

Thoughts About Sars-Cov-2



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Introduction

COVID-19, a virus who already shut down the world! To fight against this virus, most of the countries decided to confine people in their homes, limiting their movements and asking them to stay at least 2 meters away from any other person they may meet. This virus not only starts to destroy socialization but also was negatively impacting the whole economy. What should we do? Nothing else than to rediscover the ancient way of treatments, fights against diseases, by using silver and copper metals or their salts as tools against *COVID-19* or other viruses or microbes that will threaten in the future.

In ancient times copper metal and its salts were used to treat people having different conditions or wounds [1,2]. Recently it was shown that copper complex compounds could fight against cancer [3], copper nanoparticles to fight against viruses and bugs [4-6], copper oxides nanoparticles to fight against nosocomial infections [7-9], and so many other applications of copper derivatives. Copper is considered essential and safe to humans [10-13]. Copper is an essential trace element vital to the health of all living organisms [14]. The human body contains around 2 mg of copper per kilogram of body mass. While copper is found throughout the body, it is concentrated in organs with high metabolic activity, such as the liver, kidneys, heart, and brain. This tiny amount is enough to provide copper ions for billions of protein molecules, in particular enzymes, where the copper ions are essential cofactors. Without cofactors, the enzymes could not work.

Copper is an essential trace mineral that cannot be produced by the human body so must be ingested from dietary sources every day. According to the World Health Organization, 1-3 milligrams

per day of copper are required to prevent any symptoms of deficit. Various health and nutrition organizations around the world have set dietary reference values, highlighting the importance of copper as part of a balanced diet [14]. Not being a medical doctor, I am rising these questions:

- Is it possible that people which are lacking enough copper as microelement in their body develop a very bad *COVID-19* infection?
- Could be the use copper salts, or copper complexes with natural compounds (i.e., epicatechins from green tea) in a precise dosing as a weapon against *COVID-19* and other viral infections?
- Is there any related study to the severity of illness and copper level in organisms as microelement?
- What if a solution of copper acetate (to be closer to nature) is used as it is methylene blue used, coating the mouth and nose using a cotton stick soaked into this solution (concentration of it to be experimentally determined)?
- What if a complex of copper salt with natural compounds will be used to drink (to complete the lack of copper from the body) as teas spiked with copper acetate (resulting a low concentration of copper complex with tea catechins) will kill infections with viruses?
- What if the streets (and trees alongside) are sprayed with a solution of copper salt (i.e., copper sulphate) instead of just water or water plus detergent? That will help killing the microbes, fungi, and viruses from the street's surfaces, stopping it to spread in air.

- What if bed linens, pyjamas, pillowcase, gowns and even face masks [15] were made using copper metal or copper oxides nanoparticles impregnated into fabrics, to reduce nosocomial infections associated to any hospital [16]?

All these thoughts and actions should be in force for a short time period to not pollute more than help. If I am correct, the *COVID-19* as well as other viral/microbial outbreaks could be put on bay and reduce or even stop its spreading. Perhaps a periodicity of action against the viral/microbial infections should be installed by the decision-making institutions of the states. I might be wrong, but better to prove it wrong than stay inert waiting for something to occur. I invite anyone with more knowledge than myself to think about this to generate new ideas.

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