting infection from the virus and is generally done in testing centres or in the presence of health care professionals. While these data have allowed for a better understanding of the rise and decline of confirmed cases across Canada, it is important to note that they do not account for all Canadians who have been infected. For example, with the emergence of the Omicron variant, [there was an increase in the use of rapid antigen tests](#) (RAT), from which results are not usually reported to health authorities. Lastly, not everyone who acquired COVID-19 may have been aware or tested, particularly if they did not experience any symptoms.

Today's provisional release focuses on results from saliva-based PCR tests which were collected from May 10 to August 31, 2022. The results show that, on average, on any given day throughout summer 2022, the virus was detectable in approximately 1 in every 50 Canadians aged 18 years and older, indicating a current or recent infection. Among them, about one-third (35%) were not aware that they had the virus. When individuals were aware of their infection, most relied on the results from a RAT during this time.

On an average day during summer 2022, about 500,000 Canadian adults would have tested positive if they took a polymerase chain reaction test, indicating they were either currently or recently infected

As part of the survey, a representative sample of Canadians aged 18 years and older were tested for SARS CoV-2 using a saliva-based PCR test, regardless of whether they had symptoms or not. A positive test indicates a current or recent infection at the time of testing. It is important to note that an individual can test positive for an extended period of time and that a positive test result does not necessarily imply the individual is still sick or infectious.

According to the provisional results, 1.8% of Canadian adults would have tested positive if they took a test for SARS CoV-2 on any given day from May to August 2022. This means that about 420,000 to 650,000 Canadian adults were either infected or recently infected with the virus on any given day during this period. As individuals can test positive for the same infection over many days, this figure is necessarily higher than the number of new infections per day over the same period.

More than one in three Canadians with a current or recent infection did not know or suspect they had the virus

The survey included questions about whether Canadians had ever tested positive for the virus or whether they suspected that they ever had it. This information was combined with results from the saliva-based PCR test to understand how often Canadians were unaware of a SARS CoV-2 infection and thus may not have changed their behaviour to limit the spread to others.



Provisional results found that 35% of people who had a current or recent infection indicated that they had never tested positive or suspected having the virus, indicating that they were unaware of their infection.

During summer 2022, rapid antigen tests continued to be the primary way that Canadians became aware they were infected with the virus

As previously reported, the RAT became the principal way Canadians tested positive in January 2022. This continued through the summer and, among those with a current or recent infection from May to August, many knew they had the virus because of a recent positive test result. Almost three-quarters (74.0%) of people obtained their result from a RAT compared with 26.0% who received confirmation from a PCR test.

The results provide an indication of reinfections

It is possible that people who recovered from a COVID-19 infection can become infected again. In this study, 14.4% of those who showed detectable amounts of the virus from May to August 2022 reported that they had tested positive for COVID-19 more than three months earlier. While this figure should not necessarily be interpreted as the percentage of reinfections, given that it is possible for someone to still test positive on a PCR test beyond 90 days after their infection, it does provide some evidence that reinfections have occurred.

Among Canadians living in private dwellings, older Canadians and those with chronic conditions are less likely to have been infected since the start of the pandemic

The PHAC continues to provide [guidance to Canadians](#) on how to reduce the spread of SARS CoV-2, including recommendations to limit close contacts where possible when suspecting an infection. Some guidance from public health authorities has been specifically aimed at those most vulnerable to severe health outcomes, including older Canadians and those with underlying health conditions. The self-reported provisional results released today show that these two populations were less likely to have tested positive for COVID-19 since the start of the pandemic. By June 2022, 13.6% of those aged 65 years and older living in private dwellings reported having tested positive for the virus at least once since the start of the pandemic, compared with 24.7% of those aged 50 to 64 years, 34.0% of those aged 35 to 49 years, and 34.5% of those aged 18 to 34 years.

Canadians with chronic conditions or cancer were less likely to have tested positive for the virus than those without. Of Canadians with no chronic conditions or cancer, 30.2% reported testing positive at least once by June 2022, compared with 26.6% of those with one chronic condition or cancer and 21.9% of those with two or more chronic conditions or cancer. These provisional results suggest that the people most at risk of severe outcomes may be more likely to adopt measures to protect themselves.

Future data

Through its partnership with the PHAC and the CITF, Statistics Canada is committed to expanding the understanding of COVID-19 by continuing to publish the most recent information available from the survey. Future results, including direct measures of antibodies from vaccination and past infection, will be released in early 2023.

Note to readers

Populations excluded from the Canadian COVID-19 Antibody and Health Survey were persons living in the three territories, persons under 18 years of age, persons living on reserves and other Indigenous settlements in the provinces, certain members of the Canadian Forces, persons living in institutions, and residents of certain remote regions.

This report uses a subset of all data collected in the survey, which are considered provisional and are subject to change upon the final release of the survey data. Questionnaire data used in this report were collected from April 1 to August 31, 2022. Survey data collection was completed over three overlapping collection periods with approximately equal samples in each. These collection periods began on April 1, May 10, and June 1.

Saliva specimens were gathered for polymerase chain reaction (PCR) testing in order to identify current or recent SARS CoV-2 infection from May 10 to August 31, 2022. Respondents were asked to take the test regardless of whether they had symptoms or not. The result in the report above, that 1.8% (or from 1.4% to 2.1%) tested positive for SARS CoV-2, was calculated in the following manner: positive saliva PCR tests identified during the data collection period were weighted and calibrated to reflect an average percent of positive tests in the Canadian population if everyone had been tested on any given day from May to August. The count of Canadians that tested positive for SARS CoV-2 is provided as a range using the 95% confidence intervals to provide an indication of the uncertainty associated with the estimates. It should be noted that a positive PCR test [confirms the presence of the SARS CoV-2 virus's genetic material](#) and that it is possible for individuals to test positive for an extended period of time, even after the infection has resolved. Therefore, the figures presented should not be interpreted as the number of active infections.

As this report uses a subset of all data collected in the survey, provisional survey weights were used to create a representative sample and to minimize any potential bias that could arise from survey non-response. Non-response adjustments and calibration using available auxiliary information were also applied and are reflected in the survey weights. Despite adjustments and calibrations reflected in the provisional survey weights, a high degree of non-response to the survey increases the risk of remaining bias.

The proportion of people who tested positive on the saliva PCR test and indicated they were not aware of their current infection is based on those who indicated on the questionnaire that they had never tested positive before and never suspected a prior infection. These would not include cases where the individual tested positive for or suspected an earlier infection but was unaware of their current, second infection. In contrast, it is possible for the individual to have become aware of their infection after completing the survey. In some cases, the questionnaire and the specimen collections were not completed on the same day. Likewise, while collection ended on August 31, 2022, a small percentage of PCR samples, less than 1% of those received, arrived after that date. Analysis on those with current or recent infections who tested positive recently is based on those who tested positive on the saliva-based PCR test at the time of the survey who also indicated that they tested positive for the first time within three months of collection.

The Public Health Agency of Canada has published information related to testing positive for extended periods of time after an initial infection and the role of reinfections: [COVID-19: Guidance for repeated PCR testing in individuals previously positive](#).

[Information on the chronic conditions and cancers assessed by the survey](#) can be inferred from the contents of the questionnaire. Chronic conditions are defined as having lasted or are expected to last at least 6 months and were diagnosed by a health care professional.

Because survey collection spanned a long period, readers are advised caution when comparing against an overlapping but shorter period. When considering the entirety of the survey data collected from April 1 to August 31, 2022, the reader should avoid making comparisons between the survey data and other available data for a specific point in time within the survey period as the COVID-19 landscape across Canada changed drastically in that span of time.

Definitions, data sources and methods: survey number [5339](#).

For more information, or to enquire about the concepts, methods or data quality of this release, contact us (toll-free 1-800-263-1136; 514-283-8300; infostats@statcan.gc.ca) or Media Relations (statcan.mediahotline-ligneinfomedias.statcan@statcan.gc.ca).