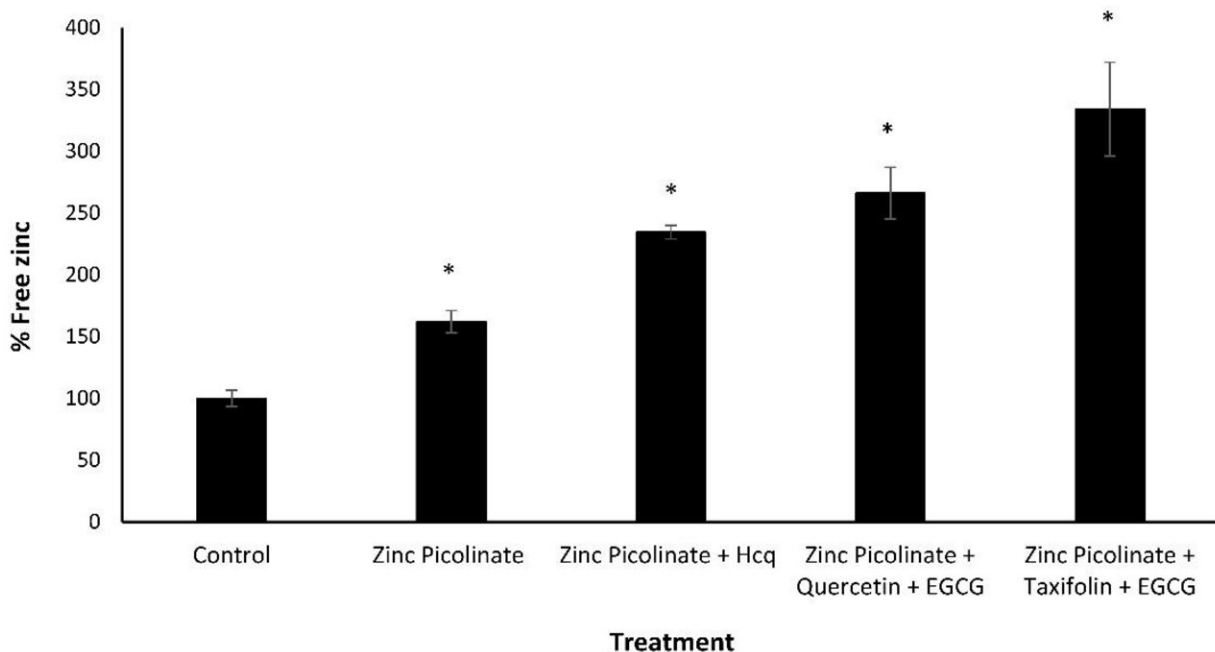


Common dietary supplements could protect against COVID, common winter illnesses

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Free zinc quantification in treated A549 cells. A549 cells were treated with culture media containing the indicated combinations for four hours, after which the cells were trypsinized and lysed, and a free zinc quantification assay was performed. Free zinc levels are shown as percentages relative to the control (cells that were incubated with media containing solvents without compounds). Zinc picolinate, EGCG, quercetin, and taxifolin concentration is 40 μ M. Hcq concentration is 20 μ M. Values are means \pm SD, Student's t-test, * p < 0.05. Pharmaceuticals (2022). DOI: 10.3390/ph15030377

Could dietary supplements become a healthy weapon against COVID-19? Experts from TAU have shown that common dietary supplements can protect against the coronavirus as well as several common winter illnesses.

The study was led by Prof. Ehud Gazit, Prof. Eran Bacharach, and Prof. Daniel Segal of the Shmunis School of Biomedicine and Cancer Research at the Wise Faculty of Life Sciences, TAU, together with Ph.D. students Topaz Kreiser and David Zaguri and other researchers. The paper was published in *Pharmaceuticals*.

Since the outbreak of the COVID-19 pandemic, humanity has led an arms race against mutations, variants and extensive contagion, in order to minimize damage to human life and the economy. Currently, the battle against the [virus](#) relies mainly on RNA-based vaccines, alongside several anti-viral medications. But the COVID virus changes rapidly, and frequent updates are required to treatments and vaccines that are based on familiarizing the immune system with the virus. The same is true for flu viruses, another widespread cause of illness and death.

Prof. Gazit, who also heads TAU's Blavatnik Center for Drug Discovery, said: "To address the rapid changes of the virus, we decided to develop active vaccines made of safe and easily obtainable [dietary supplements](#) that would reduce the viral load in the body and cut down contagion. We have known for years that food supplements containing zinc can enhance immunity to severe, viral and chronic infections and their potentially grave consequences."

The researchers found that the consumption of zinc alone achieves a relatively low cellular content. To enhance the effect, they combined the zinc with flavonoids—polyphenolic compounds found in many fruits and vegetables. They also added copper in order to prevent an ionic imbalance and improve the treatment's effectiveness.

Prof. Segal adds: "Advanced lab tests, including PCR, have shown that the new vaccines we developed did in fact reduce the viral load. We found a 50 to 95% decrease in the genomic replication of various groups of RNA viruses, including COVID-19, the flu virus, and others. These results are very promising, possibly enabling the development of an orally administered biological shelf treatment. Such a product will be safe, natural, and effective against several types of viruses, including new mutations and variants—clearly an important step forward."

It must be noted that so far, all experiments were conducted in vitro in the lab, but the researchers are optimistic about the study's practical potential. Soon, they hope to launch a series of clinical trials in humans, ultimately leading to an [effective treatment](#) accessible to everyone. Since the supplements are verified as safe for use, and in the light of the global pandemic, it was decided to promote the product to the general market before the results of the clinical trials.

Prof. Bacharach concludes: "We are all taught from a young age that good medicine includes preventive medicine. The product which we hope to offer will cover a wide range of winter illnesses, including COVID and the flu. The interesting aspect is the treatment's potential flexibility: We found that a combination of several flavonoids with zinc helps protect cells against a wide range of RNA viruses. We believe that the product can serve as a supplementary treatment to enhance the effect of existing anti-viral vaccines and medications."

Ramot, TAU's Technology Transfer Company, is leading advanced negotiations with an American company in order to receive a permit for marketing and distributing the product. "We see a great potential to a natural off the shelf product, available for everyone, innovative and promising, which provides protection against COVID-19, as well as other viral infections," says Keren Primor, Ramot CEO.

More information: Topaz Kreiser et al, Inhibition of Respiratory RNA Viruses by a Composition of Ionophoric Polyphenols with Metal Ions, *Pharmaceuticals* (2022). [DOI: 10.3390/ph15030377](https://doi.org/10.3390/ph15030377)

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