

# Coronavirus COVID-19

BC Centre for Disease Control | BC Ministry of Health



## Clinical Guidance on COVID-19 Vaccines for People with Kidney Disease (Dialysis, Non-Dialysis with Advanced Disease, Glomerulonephritis)

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

The risk of mortality from COVID-19 disease appears to be higher in patients with kidney disease. In a UK National Health Service study using a living risk predictor algorithm (QCOVID) for the risk of hospital admission and mortality due to COVID-19, chronic kidney disease (CKD) patients stage 5 (with or without dialysis or transplant) were found to be at increased risk of complications.<sup>1</sup> Other risk factors included patients on oral steroids or immunosuppressive agents. The majority of these patients had multi-morbidities (including diabetes, heart disease, lung diseases) and many were over the age of 70.

Compounding these risk factors is the need for hemodialysis patients to travel to and receive dialysis care three times per week at hospital or community-based dialysis units where social distancing is more difficult and multiple exchanges with care teams and other patients occur.

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

COVID-19 vaccines should be encouraged for people with kidney disease and are not contraindicated, including those who have had a COVID-19 infection.

This recommendation is based on the following review:

- The National Advisory Committee on Immunization recommends that immunosuppressed individuals may be offered the vaccine if the benefits of vaccine outweigh the potential risks.<sup>2</sup>
- Patients with kidney disease have an increased risk of hospitalization and death related to COVID-19 infection.<sup>1</sup>
- The Canadian Society of Nephrology supports the use of COVID-19 immunization in this population and has advocated to all provinces and the federal government for the urgent prioritization of dialysis patients for COVID-19 vaccinations.<sup>3</sup>
- Aside from a very rare risk of an allergic reaction (only a handful of people to date), there is no concern that the vaccine will cause kidney patients harm. There is only uncertainty regarding its effectiveness for those who are immunosuppressed.

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



Ministry of Health



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While data specific to the safety and efficacy of COVID-19 vaccines in people with kidney disease is currently limited, there are data to suggest that the currently available COVID-19 vaccines have efficacy.<sup>4</sup> The authors of this guidance agree that the benefits of COVID-19 immunization with these vaccines outweigh any theoretical risks of immunization.

## Is the COVID-19 vaccine efficacious and safe for people with kidney disease?

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People living with chronic kidney disease, including those on dialysis, are less likely to mount an adequate immune response to the COVID-19 vaccines, which puts them at higher risk for COVID-19 infection and severe complication.<sup>5</sup> There is one study that suggests that a third dose of COVID-19 vaccine in immunocompromised patients can increase antibody levels.<sup>6</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.

There are currently no known factors that would predispose individuals with chronic kidney disease to different or more frequent adverse events associated with the vaccines when compared to the general population.

## Are there any specific contraindications or exceptions for kidney patients?

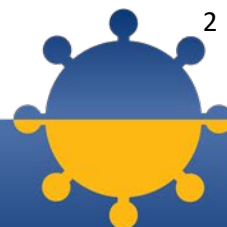
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Individuals who have had a severe allergic reaction to an ingredient of one type of COVID-19 vaccine are still able to receive future doses of the other type of vaccine.<sup>7</sup> BCCDC has a list of the individual components and their purpose in 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](#).

There are no specific contraindications or exceptions for those with kidney disease. Health-care providers of those who have had a kidney transplant should refer to the clinical guidance on COVID-19 vaccines for people who have received an organ transplant.



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

### Patients on kidney transplant waiting list

For those on the kidney transplant waiting list, there are some considerations related to immunization timing. It is recommended that immunization proceed as quickly as possible, given that the response to the vaccine is likely diminished in the immediate post-transplant period. Thus, completing immunization prior to transplant will be important for those high on the waiting list or those highly sensitized patients.

### Patients on immunosuppressive therapy

People who take immunosuppressant/immunomodulating therapy were excluded in COVID-19 vaccine trials. Therefore, it is unknown if the COVID-19 vaccines are as efficacious in those who take immunosuppressants compared to those who are not considered immunosuppressed.

Kidney patients who take immunosuppressants (with or without transplants) should be informed there are not yet studies that examine the direct benefit and safety of COVID-19 immunization in this population, and that these recommendations/clinical guidance are based on extrapolation of data from other viral infections, immunology of immunizations and from expert opinion.

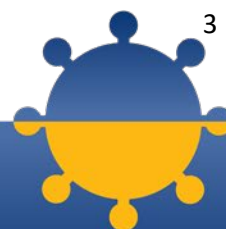
The benefits of immunization are considered to outweigh the potential risks. Immunization is recommended in this group, preferably once 'induction' therapy has been completed.

People who may have severe systemic disease (lupus, vasculitis, etc.) who need to receive immunosuppressive therapy (Rituximab, Prednisone 20 mg/day or greater, Cyclophosphamide, Plasma Exchange) should complete that course of treatment before receiving the vaccine and should not delay treatment of their life threatening condition in order to be immunized. *See special considerations for Rituximab and Prednisone below.*

In general, it is preferred that patients complete immunization before starting high-dose immunosuppressive therapy, if possible, based on the timing of the treatments and the availability of vaccines at the time. This should ideally be at least 14 days after the second dose of any of the vaccines. **\*Life-saving or prolonging therapy should not be delayed solely for the purposes of completing immunization.**

Any other timing would require case-by-case assessment based on:

- a. Risk of morbidity related to COVID-19 infection (including local prevalence of the pandemic, comorbidities that confer higher risk categories in general population, etc.).
- b. Suboptimal immunity protection due to insufficient time between immunization and immunosuppressive therapy.



## Special considerations for Hepatitis B vaccination and IGRA testing in the context of COVID-19 vaccination for hemodialysis patients

The following considerations and recommendations for HD care should be taken into account as hemodialysis patients begin receiving vaccination against COVID-19:

- COVID-19 vaccines can be given concomitantly with, or any time before or after any other indicated vaccine.<sup>8-11</sup>
- For new hemodialysis patients requiring TB screening:
  - Blood samples may be sent for IGRA testing if the patient has not had a COVID-19 vaccine dose in the last 28 days.
  - IGRA testing should be deferred until 28 days after the most recent COVID-19 vaccine dose.

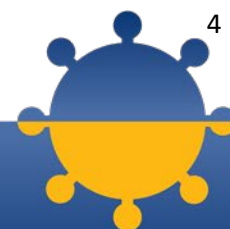
## Special considerations for immunotherapy: Rituximab and Prednisone

Patients receiving these agents may have a blunted immune response to vaccines in general that can extend to up to six months following treatment completion.

- For patients on **rituximab**, COVID-19 immunization should ideally be timed four to five months after their last infusion and 2 to 4 weeks prior to their next infusion, when possible, in order to optimize vaccine response. However, in patients that require immediate infusion or who are unable to optimize timing of infusion product and vaccine, treatment is paramount. Patients should be counselled to get the vaccine as soon as it is available to them, but to not delay rituximab treatment for the sake of a vaccine appointment.
- For patients on **prednisone** 20mg/day or higher (or equivalents), consider waiting until the prednisone dose is tapered to below 20mg/day to receive both vaccine doses, but only if the time needed to taper the prednisone dose below 20mg/day is short. Pediatric patients on high-dose steroids should consult with their pediatric rheumatologist to decide on the best time to receive the vaccine.<sup>12</sup>

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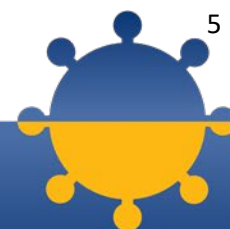
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## Authors

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Dr. Adeera Levin, MD FRCPC FCAHS CM, Executive Director BC Renal, Head Division of Nephrology University of British Columbia

Gloria Freeborn, Director of Strategic Initiatives, Education and Development, BC Renal



## Reviewers

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Dr. Michael Copland, Medical Director, Kidney Services Vancouver Coastal Health/Providence Health Care, Senior Medical Lead, BC Renal

Dr. John Antonsen, Medical Director, Kidney Services Island Health, Senior Medical Lead, BC Renal

Dr. Janis Dionne, Medical Director, Pediatric Kidney Services, British Columbia Children's Hospital

