

# Potential harms of chloroquine, hydroxychloroquine and azithromycin for treating COVID-19

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- Neuropsychiatric effects, such as agitation, confusion, hallucinations and paranoia
- Interactions with other drugs
- Metabolic variability (some people metabolize chloroquine and hydroxychloroquine poorly and a small percentage metabolize them rapidly, which affects the response to treatment)
- Overdose (chloroquine and hydroxychloroquine are highly toxic in overdose and can cause seizures, coma and [cardiac arrest](#))
- Drug shortages (patients with autoimmune disorders such as rheumatoid arthritis, lupus and other chronic diseases, who take hydroxychloroquine to treat these conditions could have problems accessing this drug)

Chloroquine, hydroxychloroquine and azithromycin are being used to treat and prevent COVID-19 despite weak evidence for effectiveness, and physicians and patients should be aware of the drugs' potentially serious adverse events, states a review in *CMAJ (Canadian Medical Association Journal)*.

"Physicians and patients should be aware of several rare but potentially life-threatening adverse effects of chloroquine and hydroxychloroquine," says Dr. David Juurlink, Division of Clinical Pharmacology and Toxicology, Sunnybrook Health Sciences Centre, and a senior scientist at ICES.

The review provides an overview of potential harms associated with these drugs as well as their management based on the best available evidence.

Potential adverse effects include:

- Cardiac arrhythmias
- Hypoglycemia

The review summarizes the poor quality of evidence suggesting that these treatments might be beneficial in patients with COVID-19 and cautions that it is possible that these treatments could worsen the disease.

"Despite optimism (in some, even enthusiasm) for the potential of chloroquine or hydroxychloroquine in the treatment of COVID-19, little consideration has been given to the possibility that the drugs might negatively influence the course of disease," says Dr. Juurlink. "This is why we need a better evidence base before routinely using these drugs to treat patients with COVID-19."

**More information:** David N. Juurlink. Safety considerations with chloroquine, hydroxychloroquine and azithromycin in the management of SARS-CoV-2 infection.

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