KALONJI, HOT TEA, GARLIC & COVID-19

Will consuming Kalonji seeds, which are rich in hydroxychloroquine, prevent COVID-19?

There is no evidence that Kalonji seeds are rich in hydroxychloroquine or chloroquine. They are rich in an unrelated compound called thymoquinone, which has not been tested or approved for the treatment of COVID-19.

There is no evidence that thymoquinone is converted to hydroxychloroquine or chloroquine in the human body. There is also no indication that thymoquinone works like hydroxychloroquine or chloroquine.

Can drinking hot tea prevent COVID-19?

The normal human body temperature is 37°C, and most hot liquids that we drink are typically at a temperature of 57.8°C. Once a virus has already entered our lungs, it is protected from high temperatures. Even if the virus is in our throat, we would need to maintain a body temperature above 56°C (138.2 deg F) for about 30 minutes to inactivate it. This is impossible to do by drinking hot liquids, and would be dangerous if attempted by other means.

Although tea is rich in compounds such as flavins, there is no evidence for their antiviral properties in the human body. One lab study (2005) showed that Theaflavin, a compound found in Pu'er (a fermented tea from Yunan province) and Black tea, can inhibit the activity of a

protein from SARS-CoV, another coronavirus. But this was never tested on living cells, or in patients infected with SARS-CoV-2. Overall, there is no evidence suggesting that drinking tea can destroy SARS-CoV-2, or prevent COVID-19.

However, hot tea may help us feel better by providing temporary relief from symptoms like blocked sinuses and a sore throat.

Will consuming garlic help prevent or recover from COVID-19?

Both prevention and recovery from COVID-19 require virus-specific, active immunity. When the SARS-CoV-2 virus infects a person for the first time, an existing army of cells, ready to fight all kinds of invading organisms, springs into action (the body's first line of defense or innate immunity). Sometimes the virus is able to bypass this defense and keep multiplying. Over the next few days (or weeks), immune cells learn and mount an active response, generating antibodies that act like guided missiles targeted specifically at the virus. Patients who have recovered from COVID-19 have these specific antibodies. The only way to generate this specific antibody-driven response is through exposure to the virus, or by vaccination with either an inactivated virus, or proteins that mimic part(s) of the virus. There is no evidence to suggest that consumption of garlic contributes to such a response.

Some studies suggest that some compounds found in garlic might benefit general health, and improve the non-specific, innate component of the immune response. However, most such studies are poorly controlled in terms of dose composition and amount, efficacy, placebos, sample size, or have other methodological issues. For example, although many trials have been conducted to test the effect of garlic on common cold, an independent assessment found that only one trial was well controlled; and even this study administered a dosage equivalent to as many as 10-30 cloves of garlic per person per day. Also, studies on the efficacy of purified compounds or garlic extracts cannot easily be generalised to the dietary consumption of garlic. In summary, the evidence suggesting that garlic can improve immune function is weak.

By all means, one may consume garlic to help maintain good health, which is associated with good overall immunity. However, there is no evidence proving that these general healthy choices are sufficient to cure or build preventive immunity against COVID-19.

Notes:

1. These responses were first published on the Indian Scientists' Response to CoViD-19 (ISRC) website.
2. Source of the image used in the background of the article title: https://pixabay.com/photos/coronavirus-corona-virus-covid-19-4958989/. Credits: thiagolazarino, Pixabay. License: CC-0.

Indian Scientists' Response to CoViD-19 (ISRC) is a group of more than 500 Indian scientists, engineers, technologists, doctors, public health researchers, science communicators, journalists and students who voluntarily came together in response to the COVID-19 pandemic. This group can be contacted at indscicov@gmail.com.

SNIPPETS

WILL SPRAYING BLEACH ON SOMEONE WHO MIGHT BE INFECTED DESTROY SARS-CoV-2?

Bleach (sodium or calcium hypochlorite) is a common, inexpensive, generally safe, and widely used disinfectant. It can be used to disinfect virus-contaminated external surfaces. Very dilute solutions of bleach (0.05% concentration) can be used to disinfect hands when soap/water are not available.

However, spraying it (or any other chemical disinfectant) on people or groups of people (in disinfection tunnels, for example) is not recommended. This is because using bleach to spray the exterior of the body of a person infected with SARS-CoV-2 does not destroy the virus inside their bodies. Instead, bleach solution, even as dilute as 0.05%, can cause inflammation of the skin (dermatitis) and asthma. At concentrations higher than 1%, this solution can irritate the eyes, throat, and skin.

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