

Implications of serology testing in Canada

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Serology testing for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) will be useful for public health decisions and research but will not have wide application for clinical care, according to a review article in *CMAJ (Canadian Medical Association Journal)*.

The article reviews current and evolving evidence around SARS-CoV-2 serological testing and implications for [clinical practice](#), laboratory medicine and public health. In an unusual collaboration reflecting the seriousness of the coronavirus disease 2019 (COVID-19) epidemic in Canada, the review was authored and endorsed by representatives of five expert groups: the Canadian Public Health Laboratory Network, Canadian Society of Clinical Chemists, Association of Medical Microbiology and Infectious Disease Canada, the Canadian Association for Clinical Microbiology and Infectious Diseases, and the COVID-19 Immunity Task Force.

Health Canada has approved several serology tests to detect the presence or absence of SARS-CoV-2 antibodies in blood, serum or plasma for use in Canada. Given that interpretation of serological test results depends on many variables and our understanding of SARS-CoV-2 is still evolving, serological testing is not applicable for routine use in [clinical care](#), including to determine whether someone is infectious or immune or to ascertain individuals' susceptibility to the disease.

"The current state of knowledge does not permit definitive inferences about immunity and the likelihood of reinfection based on the results of serological testing, and testing cannot, therefore, be used to inform

individual-level decisions on changing [occupational exposure](#), the use of personal protective equipment, recommendations on physical distancing by members of the public or advice on international travel," write representatives of the five expert groups.

Serological testing may be useful in some clinical instances, such as in people who present with atypical symptoms or children with inflammatory syndromes.

The authors suggest that results from serology testing may be used to estimate rates of exposure and transmission in specific populations, [geographic areas](#) and workplaces.

"Given measurement and interpretive uncertainties of tests, the clinical indications for SARS-CoV-2 serological testing are limited, with only a few exceptions," write the authors. "The tests will be useful in diverse research contexts and for policy-making in [public health](#) but should not be rolled out for general clinical use based on current evidence."

More information: Paul Van Caesele et al. SARS-CoV-2 (COVID-19) serology: implications for clinical practice, laboratory medicine and public health, *Canadian Medical Association Journal* (2020). [DOI: 10.1503/cmaj.201588](https://doi.org/10.1503/cmaj.201588)

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