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## Is it Possible to Prevent Covid-19 by ACE Inhibitors?

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Dear Editor,

Outbreaks of emerging infectious diseases continue to challenge human health. The reported incidence of emerging and re-emerging zoonotic disease is increasing in many parts of the world [1]. In December of 2019, a novel coronavirus (SARS-CoV-2) crossed species barriers to infect humans [2] and was effectively transmitted from person to person, leading to a pneumonia outbreak first reported in Wuhan, China [3-5]. This virus causes coronavirus disease-19 (COVID-19) with influenza like symptoms ranging from mild disease to severe lung injury and multi-organ failure, eventually leading to death, especially in older patients which have diabetes, cardiovascular diseases, kidney diseases and etc. and has already markedly affected civil societies and the global economy. Angiotensin Converting Enzyme 2 (ACE2) was identified as the functional SARS-CoV receptor [6,7].

Viral entry into cells is dependent on ACE2 [8]. Then, ACE2 serves as the entry receptor of SARS-CoV by binding to s-spike of virus also protects the lungs from injury [9].

On the other hand, there are some drugs that are ACE inhibitors that block the ACE receptors, i.e., captopril, enalapril, lisinopril, etc. these drugs are antagonists for ACE receptors and are used as therapy for heart failure and antihypertensive drugs.

Then it seems that ACE inhibitors compete to bind to the receptors with s-spike of virus and may inhibit the binding of virus to the receptor and block the entry of virus into the cell. However, using too much of ACE inhibitors may cause hypotension that may be controlled by using blood pressure increasing drugs.

Since these drugs are available, for reducing current cost of developing and producing new drugs, we suggest you check clinically the effect of these ACE inhibitors in preventing the entry of virus into human cells. It seems proper to design clinical trials to check this effect of ACE inhibitors.

**Keywords:** Covid-19; Prevention of covid-19; Treating covid-19; Ace inhibitors; Coronavirus

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