

What You Should Know About Dexamethasone for Treating COVID-19

As research into effective treatments for patients with COVID-19 continues, recent attention has been brought to dexamethasone – an older but commonly used drug. Preliminary results from a large ongoing trial called RECOVERY and studying the use of dexamethasone for treating hospitalized patients with COVID-19 showed promising results.

So, you may be wondering what this drug is all about. What was it used for in the past? What does the evidence say about its use for treating COVID-19? Here is a brief summary of what we currently know.

Dexamethasone

- Dexamethasone was first developed in 1957 and approved for medical use in 1961.
- WHO listed dexamethasone as an essential medication. Today, it is commonly used and widely available at a low cost.
- Dexamethasone is a corticosteroid medication, which demonstrates anti-inflammatory and immunosuppressive properties.

What non-COVID-19 conditions has dexamethasone been used to treat?

Dexamethasone has been used to treat many different conditions. Some examples include:

- reducing the nausea and vomiting associated with chemotherapy during cancer treatment
- treating swelling in the brain
- preventing nausea and vomiting
- as part of chemotherapy regimens for certain cancers.

The COVID-19 Dexamethasone Trial – RECOVERY

Why test dexamethasone for COVID-19?

It is thought that corticosteroids might have a role in reducing lung damage, which can occur in COVID-19 patients.

Where the current evidence lies

In the RECOVERY trial, 2,104 patients were treated with oral or intravenous dexamethasone in addition to the usual standard of care and 4,321 patients received the usual standard of care alone. The primary outcome was all-cause mortality within 28 days.

The trial found that the 482 of 2,104 (22.9%) of those treated with dexamethasone died compared with 1,110 of 4,321 (25.7%) who received the usual standard of care.

The trial found that dexamethasone reduced 28-day, all-cause mortality in these subgroups:

- **patients requiring oxygen only** – 298 of 1,279 (23.3%) of those treated with dexamethasone died compared with 685 of 2,604 (26.2%) who received the usual standard of care
- **patients requiring ventilators** – 95 of 324 (29.3%) of those treated with dexamethasone died compared with 283 of 683 (41.4%) who received the usual standard of care.

However, patients on mechanical ventilation were much younger than other patients in the trial and this may have influenced the results. In addition, these results must be interpreted with caution given the statistical limitations of the trial.

While the RECOVERY trial was the first large randomized controlled trial testing a systemic glucocorticoid for treating COVID-19, there are currently other randomized controlled trials underway, further examining this COVID-19 treatment type. The RECOVERY trial is ongoing and CADTH will continue to monitor its emerging evidence.

Dexamethasone is presently a low-cost medication and is available around the world. In Canada, it is available in oral and intravenous forms. Health Canada at this time has stated that clinicians strongly consider the use of dexamethasone for patients who have COVID-19 and require oxygen or mechanical ventilation.

[Read CADTH's critical appraisal](#) of the RECOVERY trial.

[Read more](#) about potential COVID-19 drug treatments and how to find trustworthy information sources.

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