

# Coronavirus COVID-19

BC Centre for Disease Control | BC Ministry of Health



## Clinical Guidance on COVID-19 Vaccines for Persons with Inflammatory Bowel Disease

**This guidance is intended for healthcare providers. It is based on known evidence as of April 18, 2023.**

Adults and children with inflammatory bowel disease (IBD) may require immune modulating therapies for disease control. Being on immune therapies for IBD may increase the risk for some infections, but the currently available information does not show an increased risk of infection or development of COVID-19 in individuals with IBD or those who are on the standard therapies.<sup>1</sup> Active IBD and high-dose steroids (>20 mg/day) are two of the biggest risk factors for infection and effective treatment of IBD with medical therapy has been shown to lower infectious risk.<sup>2,3</sup>

Because of limited data, it is unknown whether there are any significant differences in COVID-19 vaccine effectiveness or safety in the diverse group of people with IBD on immunosuppressant therapies compared to those included in vaccine trials. The degree of response to the vaccine may be affected by the degree of immunosuppression which will depend on the individual patient's underlying disease progression (and co-morbidities) and the immunosuppressive therapies required to control their disease and/or symptoms.

As patients wait for their vaccine administration, it would be important to counsel patients not to hold or stop their chronic immunosuppressant therapy without direct consultation with their prescriber.

## Is COVID-19 immunization recommended for people with inflammatory bowel disease?

COVID-19 vaccines should be encouraged for patients with inflammatory bowel disease and are not contraindicated, including those who have had COVID-19 infection. This recommendation is based on the following review:

- Canadian Association of Gastroenterology highlights evidence that people with IBD who have COVID-19 (including those on long-term biologics or non-steroid immunomodulatory therapies) may not have an increased risk of severe outcomes (hospitalization or death) compared to COVID-19 patients without IBD. However, recent corticosteroid use may be associated with a higher risk of severe COVID-19 outcomes.<sup>4</sup>
- Although the majority of people with IBD who are immunosuppressed were excluded from clinical trials of the COVID-19 vaccines, the American College of Gastroenterology<sup>1</sup>, Canadian Association of Gastroenterology<sup>4</sup> and British Society of Gastroenterology<sup>5</sup> have all released position statements strongly supporting the use of COVID-19 vaccination in this population.
- Experts agree that the potential benefits and anticipated desirable effects of COVID-19 vaccination outweigh the potential harms in persons with IBD who take immunosuppressing/immunomodulating therapy.<sup>1,4,5</sup>

**If you have fever, a new cough, or are having difficulty breathing, call 8-1-1.**



Ministry of  
Health



BC Centre for Disease Control



While data specific to the safety and efficacy of COVID-19 vaccines in people who take immunosuppressant or immunomodulating therapies is currently limited, there are data to suggest that the currently available COVID-19 vaccines have efficacy.<sup>6</sup> The authors of this guidance agree that the benefits of COVID-19 immunization with these vaccines outweigh any theoretical risks of immunization.

## Is COVID-19 immunization efficacious and safe for patients with inflammatory bowel disease?

Individuals who are treated with immunosuppressant and immunomodulating therapies were excluded from the clinical trials of all of the COVID-19 vaccines.<sup>7-11</sup> Post-vaccine studies have shown attenuated immunogenicity and lower antibody concentrations for patients with IBD taking infliximab, but seroconversion rates were higher after a second dose of the vaccine.<sup>12</sup>

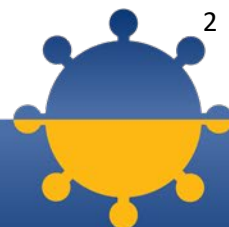
There is one study that suggests that a third dose of COVID-19 vaccine in immunocompromised patients can increase antibody levels.<sup>12</sup> Small studies on third doses of the mRNA COVID-19 vaccines have shown that immunogenicity (immunity measured in the blood) may increase with a third dose.<sup>13</sup>

Safety data for people with inflammatory diseases taking immunosuppressive medications are available in observational studies. The frequency and severity of adverse events following vaccination with an mRNA COVID-19 vaccine were comparable to that of non-immunosuppressed individuals in these studies and what was reported in clinical trials. Safety data in these populations following vaccination with a viral vector vaccine is not available. The safety of a third mRNA dose is unknown at this time, but in these small studies reactions were found to be similar to that of prior doses.

Informed consent should include discussion about the possibility that individuals who are immunosuppressed may have a diminished immune response to any of the COVID-19 vaccines. If the patient has an autoimmune disease as well, informed consent should include discussion about the emerging evidence of the safety of mRNA COVID-19 vaccines in these populations. However, they should also be reassured that expert consensus is that benefits of immunization outweigh the risks.<sup>1,4,14-16</sup>

Safety and efficacy considerations for inflammatory bowel disease patients treated with immune modulating therapies are as follows:

- In IBD patients taking immunosuppressive drugs, including biologics and small molecule inhibitors, the key concerns are related to the theoretical risk of suboptimal vaccine responses rather than vaccine side effects.<sup>1</sup>
- Canadian Association of Gastroenterology suggests that patients with inflammatory bowel disease (IBD) may have a lower immune response to certain vaccines. However, inactivated (or non-live) vaccines are safe with no serious adverse events in people with IBD regardless of whether or not they are on immunosuppressive therapy.<sup>15</sup>
- There are currently no known factors that would predispose these patients with inflammatory bowel disease to adverse events associated with the vaccines beyond those experienced by the general population.<sup>7-11</sup> At the time of Health Canada's authorization, there were no known serious warning signals or precautions associated



with these vaccines specifically in patients on immunosuppressants, apart from considerations about potential reduced efficacy.<sup>7-11</sup>

- As immune response to COVID-19 immunization is unknown for those taking immunosuppressant or immunomodulating therapy, patients who take these therapies and who receive the COVID-19 vaccine should continue to closely follow public health recommendations including social distancing, regular hand washing and cleaning/disinfection.

## Are there any specific contraindications or exceptions for patients with inflammatory bowel disease?

Individuals who have had a severe allergic reaction to an ingredient of one type of COVID-19 vaccine are still able to receive future doses of the other type of vaccine.<sup>17</sup> BCCDC has a list of the individual components and their purpose in the vaccines. For a complete list of components in the vaccine, consult the vaccine monographs found at: [www.bccdc.ca/health-info/diseases-conditions/covid-19/covid-19-vaccine/vaccines-for-covid-19](http://www.bccdc.ca/health-info/diseases-conditions/covid-19/covid-19-vaccine/vaccines-for-covid-19).

For individuals with a history of anaphylactic reaction to a previous dose of an mRNA COVID-19 vaccine, re-vaccination (i.e., administration of a subsequent dose in the series when indicated) may be offered with the same vaccine or the same mRNA platform if a risk assessment deems that the benefits outweigh the potential risks for the individual and if informed consent is provided. Prior to revaccination, consultation with an allergist or another appropriate physician (e.g., Medical Health Officer) is advised. If re-vaccination is going ahead, vaccine administration should be done in a controlled setting with expertise and equipment to manage anaphylaxis, with an extended period of observation of at least 30 minutes after re-vaccination.

Health Canada continues to monitor any adverse events following immunization through their post-authorization surveillance [process](#).

Other than allergy, there are no specific contradictions or exceptions for people with IBD apart from the efficacy and safety considerations outlined above.

Currently, it is recommended that COVID-19 vaccines can be given concomitantly with, or any time before or after any other indicated vaccine including the seasonal influenza vaccine.<sup>18-21</sup>

## Are there specific recommendations or considerations for safe and/or most effective administration?

One of the general principles for immunization of immunocompromised patients is to vaccinate when maximum immune response can be anticipated.<sup>22</sup> For patients who are stabilized on their immunosuppressant therapy, finding the optimal timing relative to the COVID-19 dosing schedule is challenging. Delaying some therapies may risk destabilizing disease control.<sup>23-25</sup>

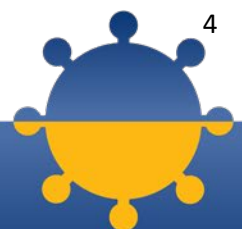
Medication timing recommendations are as follows:



- For patients on the following medications, there is **no need to adjust or delay the medication**:<sup>4,25</sup>  
**adalimumab | anakinra | azathioprine | belimumab | certolizumab | cyclophosphamide (pills) | cyclosporin | etanercept | golimumab | hydroxychloroquine | infliximab | IVIG | ixekizumab | leflunomide | methotrexate | mycophenolate mofetil | prednisone (less than 20mg/day) or equivalents | sarilumab | secukinumab | sulfasalazine | tacrolimus | tocilizumab | ustekinumab | vedolizumab**
- For patients on **rituximab** or **ocrelizumab**, COVID-19 immunization should ideally be timed four to five months after their last infusion and two to four weeks prior to their next infusion, when possible, in order to optimize vaccine response. However, in patients who require immediate infusion or who are unable to optimize timing of infusion product and vaccine, it is likely more important to have the COVID vaccine as soon as possible than it is to delay based on timing of B-cell therapy.
- For patients on **prednisone 20mg/day or higher or equivalents**, consider waiting until the prednisone dose is tapered to below 20mg/d to receive both vaccine doses, providing that tapering makes clinical sense for the patient at that time and providing that the time needed to taper down is limited. It is likely more important to have the COVID vaccine as soon as possible than it is to delay based on timing of steroid therapy. Pediatric patients on high-dose steroids should consult with their pediatric rheumatologist to decide on the best time to receive the vaccine.<sup>26</sup>

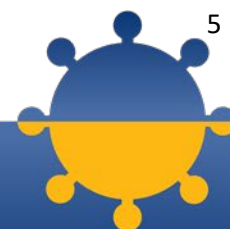
## References

1. American College of Gastroenterology. Inflammatory Bowel Disease and COVID-19 Patient Information. Updated 23 March 2020.  
[https://webfiles.gi.org/links/patients/COVID19\\_IBD\\_ACG\\_Patient\\_Handout\\_03232020\\_FINAL.pdf](https://webfiles.gi.org/links/patients/COVID19_IBD_ACG_Patient_Handout_03232020_FINAL.pdf). Accessed 27 November 2021.
2. Burke, K. E., Kochar, B., Allegretti, J. R., Winter, R. W., Lochhead, P., Khalili, H., Colizzo, F. P., Hamilton, M. J., Chan, W. W., & Ananthakrishnan, A. N. (2021). Immunosuppressive Therapy and Risk of COVID-19 Infection in Patients With Inflammatory Bowel Diseases. *Inflammatory bowel diseases*, 27(2), 155–161.  
<https://doi.org/10.1093/ibd/izaa278>
3. Lukin, D. J., Kumar, A., Hajifathalian, K., Sharaiha, R. Z., Scherl, E. J., Longman, R. S., Jill Roberts Center Study Group Study Group, & Weill Cornell Medicine-Gastrointestinal Study Group (2020). Baseline Disease Activity and Steroid Therapy Stratify Risk of COVID-19 in Patients With Inflammatory Bowel Disease. *Gastroenterology*, 159(4), 1541–1544.e2. <https://doi.org/10.1053/j.gastro.2020.05.066>
4. Canadian Association of Gastroenterology. COVID-19 Vaccination in Patients with Inflammatory Bowel Disease. <https://academic.oup.com/jcag/article/4/1/49/6121498>. Accessed 27 November 2021.
5. British Society of Gastroenterology Inflammatory Bowel Disease section and IBD Clinical Research Group position statement on SARS-CoV2 Vaccination. Updated 23 October 2021. <https://www.bsg.org.uk/covid-19-advice/british-society-of-gastroenterology-inflammatory-bowel-disease-section-and-ibd-clinical-research-group-position-statement-on-sars-cov2-vaccination>. Accessed 27 November 2021.
6. Azzolini E, Pozzi C, Germagnoli L, et al. mRNA COVID-19 vaccine booster fosters B- and T-cell responses



- in immunocompromised patients. Life Sci Alliance 2022;5(6)doi:10.26508/lsa.202201381, 10.26508/lsa.202201381
7. Pfizer-BioNTech. COMIRNATY product monograph. Kirkland, Quebec. 9 September 2022.
  8. Moderna. SPIKEVAX product monograph. Oakville, Ontario. 14 July 2022.
  9. AstraZeneca. VAXZEVRIA product monograph. Mississauga, Ontario. 5 May 2022.
  10. Janssen. JCOVDEN product monograph. Toronto, Ontario. 5 August 2022.
  11. Novavax. NUVAXOVID product monograph. Oakville, Ontario. 24 March 2022.
  12. Kennedy NA, Lin S, Goodhand JR, et al. Infliximab is associated with attenuated immunogenicity to BNT162b2 and ChAdox1 nCoV-19 SARS-CoV-2 vaccines in patients with IBD. Gut. 2021 Apr 26; 2021-324789. doi: 10.1136/gutjnl-2021-324789
  13. BC Centre for Disease Control. COVID-19 Vaccine. Getting a Vaccine. Booster dose. Updated 1 March 2022. Available at: <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/covid-19-vaccine/getting-a-vaccine#booster>. Accessed 1 March 2022.
  14. BC Centre for Disease Control. COVID-19 Vaccine. Getting a Vaccine. Getting your first and second doses. Updated 28 February 2022. Available at <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/covid-19-vaccine/getting-a-vaccine#first>. Accessed 1 March 2022
  15. Andrea Greinacher et al. The New England Journal of Medicine. Thrombotic Thrombocytopenia after ChAdOx1 nCov-19 Vaccination. DOI: 10.1056/NEJMoa2104840
  16. Canadian Society of Allergy and Clinical Immunology. COVID-19 Vaccine Testing & Administration Guidance for Allergist/Immunologists from CSACI: Current as of 5 January 2021. <https://csaci.ca/wp-content/uploads/2021/01/COVID-19-VaccineTesting-AdministrationGuidance-JAN5.pdf>. Accessed 27 November 2021.
  17. BC Centre for Disease Control. COVID-19 Vaccine. Vaccine Considerations. Updated 12 May 2022. Available at: <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/covid-19-vaccine/vaccine-considerations>. Accessed 8 August 2022
  18. BC Centre for Disease Control. Communicable Disease Control Manual Chapter 2: Immunization Part 4 - Biological Products. COMIRNATY. Updated 29 July 2022. Available at: [www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/immunization/biological-products](http://www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/immunization/biological-products). Accessed 8 August 2022.
  19. BC Centre for Disease Control. Communicable Disease Control Manual Chapter 2: Immunization Part 4 - Biological Products. SPIKEVAX. Updated 8 August 2022. Available at: [www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/immunization/biological-products](http://www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/immunization/biological-products). Accessed 8 August 2022.
  20. BC Centre for Disease Control. Communicable Disease Control Manual Chapter 2: Immunization Part 4 - Biological Products. VAXZEVRIA. Updated 8 July 2022. Available at: <http://www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/immunization/biological-products>. Accessed 8 August 2022.
  21. BC Centre for Disease Control. Communicable Disease Control Manual Chapter 2: Immunization Part 4 - Biological Products. NOVAVAX. 8 July 2022. Available at: [!\[\]\(3da2b303d29c1ea489bbe26a3f5ac664\_img.jpg\)

BRITISH  
COLUMBIA](http://www.bccdc.ca/health-</a></li></ol></div><div data-bbox=)





[professionals/clinical-resources/communicable-disease-control-manual/immunization/biological-products](#). Accessed 8 August 2022.

22. Marlet, J., Gatault, P., Maakaroun, Z., Longuet, H., Stefic, K., Handala, L., Eymieux, S., Gyan, E., Dartigeas, C., & Gaudy-Graffin, C. (2021). Antibody Responses after a Third Dose of COVID-19 Vaccine in Kidney Transplant Recipients and Patients Treated for Chronic Lymphocytic Leukemia. *Vaccines*, 9(10), 1055. <https://doi.org/10.3390/vaccines9101055>.
23. BC Centre for Disease Control: General Principles for Immunization of the Immunocompromised. January 2010 <http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Epid/CD%20Manual/Chapter%202%20-%20Imms/Part2/GeneralPrinciples.pdf>. Accessed 27 November 2021.
24. Mehta P, Porter JC, Chambers RC, et al. B-cell depletion with rituximab in the COVID-19 pandemic: where do we stand? *Lancet Rheumatology* 2020;2(10):E589-590
25. Canadian Rheumatology Updated CRA Recommendation on COVID-19 Vaccination in Persons with Autoimmune Rheumatic Disease (PDF). 23 November 2021. [https://rheum.ca/wp-content/uploads/2021/11/V3\\_Nov\\_23\\_2021\\_EN.pdf](https://rheum.ca/wp-content/uploads/2021/11/V3_Nov_23_2021_EN.pdf). Accessed 27 November 2021.
26. Government of Canada. Immunization of immunocompromised persons: Canadian Immunization Guide. May 2018. Available from: <https://www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-3-vaccination-specific-populations/page-8-immunization-immunocompromised-persons.html>. Accessed 27 November 2021.

## Authors

Dr. Brian Bressler, Founder, The IBD Centre of BC, Director, Advanced IBD Training Program Clinical Associate Professor of Medicine, Division of Gastroenterology, University of British Columbia

Dr. Dustin Loomes, Director, Vancouver Island IBD Clinic, Pacific Digestive Health / Royal Jubilee Hospital, Clinical Assistant Professor, UBC

Eric Lun, Executive Director, BC Transplant, Provincial Specialized Programs and Clinical Policy

