



## YOUR QUESTION

Is it safe to use ibuprofen in the pharmacological treatment of a patient with COVID-19?

### **What is the best evidence currently?**

Ibuprofen is typically prescribed for patients with pain or fever. As these may be symptoms of COVID-19, ibuprofen has been prescribed by some doctors in this context also. On March 11 2020, a commentary was published in the *Lancet* hypothesising that ibuprofen may raise the risk of being infected with COVID-19. Subsequently, the French Minister of Health advised via social media to avoid ibuprofen and other anti-inflammatories because they could be “an aggravating factor” in COVID-19 infections. No evidence for this advice was put forward. Some experts in the UK and France have advised that paracetamol should be considered instead as a first choice for treatment rather than ibuprofen but cautioned that more research is needed.




Both the Food and Drug Administration and the European Medicines Agency have stated that they are not aware of any negative effects of ibuprofen given to COVID-19 patients, apart from the usual known side-effects that limit its use in certain populations. The HPSC states that there are no contraindications for ibuprofen use. However, it is noted that ibuprofen might mask COVID-19 symptoms and should be avoided in cases when an individual has been or is believed to have been in contact with someone infected with COVID-19, or for healthcare workers returning to Ireland after 16th March 2020.

Furthermore, the World Health Organization is making no recommendation against the use of ibuprofen at this time. Both the Health Service Executive and the National Health Service have stated that there is no strong evidence that NSAIDs such as ibuprofen could worsen COVID-19 or have a negative impact on disease outcome. Both health services note that paracetamol is usually recommended as the first-line treatment for most people but that ibuprofen is safe to take if doing so on doctor's advice. UpToDate state that there have been no clinical or population-based data that directly address the risk of NSAIDs in the context of COVID-19 and it also confirms that the World Health Organization and the European Medicines Agency do not recommend that ibuprofen be avoided.

SOURCES\*

Produced by the members of the National Health Library and Knowledge Service Evidence Team. Current as at 30 March 2020. This rapid evidence review collates the best available evidence at the time of writing. Emerging literature or subsequent developments in respect of COVID-19 may require amendment to the information or sources listed in the document. Although all reasonable care has been taken in the compilation of content, the National Health Library and Knowledge Service Evidence Team makes no representations or warranties expressed or implied as to the accuracy or suitability of the information or sources listed in the document. This evidence summary is the property of the National Health Library and Knowledge Service and subsequent re-use or distribution in whole or in part should include acknowledgement of the service.

The following PICO(T) was used as a basis for the evidence summary:

	COVID-19 PATIENTS
	IBUPROFEN
	
	

Resources consulted: WHO, ECDC, HPSC, NHS, HSE, BMJ Best Practice, EMA, FDA, UpToDate, EMBASE, Medline, Google Scholar and Google.

\* World Health Organization. (2020). [https://twitter.com/WHO/status/1240409217997189128?ref\\_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1240409217997189128&ref\\_url=https%3A%2F%2Fwww.sciencealert.com%2Fwho-recommends-to-avoid-taking-ibuprofen-for-covid-19-symptoms](https://twitter.com/WHO/status/1240409217997189128?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1240409217997189128&ref_url=https%3A%2F%2Fwww.sciencealert.com%2Fwho-recommends-to-avoid-taking-ibuprofen-for-covid-19-symptoms) [Accessed 30 03 2020].

European Medicines Agency. (2020). [https://www.ema.europa.eu/en/documents/press-release/ema-gives-advice-use-non-steroidal-anti-inflammatories-covid-19\\_en.pdf](https://www.ema.europa.eu/en/documents/press-release/ema-gives-advice-use-non-steroidal-anti-inflammatories-covid-19_en.pdf). [Accessed 30 03 2020].

Food and Drug Administration. (2020). <https://www.fda.gov/drugs/drug-safety-and-availability/fda-advises-patients-use-non-steroidal-anti-inflammatory-drugs-nsaids-covid-19>. [Accessed 30 03 2020].

Centers for Disease Control and Prevention. (2020). [https://www.cdc.gov/coronavirus/2019-ncov/downloads/COVID-19\\_CAREKit\\_ENG.pdf](https://www.cdc.gov/coronavirus/2019-ncov/downloads/COVID-19_CAREKit_ENG.pdf). [Accessed 30 03 2020].

Health Protection Surveillance Centre. (2020). [https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/occupationalhealthguidance/Healthcare%20Worker%20COVID-19%20Close%20Contact%20Information%20Leaflet\\_v7.0\\_23032020.pdf](https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/occupationalhealthguidance/Healthcare%20Worker%20COVID-19%20Close%20Contact%20Information%20Leaflet_v7.0_23032020.pdf). [Accessed 30 03 2020].

Health Service Executive. (2020). <https://www.hse.ie/eng/services/news/media/pressrel/advice-about-anti-inflammatory-medication-and-covid-19.html>. [Accessed 30 03 2020].

National Health Service. (2020). <https://www.nhs.uk/conditions/coronavirus-covid-19/self-isolation-advice/>. [Accessed 30 03 2020].

BMJ Best Practice. [Coronavirus virus 2019 \(COVID-19\)](#). [Accessed 30 03 2020].

UpToDate. [Coronavirus Disease 2019 \(COVID-19\)](#). [Accessed 30 03 2020].

Fang et al. (2020). [The Lancet] <https://www.ncbi.nlm.nih.gov/pubmed/32171062>. [Accessed 30 03 2020].

BMJ. (2020). [BMJ]. <https://www.ncbi.nlm.nih.gov/pubmed/32184201>. [Accessed 30 03 2020].

Fitzgerald, G.A. (2020). [Science]. <https://www.ncbi.nlm.nih.gov/pubmed/32198292>. [Accessed 30 03 2020].



The following search strategy was used:

"covid-19" OR coronavirus OR "wuhan virus" OR "2019-ncov" OR "severe acute respiratory syndrome coronavirus 2" OR "2019 novel coronavirus" OR "2019 new coronavirus" AND ibuprofen (and all brand name variants)

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