

Long-term symptoms in Canadian adults who tested positive for COVID-19 or suspected an infection, January 2020 to August 2022

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COVID-19 has had a varied impact on those who have contracted it. While most infected people have had mild symptoms, others have had more severe cases, some even requiring hospitalization, and others ultimately dying from the disease. Among those who have recovered from their initial infections, lingering symptoms such as tiredness, fatigue, brain fog and cough/shortness of breath have been reported months beyond the original infection. Today, in partnership with the Public Health Agency of Canada (PHAC), Statistics Canada is releasing the first nationally representative insights on Canadians who experienced long-term symptoms after testing positive for COVID-19 or suspecting a prior COVID-19 infection.

These results are based on provisional data from the second cycle of the Canadian COVID-19 Antibody and Health Survey (CCAHS-2). [Additional insights on these topics](#) are also available from the PHAC.

According to provisional results from the CCAHS, up to the end of May 2022, almost one-third (32.0%) of Canadians aged 18 years and older indicated that they tested positive for COVID-19, while an additional 8.3% suspected they had COVID-19. These results, however, understate the true number of infections from January 2020 to May 2022, as some people who were infected may not have been aware that they had contracted COVID-19 or had tested negative even though they had been infected. The self-reported results in this release will be complemented in future analysis by direct measures of Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (the virus that causes COVID-19) from blood samples and saliva samples collected through the CCAHS.

Today's provisional release focuses on the experiences of Canadian adults who indicated that they tested positive for COVID-19 or suspect they had the disease since the start of the pandemic. The data in this release were collected from April 1 to August 15, 2022. The results show that 14.8% of Canadian adults who had or thought they had COVID-19 still experienced symptoms at least three months after their initial infection.

Among Canadian adults who tested positive or suspected they had COVID-19, nearly four in five reported having mild to moderate symptoms with their first infection

Fever, dry cough, and fatigue are commonly reported symptoms of COVID-19. However, a wide range of symptoms have been identified, such as loss of taste or smell, sore throat, headache, muscle or joint pain, shortness of breath, pain or pressure in the chest, and psychological symptoms including anxiety and depression. The severity of the initial symptoms varied considerably among Canadian adults who tested positive for or reported having COVID-19.

Overall, 5.2% declared having no symptoms while 16.7% rated their symptoms as severe, which was defined as having a significant impact on their daily life. Just over one-third (34.2%) rated the symptoms of their COVID-19 infection as mild (i.e., not having a direct impact on their daily life) and 43.9% rated their symptoms as moderate (i.e., having some impact on their daily life). A higher percentage of women reported experiencing moderate (46.9%) and severe symptoms (18.0%) compared with men (40.9% and 15.2%, respectively).

About 1.4 million Canadian adults indicated they had symptoms at least three months after a positive COVID-19 test or suspected infection

For some individuals who become ill from COVID-19, symptoms either continue long after their infection or return after the initial symptoms have been resolved. Of those who indicated a previous positive test or a suspected infection for COVID-19, 14.8% experienced symptoms at least three months after their infection. This translates into



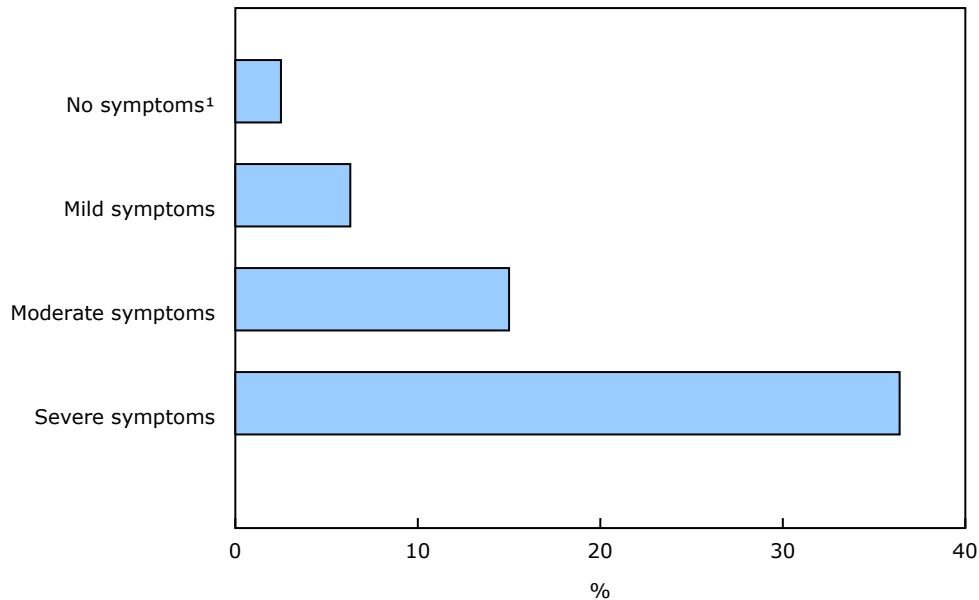
about 1.4 million Canadian adults or 4.6% of the Canadian population aged 18 years and older. A higher percentage of women (18.0%) reported prolonged symptoms compared with men (11.6%). No significant differences by age group were found in the percentage of Canadian adults reporting prolonged symptoms.

Canadians with symptoms at least three months after an initial or suspected infection indicated that fatigue (72.1%) was the most reported unresolved symptom, followed by cough (39.3%), shortness of breath (38.5%) and brain fog (32.9%).

A higher percentage of Canadian adults with severe symptoms at the time of their first COVID-19 infection experienced symptoms at least three months later

While research on the topic is ongoing, and anyone who has been infected might be at risk of having prolonged and recurrent symptoms, some studies have suggested that this risk is greater for those who had a more severe initial experience with COVID-19. Among Canadian adults who rated their symptoms as severe at the time of their first positive test or suspected infection, 36.4% indicated having symptoms at least three months after their infection. As indicated by Chart 1, the percentage who indicated longer-term symptoms decreased as the severity of their initial symptoms decreased. Among those who rated the symptoms as moderate, 15.0% reported longer-term symptoms, while 6.3% who reported a mild case of COVID-19 reported longer-term symptoms.

Chart 1
Percentage of Canadian adults experiencing symptoms three or more months after a positive COVID-19 test or suspected COVID-19 infection, by severity of initial symptoms



1. Use data with caution. Data contains a coefficient of variation between 16.7% and 33.3%.
Source(s): Canadian COVID-19 Antibody and Health Survey - Cycle 2 (5339).

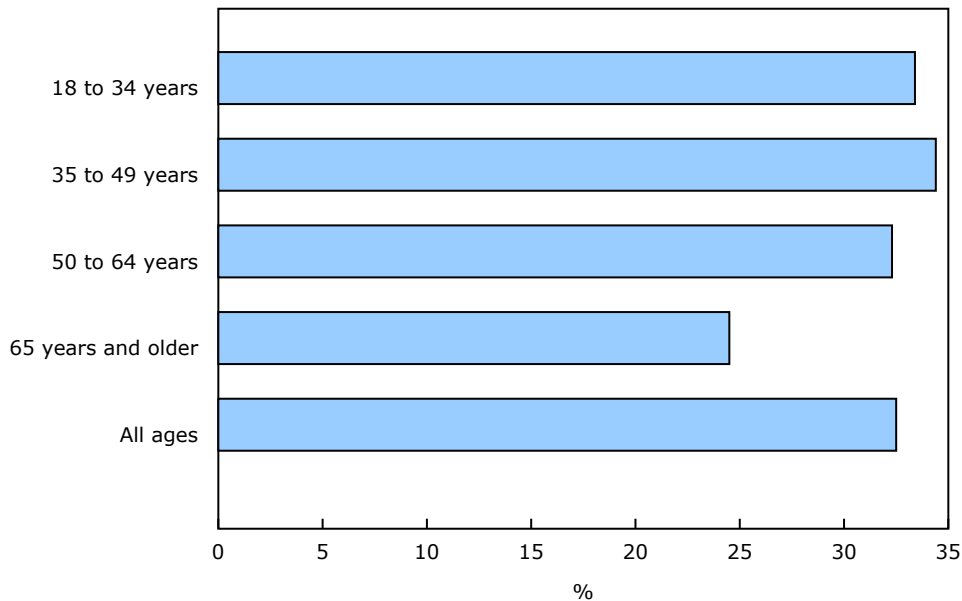
After the emergence of the Omicron variant, a smaller percentage of Canadian adults indicated having symptoms at least three months following their positive or suspected COVID-19 infection

In December 2021, the Omicron strain became the dominant strain of SARS-CoV-2 infecting Canadians. This strain has been described as less virulent but more contagious than previous SARS-CoV-2 strains. The provisional results of the CCAHS are showing that among Canadian adults who indicated a positive test or suspected infection before December 2021, 25.8% had symptoms at least three months after their infection. For those indicating an infection experienced in December 2021 or after, the percentage that had symptoms at least three months after infection decreased to 10.5%.

Nearly one in three Canadian adults who had symptoms at least three months after their initial infection had fully recovered from their initial symptoms before developing symptoms again

Of Canadian adults who reported symptoms at least three months after being infected, 32.5% had recovered from their initial symptoms before symptoms returned. A higher percentage of men (37.2%) than women (28.7%) indicated their symptoms had resolved and then returned. The percentage of Canadian adults who had symptoms return after recovery also varied by age group and was lowest among those aged 65 years and older (24.5%) compared with other age groups.

Chart 2
Percentage of Canadian adults reporting new symptoms after an initial recovery from a confirmed or suspected COVID-19 infection, by age group



Source(s): Canadian COVID-19 Antibody and Health Survey - Cycle 2 (5339).

Looking ahead

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 the CCAHS on a regular basis. Among the several aspects of this survey, future releases will include the results from direct measures of SARS-CoV-2 antibody data collected through dried blood spot tests and active infection status through polymerase chain reaction (PCR) testing of saliva samples. This laboratory component of the 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 of immunity against SARS-CoV-2 caused by a prior infection and/or as a result of vaccination and by estimates of an active infection at the time of saliva specimen collection.

Note to readers

Populations excluded from the Canadian COVID-19 Antibody and Health Survey (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 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. Data used in this report was collected from April 1, 2022 to August 15, 2022. Survey data collection was completed over three overlapping collection periods with approximately equal samples in each. These collection periods began April 1, May 10, and June 1, respectively.

As these data were analyzed at a time when collection was ongoing, 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.

For COVID-19 symptoms, categories were defined as the following: no symptoms; mild symptoms, did not affect daily life; moderate symptoms, had some effect on daily life; and severe symptoms, had a significant effect on daily life. For the purpose of this analysis, data on COVID-19 infections included Canadians who self-reported a previous positive polymerase chain reaction (PCR) test or a positive rapid antigen test (RAT), as well as those who never tested positive but suspected they had an infection. These data do not include all those who had COVID-19, as some may have never suspected they had an infection and never been tested, or tested negative even though they were infected. It is also important to note that those who tested positive or suspected an infection may have had a different experience with the disease, including risk of longer-term symptoms, compared with those who were infected but neither tested positive nor suspected they had COVID-19.

The type of test used by respondents who indicated they tested positive but did not know the test type was categorized based on date of COVID-19 test, with positive tests occurring before December 2021 categorized as PCR and after December 2021 categorized as RAT.

Results on the status of persisting symptoms three months after testing positive or suspecting an infection only included respondents for whom a period of three months separated their date of infection and the date they completed the questionnaire.

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) or Media Relations (statcan.mediahotline-ligneinfomedias.statcan@statcan.gc.ca).