

# Cell defence for virus invasion

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By Ayesha Singh

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There hasn't been more talk of immunity, than in the last three weeks, since COVID-19 threatened our defence mechanism. All of a sudden vitamin C, B6, and E flew off the shelves, leaving chemists exhausted with the increasing demand and shortage in supply. The virus caused confusion over what was required to combat it. Building a strong immune response seemed logical. And that's how various health supplements, including the dormant ones, began surfacing promising protection. While these cannot prevent the disease or cure it, they can strengthen the immunity system to put up a tough fight.

## **A note of optimism**

A new study published in the journal, Nature Medicine, found that researchers from the University of Melbourne at the Peter Doherty Institute for Infection and Immunity in Australia showed how in one of Australia's first novel coronavirus cases, a robust immune response was recorded in recovery. Which makes the conversation around supplements even more compelling.

## **What are these?**

Supplements could be in the form of vitamins, minerals or herbs taken as tablets, capsules, energy bars, liquids or powders. The best one is also the most known: Vitamin C. "Its antioxidant activity can decrease inflammation which may improve immune function. It's believed that a high dose of IV vitamin C may improve lung function in

hospitalised people with Covid-19. However, there's no proof that oral vitamin C supplements will help treat or prevent Covid-19," says Divya Sharma, Dietician, Motherhood Hospital, Noida.

Vitamin D is essential as it helps lower the risk of respiratory infections.

Supplementing with zinc is said to protect against respiratory tract infections and reduce the duration of these infections.

"Taking elderberry supplements may reduce upper respiratory symptoms caused by viral infections and help alleviate flu symptoms. Many types of medicinal mushrooms, including Cordyceps and Turkey Tail, may offer immune-enhancing and antibacterial effects. Astragalus, curcumin, and Echinacea are just some of the supplements that may offer immune-boosting properties," says Namita Nadar, Head Nutritionist, Fortis Hospital, Noida.



### Natural vs synthetic supplements

It's a no-brainer that natural supplements from your kitchen are safest. The second best are natural ones off the counter. Synthetic ones need caution. "The labelling of many of these is poor. Read the fine print. A natural one will say where its source is—animal or plant—along with a nutritional break-up," says Deepak Verma, Internal Medicine Specialist, Columbia Asia Hospital, Ghaziabad. "But no matter what the source, immunity cannot be built in one day. It takes time. Therefore, whatever the nature of the supplement, we cannot protect ourselves against COVID-19 fully immediately," says Dr. P Venkata Krishna, Senior Consultant, Internal Medicine, Paras Hospitals, Gurugram.

What is possible is lowering the risks with anti-viral foods including ginger and garlic. There is star anise too that contains shikimic acid, used as a base material for the production of Tamiflu, which is taken for influenza virus. "Herbs such as oregano, basil, dried thyme, turmeric are also anti-viral. Coconut oil is great because of the presence of immunity-boosting lauric and caprylic acid. Resveratrol rich foods, including peanuts, pistachios, grapes, blueberries, and dark chocolate, are helpful," says nutritionist Pramod Tripathi, the founder of Freedom from Diabetes.

### There is more to it

Supplements give an additional boost. They shouldn't be treated as a replacement for a healthy lifestyle. "The main component of nutrition comes through a daily diet which is largely alkaline, with around 50-60 percent carbohydrates, 20-25 percent protein and 20-25 percent fat with adequate fibre. Without this, supplements are useless," says Tripathi.

### **Ayurvedic commandments**

Amalaki or amala (*Emblica officinalis*), Guduchi/Glioy (*Tinospora cordifolia*), Neem (*Azadirachta indica*), Kutki (*Picrorhiza kurroa*), Tulsi (holy basil) are some of the Ayurvedic herbs that build immunity, according to Dr Partap Chauhan, Director, Jiva Ayurveda. “Putting two-three drops of sesame oil in each nostril and sniffing it will strengthen the inner mucus membrane to keep away foreign bodies. Most importantly, stay away from stress as it lowers immunity,” he says.

### **The flip side**

The main problem is with incorrect dosing. Vitamin K can reduce the effectiveness of certain blood thinners. Vitamins C and E that are a great source for antioxidants can reduce the effectiveness of chemotherapy in certain types of cancer. Secondly, not everyone needs supplements but because there is no strict regulation over their sale, people can easily get them. Additionally, self-diagnosis often leads to toxicity.

### **The final analysis**

If you're an expecting mother, have chronic or serious health conditions, have food intolerances or are a senior citizen, don't take an immunity supplement without consulting a doctor. For the rest, the safest alternative is to load your cart with the natural bounty in your kitchen.