

Many of our patients have been concerned after hearing reports via “social media” on the internet about the possibility that two very common classes of blood pressure medications, the Angiotensin Converting Enzyme Inhibitors (usually called “ACE inhibitors,” or “ACEI,”) and the Angiotensin Receptor Blockers (commonly called “ARB’s”), these medications together known as “RAAS (Renin–Angiotensin–Aldosterone System) Antagonists,” cause either an increased risk of COVID-19 (coronavirus, SARS-CoV-2) infection and/or increased mortality (risk of death) if one is infected with the virus. *Currently there is no clinical or scientific evidence that they do this.* The spread and magnification by social media of this misinformation is so potentially devastating to so many people that the American College of Cardiology, the Heart Failure Society of America, the American Heart Association and the European Society of Cardiology have issued formal statements about this.

Their advice is unequivocal and unanimous. **Patients *should not stop their medications*** without a thorough discussion with their doctors.

Links to these position statements are presented here.

<https://www.acc.org/latest-in-cardiology/articles/2020/03/17/08/59/hfsa-acc-aha-statement-addresses-concerns-re-using-raas-antagonists-in-covid-19>

[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)

Additionally, NephJC, a leading nephrology Journal Club, has also issued a similar statement, and has collected further world-wide expert recommendations which you can (and are encouraged to do so) read here:

<http://www.nephjc.com/news/covidace2>

The *known* facts are

1. ACE and ARB medications are extremely beneficial for multiple cardiovascular diseases, shown by countless double blind, randomized, placebo controlled studies over decades.
2. The initial statements about these meds and COVID-19 were “theoretically” based – since COVID-19 attaches to certain cell wall receptors, and ACE/ARB drugs are involved with these same receptors, then ACEI/ARB drugs may either increase the risk of infection and worsen mortality. That simple hypothesis then took on a life of its own online via social media.
3. There are no studies or reports that have scientifically demonstrated that ACEI/ARBs increase either the risk that you can become infected with COVID-19, or that if you are infected that your risk of dying is increased.

The ACEI and ARB families of medications are extremely valuable cardiovascular medications. Why? Because these drugs are stunningly effective and critically important in our management of everything from hypertension to heart failure, coronary artery disease, heart attacks and kidney disease (particularly, in the case of kidney disease, for diabetics). They are so much more than just

“blood pressure medicines.” They save lives by keeping people out of heart failure, protecting them from heart attacks and reducing the risk of progressive kidney failure (which may lead to dialysis). If people with cardiovascular and kidney disease were to stop taking the meds, there is an extremely high risk that their underlying condition will destabilize, putting them at risk of dying from their underlying medical problem, *even without COVID-19 infection!*

We are learning a lot about this terrible illness. But everyone who’s reading about it (medically) agrees that we need to know more, and quickly. Because this illness is literally spreading like wildfire, doctors across the world are taking to electronic means to share thoughts, observations, hypotheses, treatment responses, treatment options and other ideas because “traditional” means of publishing in a paper journal (which can take months or even years, and we don’t have that time to wait) are simply woefully inadequate to meet our needs in this catastrophic situation. This is so fast paced that what normally would have been filtered and distilled into a final, finished product in peer reviewed journals is being put into a medium that the public has access to.

So, people come up with *ideas* and then investigate them logically. That’s how science progresses. What we’re seeing that’s led to this concern is scientific thinking in real time that has been misinterpreted and misrepresented. Someone read this and then started spreading it around as the truth, when it is just one side of a discussion. Indeed, there is an equally relevant hypothesis that for the same reason (these medications affecting cell receptors) they may even *save lives* (but that hasn’t been amplified by social media outlets)!

Our recommendation at this time is that you continue your ACEI or ARB medication as it has been prescribed by your personal physician.

If you are having other problems or concerns with your medication beyond this internet event, please of course contact us to schedule an appointment with your physician.

Rest assured that we will continue to monitor this, and other aspects of the COVID 19 infection, on a daily, if not more frequent, basis (it’s changing that quickly) and should any change in this recommendation arise, based on scientific study and evaluation, we will let you know. We wish you and your family and loved ones good health and safety during these concerning times. It is during such times of turmoil that we must turn to and rely upon *facts* and *truth* to guide us, and not fall prey to unsubstantiated rumors which abound.

Most sincerely,

Paul J. O’Brien, M.D.

Angiotensin Converting Enzyme Inhibitor (ACEI) medications available in the United States. These can be recognized by the fact that they all end in the term “pril.” They are listed alphabetically by generic name (brand name(s) in parentheses). Many of these may be combined with other medications, for example amlodipine and/or hydrochlorothiazide, but these are the medication names to look for:

- benazepril (Lotensin),
- captopril (Capoten),
- enalapril (Vasotec),
- fosinopril (Monopril),
- lisinopril (Prinivil, Zestril),
- moexipril (Univasc),
- perindopril (Aceon),
- quinapril (Accupril),
- ramipril (Altace),
- trandolapril (Mavik).

https://www.rxlist.com/ace_inhibitors/drug-class.htm

Angiotensin Receptor Blocker (ARB) medications available in the United States. These can be recognized by the fact that they all end in the term “sartan.” They are listed alphabetically by generic name (brand name(s) in parentheses). Many of these may be combined with other medications, for example amlodipine and/or hydrochlorothiazide, but these are the medication names to look for:

- candesartan (Atacand),
- eprosartan (Teveten),
- irbesartan (Avapro),
- losartan (Cozaar),
- olmesartan (Benicar),
- telmisartan (Micardis),
- valsartan (Diovan).

Entresto – this medication is extremely effective specifically for patients with weakened heart function (known as cardiomyopathy) and congestive heart failure. It is a combination of two medications, one is sacubitril and the other is the *ARB agent valsartan*.

https://www.rxlist.com/angiotensin_receptor_blockers_arbs/drug-class.htm