

The New Coronavirus: From Prevention and Treatment to The Mechanism of Proliferation in Human Body

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Because the human immune system is not prepared to deal with the new coronavirus in advance, the rate of spread of this deadly virus is very high in human societies. The origin of this virus is similar to the two viruses in its family, the Middle Eastern Respiratory Syndrome (MERS) or the acute respiratory syndrome (SARS), so all three viruses are transmitted from animal to human. The main route of transmission of the virus is through the respiratory droplets of infected people or contact with infected surfaces and objects. People who care for Covid-19 patients or those who are at the places of attendance of patients infected with the virus are more likely to be exposed to the new coronavirus. The virus has a crown-like protein at its surface that, after binding to the membrane protein receptor (called ACE2), enters healthy cells and then proliferates to create more copies. The presence of this protein receptor, which also plays an important role in controlling blood pressure and function of the heart and lungs, has been demonstrated in various parts of the body such as lungs, heart, blood vessels, kidneys and gastrointestinal tract. Although no effective drug for the treatment of Covid-19 has been introduced so far, the design of antibodies against the corona protein of the new coronavirus or drugs that occupy viral binding site on ACE2 prior to its attachment to the virus is one of the goals of the researchers in the field. The individuals with underlying diseases or patients indicating the increased expression of the ACE2 cell membrane receptor, show more severe symptoms of the disease. As we age, mortality rates in patients with the new coronary virus increase due to lowered immune system and some underlying diseases or both. In the present situation, personal and social health care and applying natural methods to strengthen the immune system seem to be the most important strategies that can be taken to prevent the spread of the disease in human societies.

Keywords: Covid-19, ACE2 Membrane Receptor, Viral Infection, Coronal Protein, Immune System.

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