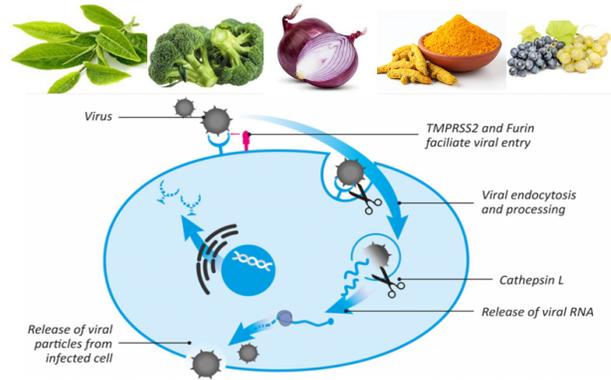




NUTRIENT SYNERGY IMPAIRS MULTIPLE STEPS OF CORONAVIRUS INFECTION



More than a year after the emergence of COVID-19 the world is still at a standstill facing rapid spread and new mutations of SARS-CoV-2. Many countries are struggling to have any grip on this pandemic and dealing with scarcity of new vaccines. Despite implementing preventive measures like hand washing, masks, and social distancing, the daily infections and deaths attributed to COVID-19 continue to rise.

Worldwide, 2.2 million people died of this infection with upwards of 104 million COVID-19 cases. Drastic lockdowns threw millions of people into extreme poverty, hunger, and malnutrition, and due to lack of access to nutritious food, more people have compromised immunity, thus increased susceptibility to infections. Although pharmaceutical companies are racing to produce drugs and anti-SARS-CoV-2 vaccines became available, their efficacy is now being questioned with rapidly mutating coronavirus variants. It is a well-known fact that people with pre-existing conditions such as diabetes, heart disease, and cancer have impaired immunity and are prone to serious complications from COVID-19. In this critical situation, several clinical trials have been conducted with vitamin C and other nutrients in COVID-19 patients, some with promising results. Health care providers also turned to natural approaches to improve immunity and curb the spread of infections.

The scientists at the Dr. Rath Research Institute have provided scientific evidence that specific micronutrients acting in synergy can simultaneously attack the virus at its multiple steps important in blocking SARS-CoV-2 infections.¹ In a separate study the effects of nutrients on strengthening the immune system was also shown.²

Since anti-SARS-CoV-2 vaccines are specific for a specific type of a virus, its mutations (as they constantly surface) can make them not useful. Therefore, our research has used a strategy that can work against different forms of coronavirus. For example, so far all identified coronaviruses use specific docking stations on the cell surface (called ACE2 receptors) which facilitate their entry into the cells. We have shown that vitamin C alone and in combination with other nutrients can significantly reduce availability of these receptors thereby potentially reducing the viral entry. In addition, we have documented that a combination of plant extracts (curcumin, resveratrol, green tea extract, cruciferous plant extracts, and quercetin) also affects other key steps essential in SARS-CoV-2 infection. In addition to decreasing the ACE2

receptors by 90% these micronutrients inhibit a direct binding of the viral particles to these receptors.

SARS-CoV-2 binds to the host cells receptors through a specific site (receptor-binding domain; RBD) present on its spike proteins. We have shown that a combination of natural components can directly interfere with viral RBD binding to the ACE2 receptors. This shows that this critical process targeted by vaccines and drugs can be also affected by natural compounds. Moreover, these nutrients were also able to block another receptor (NRP-1) which acts as a door opener for the coronavirus. The entry and processing of viruses inside the human cells needs help from various enzymes produced by the host. The enzymes such as TMPRSS2, cathepsin L, and furin are hijacked by the virus in its infection process. Our study shows that natural compounds could at the same time decrease activity of these critical enzymes directly and in the cells. Even more, when a coronavirus enters the cell, it has to multiply and release the virus particles in order to spread the infection. Its replication requires RNA-dependent RNA polymerase (RdRp). This essential enzyme forms a target for Remdesivir, the only drug that is approved for emergency use in COVID-19. While the efficacy of this drug is now in doubt, our study showed that the micronutrients were able to block the activity of RdRp by 100%.

It is evident that current measures that focus on one target i.e., preventing SARS-CoV-2 binding to cells with vaccines and drugs, are not fully effective. It is urgent that we revert from this single and specific target strategy and implement a new approach using micronutrients that can simultaneously act on various stages of the coronavirus infection; in addition to reducing the viral binding they can limit its entry doors and process of getting into the cells as well as its multiplication inside the cells. Furthermore, micronutrients provide additional support to our immune system – the best tool against viral and other invaders. Considering the fact that micronutrient deficiencies were already prevalent prior to the pandemic, specific micronutrient supplements should be strongly considered. Even more, unlike pharmaceutical drugs, micronutrients are safe, and their efficacy is proven.

Ref:

1. A. Niedzwiecki, M. Rath, *Journal of Cellular Medicine and Natural Health*, Jan 2021.
2. Goc A, et al. *J Cellular Medicine and Natural Health*. Aug 2020

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The ground-breaking nature of this research poses a threat to the multi-billion dollar pharmaceutical "business with disease". It is no surprise that over the years the drug lobby has attacked Dr. Rath and his research team in an attempt to silence this message. To no avail. During this battle, Dr. Rath has become an internationally renowned advocate for natural health. Says he: "Never in the history of medicine have researchers been so ferociously attacked for their discoveries. It reminds us that health is not given to us voluntarily, but we need to fight for it."

This information is based on scientific research results. It is not intended to substitute for medical advice to treat, cure, or prevent any disease.
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