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The latest news and updates from the world of pharmacotherapy

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COVID-19 and ACEi/ARBs

In recent days, a theoretical concern has been raised suggesting that ACE inhibitors and ARBs may increase the risk of infection and severity of COVID-19 infection by increasing cell expression of ACE2 enzyme, which is targeted by the COVID-19 virus. (1) However, clinical evidence to support this claim is lacking. At this time, both **Hypertension Canada and the European Society of Cardiology recommend continuing with current blood pressure treatment regimens.** (2,3)

References:

- (1) Fang L, Karakiulakis G, and Roth M. Are patients with hypertension and diabetes mellitus at increased risk for COVID-19 infection? *Lancet Respir Med.* 2020. [[https://doi.org/10.1016/PllS2213-2600\(20\)30116-8.pdf](https://doi.org/10.1016/PllS2213-2600(20)30116-8.pdf)] ([https://www.thelancet.com/pdfs/journals/lanres/PIIS2213-2600\(20\)30116-8.pdf](https://www.thelancet.com/pdfs/journals/lanres/PIIS2213-2600(20)30116-8.pdf))
- (2) Hypertension Canada's Statement on: Hypertension ACE inhibitors and angiotensin receptor blockers and COVID-19. March 13, 2020. Available at: <https://hypertension.ca/wp-content/uploads/2020/03/2020-30-15-Hypertension-Canada-Statement-on-COVID-19-ACEi-ARB.pdf> (Accessed March 16, 2020.)
- (3) European Society of Cardiology. Position statement of the ESC Council on hypertension on ACE-inhibitors and angiotensin receptor blockers. March 13, 2020. Available at: [https://www.escardio.org/Councils/Council-on-Hypertension-\(CHT\)/News/position-statement-of-the-esc-council-on-hypertension-on-ace-inhibitors-and-ang](https://www.escardio.org/Councils/Council-on-Hypertension-(CHT)/News/position-statement-of-the-esc-council-on-hypertension-on-ace-inhibitors-and-ang) (Accessed March 15, 2020.)

COVID-19 and NSAIDs

As anti-inflammatory agents, it has been suggested that NSAIDs may weaken immunological response. (1) Some has therefore suggested that perhaps NSAIDs may be associated with COVID-19 infections as well. However, clinical evidence is lacking. In France, authorities have advised taking acetaminophen instead of over-the-counter NSAIDs if appropriate. (2) This is consistent with the general recommended approach to try acetaminophen for fever and aches first, and then resort to NSAIDs if acetaminophen alone is inadequate or contraindicated otherwise. (3)

References:

- (1) Bancos S, et al. Ibuprofen and other widely used non-steroidal anti-inflammatory drugs inhibit antibody production in human cells. *Cell Immunol.* 2009;258(1):18-28. [doi:10.1016/j.cellimm.2009.03.007] (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2693360/>)
- (2) The Guardian. Anti-inflammatories may aggravate Covid-19, France advises. March 14, 2020. Available at: <https://www.theguardian.com/world/2020/mar/14/anti-inflammatory-drugs-may-aggravate-coronavirus-infection> (Accessed March 17, 2020.)
- (3) Science Media Centre. Expert reaction to reports that the French Health Minister recommended use of paracetamol for fever from COVID-19 rather than ibuprofen or cortisone. March 16, 2020. Available at: <https://www.sciencemediacentre.org/expert-reaction-to-reports-that-the-french-health-minister-recommended-use-of-paracetamol-for-fever-from-covid-19-rather-than-ibuprofen-or-cortisone/> (Accessed March 17, 2020.)

Abbreviations: ACE = angiotensin converting enzyme, ACE2 = angiotensin converting enzyme 2, ACEi = angiotensin converting enzyme inhibitors, ARBs = angiotensin receptor blockers, COVID-19 = coronavirus disease 2019