

# Self-reported COVID-19 test results in Canada, January 2020 to March 2022

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Statistics Canada is releasing provisional data from the second cycle of the Canadian COVID-19 Antibody and Health Survey (CCAHS). This release is on self-reported COVID-19 infection.

There have been a large number of data sources used to monitor rates of COVID-19 infection since the start of the pandemic. Published national [COVID-19 case report data](#) on the provinces and territories collected by the Public Health Agency of Canada focuses on people who tested positive for COVID-19 based on a polymerase chain reaction (PCR). The PCR test is currently considered the "gold standard" test for diagnosing COVID-19, often done in testing centres or in the presence of medical professionals. While these data have been used to understand the rises and declines of confirmed cases across Canada, it is important to note that these data do not account for all Canadians who have been infected. Not everyone who acquired COVID-19 may have been aware or tested. This limitation was exacerbated with the onset of the Omicron variant in late 2021, as much higher rates of infections put a strain on PCR testing in some jurisdictions. As a result, there was an increase in the use of rapid antigen tests (RATs), whose results are not necessarily reported to health authorities. The RAT can be self-administered at home, produce a test result within minutes, and is able to identify people infected with COVID-19. They are, however, considered less valid than PCR tests, as they are less likely to detect infections.

According to the provisional results released today, approximately 1 in 5 Canadians aged 18 years and older indicated that they tested positive for COVID-19, either through a RAT or PCR test, before April 1, 2022. However, this figure understates the true number of infections over that period, as some people who were infected may not have had access to a test, chose not to be tested, or were unaware that they had COVID-19. While individuals can report whether they have ever tested positive, either with a PCR test or a RAT, this information can be complemented by other means, such as considering seroprevalence, which is the proportion of Canadians who have antibodies detected through direct testing of blood samples, to provide a more comprehensive understanding of the prevalence of COVID-19 infections.

The CCAHS provides new evidence about those who tested positive with either a PCR or a RAT, as well as those who suspected that they had an infection. In the future, these self-reported results will be complemented by direct measures of SARS CoV-2 (the virus which causes COVID-19) antibodies from blood samples and active infection status from saliva samples. Given that these direct measures are not yet available, today's provisional release focuses on people who indicated that they had tested positive for COVID-19 between the start of the pandemic and March 31, 2022. This is the first nationally representative study of Canadian adults who tested positive with RATs.

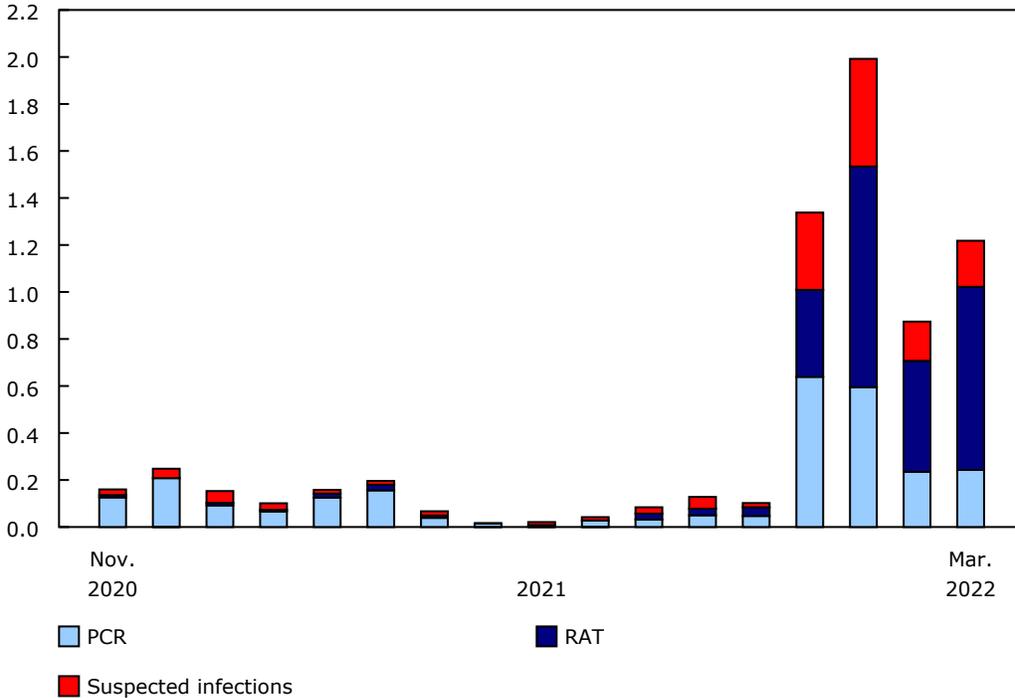
## **In January 2022, rapid antigen tests became the principal way in which Canadians tested positive for COVID-19**

In late 2021, with the rapid spread of the Omicron variant, demand for testing increased. In some jurisdictions, this put a strain on PCR testing, and there was a shift towards increasing the availability of RATs. As a result of this shift, among Canadians aged 18 years and older who indicated that they first tested positive for COVID-19 in January 2022, almost two thirds (61.2%) received this result from a RAT. According to Canadians, the RAT continued to be the main source of their positive COVID-19 test results through February and March 2022.



**Chart 1**  
**Self-reported positive COVID-19 polymerase chain reaction (PCR) test and rapid antigen test (RAT) results, and suspected infections, in Canadian adults between November 2020 and March 2022**

millions of Canadians



x suppressed to meet the confidentiality requirements of the Statistics Act  
**Note(s):** For December 2020, June 2021, July 2021 and August 2021, RAT cases were combined with PCR cases due to small sample sizes within the RAT category. Self-reported COVID-19 positive tests and suspected infections before November 2020 were excluded due to low sample size.  
**Source(s):** Canadian COVID-19 Antibody and Health Survey - Cycle 2 (5339).

**Almost 1 in 5 Canadians indicated that they had tested positive at least once for COVID-19 on either a PCR or RAT before April 2022**

The provisional results released today found that 19.5% of Canadians aged 18 years and older reported that they had tested positive for COVID-19 before April 1, 2022. This percentage includes 9.8% of Canadian adults who indicated that they had tested positive on a PCR test and an additional 9.7% who had tested positive on a RAT. Given that a large number of COVID-19 infections have continued being observed after March 2022, and as not everyone infected with the virus may have tested positive, these figures do not account for the current prevalence of COVID-19.

Self-reported infections, either through a PCR test or RAT, differed across age groups. Canadians aged 18 to 34 years (26.5%) reported the highest percentage of positive tests, while those aged 65 years and older (7.2%) reported the lowest.

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## Nearly 1 in 12 Canadians suspected they were infected with COVID-19 at some point before April 2022, despite never testing positive

Among adult Canadians, 8.1% suspected that they had contracted COVID-19 at least once before April 1, 2022, despite never testing positive. There are various, and sometimes multiple, reasons for people suspecting they had a prior infection. The three most commonly reported being: having COVID-19 symptoms (82.1%), being exposed to a household member who was suspected of having had COVID-19 or tested positive for COVID-19 (39.1%) and being exposed to someone outside their household who was suspected to have had COVID-19 or tested positive for COVID-19 (25.3%). Slightly more men (8.4%) than women (7.9%) suspected that they had been infected with COVID-19 despite never testing positive. The 18 to 34-year-old age group had the highest percentage of self-suspected COVID-19 infections (11.4%), while those aged 65 and older (3.9%) had the lowest. Self-suspected COVID-19 infection was 9.1% among people aged 35 to 49 years and 7.3% among those aged 50 to 64.

## South Asian and Arab Canadians were among those most likely to indicate that they tested positive for COVID-19 from a PCR before April 2022

Not all Canadian population groups have had the same exposure to COVID-19 since the start of the pandemic. [Recent results](#) have shown that, during the first year of the pandemic, Canadians who identified as Black or South Asian had higher mortality rates due to COVID-19 than those who identified as Chinese or White. The provisional results released today indicate that some population groups were more likely than others to report testing positive by PCR. In particular, people who identified as South Asian (20.0%) or Arab (19.8%) were among those most likely to indicate that they had tested positive with the PCR test before April 1, 2022. In contrast, those who identified as Chinese (5.3%) or White (8.7%) were less likely to report testing positive with the PCR test.

While RATs have become more readily available, this has not always been the case in all parts of Canada. Some Canadians, through schools, daycares, or by purchasing tests online, may have had better access to these home tests than others. As more information becomes available, it will be possible to do more in-depth analysis on whether or not certain population groups who had developed COVID-19 antibodies from a previous infection may have been more, or less, likely to test positive with a RAT.

## Future data

Through its partnership with the PHAC, Statistics Canada is committed to expanding the understanding of COVID-19 by continuing to update the provisional results from CCAHS on a monthly basis. Among the several aspects of this survey, future results will include the additional direct measures of SARS CoV-2 antibody data directly through dried blood spot tests and active infection status through PCR testing of saliva samples. This laboratory component of CCAHS is being conducted in partnership with the COVID-19 Immunity Task Force. These additional direct measures will build on the self-reported experiences of Canadians by providing population-level estimates on immunity against SARS-CoV-2 caused by a prior infection and/or as a result of vaccination and estimates of an active infection at the time of saliva specimen collection. These findings will be among others disseminated in upcoming publications. Beyond the additional direct measures, future publications will also provide insight into COVID-19 symptom severity and health care access during the pandemic.

### Note to readers

Populations excluded from the CCAHS are persons living in the three territories, persons under 18 years of age, persons living on reserves and other Indigenous settlements in the provinces, full-time members of the Canadian Forces, persons living in institutions, and residents of certain remote regions.

As this report uses a subset of all the data collected in the survey, the data are not complete, are considered preliminary, and are subject to change upon the final release of the survey data. Survey data collection was completed over three overlapping collection periods with approximately equal samples in each. These collection periods began April 1, May 16, and June 1, respectively. Note, the vast majority of the collection occurred prior to the seventh national wave of COVID-19 (the third wave of the omicron variant to COVID-19).

Please note that the data in this article is based on the individual's self-reported first positive test result or first suspected infection and does not account for multiple infections.

As these data were analyzed at a time when collection was ongoing, provisional survey weights were used 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 included with the data file. Despite adjustments and calibrations reflected in the provisional survey weights, the high degree of non-response to the survey increases the risk of remaining bias. This remaining bias may impact estimates produced using the survey data.

As this is a limited provisional release, please note that not all variables for the survey have been released.

### 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](mailto:infostats@statcan.gc.ca)) or Media Relations ([statcan.mediahotline-ligneinfomedias.statcan@statcan.gc.ca](mailto:statcan.mediahotline-ligneinfomedias.statcan@statcan.gc.ca)).