

We know you want to help, but prescribing Ivermectin for the prevention or treatment of COVID-19 is not the answer.

Since the SARS-Cov-2 pandemic struck, there have been reports proclaiming the benefits of many drugs for the management of COVID-19. One of the latest drugs of focus is Ivermectin, an anti-parasitic drug highly discussed on social media.

Unfortunately, the Ivermectin studies supporting its use are plagued with bias, small sample sizes, confounding factors, surrogate marker endpoints, no or inadequate controls, low-quality evidence, exclusion of up-to-date data and inclusion of poor quality non-peer reviewed studies with the main large trial (in favour of its use having been withdrawn for concerns of fraudulent data).

Meta-analyses of these studies have noted critically low quality, while a high quality Cochrane review concluded that Ivermectin should not be used outside of a trial.^{1,2,4}

What advice should I give to my patients asking for Ivermectin to prevent COVID-19?

Ivermectin has NOT been approved by Health Canada to treat or prevent COVID-19. [See the alert from Health Canada.](#)

Many reputable groups, such as the Infectious Diseases Society of America, the European Medicines Agency and locally, AHS and PEER, have looked at the current evidence for use of Ivermectin for COVID-19 and concluded it should not be used for the prevention or treatment of COVID outside of clinical trials. Physicians and patients involved in formally approved, reputable clinical trials are part of ongoing clinical research, which is acceptable and important to the evolving understanding of COVID management. The evidence isn't there to support its use and it can be dangerous, especially if taken in high doses.

Additionally, a company (Merck Canada Inc.) that makes an Ivermectin product, approved for the treatment of certain parasite infections, advises against using Ivermectin in pregnant women, children under 15 kg and adults over 65, as the safety evidence is limited or has not yet been established.⁵

The best way to protect ourselves and our loved ones is by getting vaccinated and following COVID-19 prevention measures. It is also important for people to look

after themselves through healthy lifestyles and managing any chronic medical conditions as well as possible. We know healthy people can tolerate severe illness better than those with underlying medical conditions and encourage everyone to work with their healthcare team to be as healthy and well as possible.

If your patient or someone they know has taken Ivermectin, they should watch for side effects and seek medical attention if any are present. Side effects of Ivermectin include (but are not limited to):^{3,7 10}

- Gastrointestinal (nausea, vomiting, diarrhea, etc.)
- Allergic reactions
- Headache
- Blurred vision/visual hallucinations
- Dizziness
- Tachycardia
- Hypotension
- Altered mental state
- Confusion
- Loss of coordination/balance
- CNS depression
- Seizures

The Health Canada alert asks Canadians to [submit a complaint](#) should they have any information about the illegal advertising or sale of Ivermectin or any other health product.

Alberta physicians must practise according to the standards of practice established by the College of Physicians & Surgeons of Alberta. The standard that addresses prescribing of drugs for unapproved uses states that a [physician's actions must be informed by "current best available medical evidence"](#).

So, what is the best available medical evidence currently available?

In summary, high-quality evidence reviews and established international guidelines do NOT recommend Ivermectin use for COVID-19. There are no approved trials of Ivermectin in Alberta. This evidence base is being monitored closely.

If you have evidence of someone prescribing Ivermectin, you can report it to our COVID concerns line at covid19@cpsa.ab.ca.

Cochrane Library:

<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD015017.pub2/full>

“Based on the current very low-to low-certainty evidence, we are uncertain about the efficacy and safety of Ivermectin used to treat people with COVID-19 in the inpatient and outpatient settings and to prevent a SARS-CoV-2 infection in people after having high-risk exposure. There is also no evidence available from the study pool as to which is the best dose and regimen of Ivermectin. Overall, the reliable evidence available does not support the use of Ivermectin for treatment or prevention of COVID-19 outside of well-designed randomized controlled trials (RCTs). With respect to the number of identified studies in trial registries and with accordance to the living approach of this review, we will continually update our search and include eligible trials.

Note: The Cochrane review examined studies that conflicted with their findings and highlighted these studies’ shortcomings.

Conflicts are mainly due to inclusion of studies investigating active comparators with unproven efficacy (e.g. hydroxychloroquine), pooling of studies with active and inactive comparators, different definitions of outcomes or outcomes assessment times, and different interpretations of the certainty of evidence.”

Alberta Health Services:

<https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-sag-ivermectin-in-treatment-and-prevention-rapid-review.pdf>

“At this time, Ivermectin is not recommended for prophylaxis against COVID-19, outside of clinical trials.

Rationale: The studies are of low quality so findings have considerable uncertainty around the effect size due to the shortcomings in study design and execution. Further research is necessary to confirm the effectiveness of Ivermectin as COVID-19 prophylaxis.

At this time, Ivermectin is not recommended for treatment of COVID-19 outside of a clinical trial.

Rationale: Existing evidence on this topic is inconclusive due to low quality of the literature and mixed findings of the primary studies and meta-analyses. There is considerable uncertainty due to the shortcomings in study design and execution.

Further research is necessary to confirm the role of Ivermectin as an effective, clinically useful treatment for COVID-19.

We recommend Alberta investigators support clinical trials of Ivermectin as possible to help establish the role of Ivermectin in COVID-19.”

PEER (Patients, Experience, Evidence, Research):

https://gomainpro.ca/wp-content/uploads/tools-for-practice/1630698383_tfp297_ivermectin.pdf

“Bottom line, the best available evidence does not show that Ivermectin improves clinically important outcomes in COVID-19. Use in COVID-19 is discouraged.”

BC Centre for Disease Control:

<http://www.bccdc.ca/health-professionals/clinical-resources/covid-19-care/clinical-care/treatments>

“Ivermectin is not recommended for treatment or prophylaxis of COVID-19 outside of approved randomized-controlled trials.”

CADTH:

<https://cadth.ca/sites/default/files/covid-19/RC1336%20-%20Ivermectin%20for%20COVID-19%20v6.4.pdf>

“With the current evidence, the included guidelines do not recommend the use of Ivermectin for the treatment if COVID-19.”

BMJ:

<https://www.bmj.com/content/370/bmj.m2980>

<https://ebm.bmj.com/content/early/2021/05/26/bmjebm-2021-111678>

“Whether or not Remdesivir, Ivermectin, and other drugs confer any patient-important benefit remains uncertain.

Concluding, research related to Ivermectin in COVID-19 has serious methodological limitations resulting in very low certainty of the evidence, and continues to grow. The use of Ivermectin, among others repurposed drugs for prophylaxis or treatment

for COVID-19, should be done based on trustable evidence, without conflicts of interest, with proven safety and efficacy in patient-consented, ethically approved, randomized clinical trials.”

CDC (Prevention Health Alert Network):

<https://emergency.cdc.gov/han/2021/han00449.asp>

“Clinical trials and observational studies to evaluate the use of Ivermectin to prevent and treat COVID-19 in humans have yielded insufficient evidence for the NIH COVID-19 Treatment Guidelines Panel to recommend its use.”

World Health Organization:

<https://www.who.int/news-room/feature-stories/detail/who-advises-that-ivermectin-only-be-used-to-treat-covid-19-within-clinical-trials>

“The current evidence on the use of Ivermectin to treat COVID-19 patients is inconclusive. Until more data is available, WHO recommends that the drug only be used within clinical trials.”

European Medicines Agency:

<https://www.ema.europa.eu/en/news/ema-advises-against-use-ivermectin-prevention-treatment-covid-19-outside-randomised-clinical-trials>

“EMA has reviewed the latest evidence on the use of Ivermectin for the prevention and treatment of COVID-19 and concluded that the available data do not support its use for COVID-19 outside well-designed clinical trials.”

Infectious Diseases Society of America:

<https://www.idsociety.org/practice-guideline/covid-19-guideline-treatment-and-management/>

<https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciab591/6310839>

“Recommendation 21: In hospitalized patients with COVID-19, the IDSA panel suggests against Ivermectin outside of the context of a clinical trial. (Conditional recommendation, very low certainty of evidence.)

Recommendation 22: In ambulatory persons with COVID-19, the IDSA panel suggests against Ivermectin outside of the context of a clinical trial. (Conditional recommendation, very low certainty of evidence.)

Compared with the standard of care or placebo, IVM did not reduce all-cause mortality, LOS, or viral clearance in RCTs in patients with mostly mild Covid-19. IVM did not have an effect on AEs or SAEs and is not a viable option to treat patients with COVID-19.”

COVID Management Guidelines India Group:

<https://indiacovidguidelines.org/ivermectin/>

“We recommend against using Ivermectin for treatment of patients with any severity of COVID-19. Ivermectin should only be used in the context of a randomized clinical trial.”

U.S. Food & Drug Administration:

<https://www.fda.gov/consumers/consumer-updates/why-you-should-not-use-ivermectin-treat-or-prevent-covid-19>

“Currently available data do not show Ivermectin is effective against COVID-19. [Clinical trials](#) assessing Ivermectin tablets for the prevention or treatment of COVID-19 in people are ongoing.

...the FDA has received multiple reports of patients who have required medical attention, including hospitalization, after self-medicating with Ivermectin intended for livestock.”

Merck Canada Inc.:

<https://www.merck.com/news/merck-statement-on-ivermectin-use-during-the-covid-19-pandemic/>

“No scientific basis for a potential therapeutic effect against COVID-19 from pre-clinical studies;

No meaningful evidence for clinical activity or clinical efficacy in patients with COVID-19 disease, and;

A concerning lack of safety data in the majority of studies.”

What are the big concerns about safety? Ivermectin has been used for years for parasitic infections.

- While Ivermectin has been shown to inhibit viral replication *in vitro*, human therapeutic doses may not be safely attainable.
- In July 2021 in the U.S., there was a 24-fold increase in outpatient dispensing of Ivermectin and a five-fold increase in calls to poison control centres across the U.S. Reports were also associated with increased frequency of adverse effects and emergency department/hospital visits. No similar data is available for Alberta.
- The product monograph from Merck Canada advises against using Ivermectin in pregnant women, children under 15 kg, and adults over 65 as the safety evidence is limited or has not yet been established.⁵
- Ivermectin products intended for veterinary use should never be used by humans – volumes, doses, etc. of these products could be especially harmful.

What else does CPSA encourage physicians to do?

- Carefully review information on social media and research articles, to assess the research methodology.
- Keep abreast of the evidence (several Ivermectin studies are underway).
- To support clinical decisions, only consider information from trusted sources for current, reliable and meaningful evidence. If in doubt about research findings and claims, please contact [CPSA](#).
- Educate your patients. Ivermectin is not approved for use for COVID-19 by Health Canada, there is currently no sound evidence for its use and there are risks of using it. Concurrent use of Ivermectin with other drugs may result in drug-drug interactions (possible increased INR with warfarin)^{16, 19}, or increase side effects (e.g., sedation of benzodiazepines).
- Recommend COVID-19 vaccinations for eligible Albertans. Vaccines continue to be safe and highly efficacious alternatives for the prevention of COVID-19, reducing the risk of serious disease and death including for the Delta variant and breakthrough infections.
- Encourage your patients to stay healthy by addressing and managing chronic illnesses to reduce the risk of serious disease related to COVID infections. And follow your own advice by taking care of your own health as well.

- Recommend COVID-19 prevention measures, such as: wearing masks in indoor public places, physical distancing by staying at least two meters from other people who don't live in the same household, avoiding crowds and poorly-ventilated spaces, frequent handwashing and use of approved hand sanitizers.

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