

Be Smart in Taking Supplement during Covid-19

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Since the outbreak of the Covid-19 pandemic, there have been many ideas for consuming supplements or vitamins to boost endurance. Although not wholly accurate, vitamin C and multivitamins that contain Zinc are considered to be able to prevent transmission of the Coronavirus. Hence, people should be smart in choosing and using supplements.

Dra. Apt. Tri Murti Andayani, Sp.FRS, Ph.D., and drh. Retno Murwanti, MP, Ph.D., as lecturers at the Department of Pharmacology and Clinical Pharmacy, UGM Faculty of Pharmacy, stated that vitamins are different from supplements. Vitamins are substances or complex organic composites that function to organize specific metabolic processes in the body. Meanwhile, supplements are nutrients used to accomplish food substances. Those consist of one or more ingredients that can be in the form of vitamins, minerals, herbs or plants, and amino acids.

"Vitamins are derived from organic foods, and fruits while supplements are generally produced mechanically, containing several kinds of vitamins and minerals that the body needs," said Tri Murti Andayani, at the UGM Faculty of Pharmacy on Monday (11/5).

In general, vitamins are classified into two types, namely water-soluble vitamins and fat-soluble



vitamins. Water-soluble vitamins, vitamins B and C, cannot be stored in large quantities in the body and will be excreted in the urine. Fat-soluble vitamins include vitamins A, D, E, and K, and taking these vitamins must be careful because if the dose is too high, it will accumulate in the body.

Tri Murti emphasized that basically, the immune system can be improved by supporting nutrients from various foods, vegetables, or fruits. Sources of vitamin B are found in some grains, fruits, and vegetables such as yeast, rice, bananas, avocados, eggs, cheese, fish, beef, vegetables, nuts, and others.

This B vitamin is very required by the body, and if a deficiency can cause interference, such as lack of vitamin B6 and B12, it might cause anemia. Vitamin C is needed to increase endurance. However, the body cannot produce it.


Meanwhile, natural sources of vitamin C can be obtained from fruits that are rich in vitamin C, such as strawberries, kiwi, and citrus fruits. Sources of vitamin A can be obtained from fish oil, carrots, broccoli, eggs, and milk. Vitamin D is essential for maintaining bone health and strength by helping the absorption of calcium in the intestine.

"Vitamin D can be obtained from sun exposure; it can also be obtained from foods such as salmon, eggs, cheese, and processed milk products. "Vitamin E sources include kiwifruit, almonds, avocados, eggs, milk, and nuts, and sources of vitamin K generally come from green vegetables such as celery, avocado, and kiwi fruit," she explained.

Furthermore, Tri Murti explained that supplements are products that contain one or more vitamins, minerals, amino acids, fatty acids, and fiber. Also, supplements can be in the form of natural products in the form of herbs or non-plant natural ingredients in the form of tablets, pills, capsules, soft capsules, or liquids.

At present, there are many types of supplements on the market. There are multivitamins contain three or more vitamins and minerals, such as vitamins C, B, A, D3, E, K, copper, iron zinc, calcium, magnesium, etc. Besides, non-mineral non-vitamin supplements, such as fish oil, probiotics, echinacea, garlic supplements, and others. Supplements are not a whole substitute for food, but we still need to consume a variety of healthy foods to meet our daily needs.

Supplements are not like drugs. They are not intended to treat, diagnose, prevent, or cure disease. In fact, some supplements contain active ingredients that have biological effects in the body that can be dangerous if not used properly. The combination of supplements, providing supplements with drugs, replacing drugs with supplements, or using supplements excessively is not appropriate.



Things to consider in choosing and using supplements or vitamins first is to make sure whether you must consume or simply need supplements. Avoid taking supplements for specific treatment purposes, first consult with your doctor or pharmacist before using supplements to make sure the supplement content is necessary because each person has different nutritional needs.

"If it is needed, read the packaging label first to find out the ingredients contained, the amount of content, and other additional ingredients," she explained.

Retno Murwanti added the effectiveness and safety of supplements could be assessed from the chemical content of the product, how it works in the body, the dose of use, and the manufacturing process. Research conducted on 35,533 men at risk of prostate cancer in the United States, Canada, and Puerto Rico shows that men who consume vitamin E have a higher risk of developing prostate cancer than placebo.

While vitamin C is known to have several physiological functions such as antioxidant activity, it enhances the immune system and synthesis of collagen, carnitine, and neurotransmitters. However, several studies show that consuming vitamin C does not provide significant benefits in preventing cancer, reducing mortality, preventing heart disorders, and reducing the incidence of the common cold (flu).

"Another thing that must be considered is whether the supplement has been registered with the Indonesian Food and Drug Supervisory Agency (BPOM). It aims to ascertain whether the quality of the supplements consumed has met the standards and does not contain ingredients that endanger health," said Retno.

Retno emphasized that vitamins and supplements should be consumed when the body needs it. Inappropriate consumption of vitamins and supplements can cause unexpected effects.

Besides, frequently taking drugs may be able to cause drug interactions. The nutritional content of food, such as protein fiber, vitamins, or minerals, has a more significant role in supporting the immune system than supplements sold in pharmacies or health stores.

"By eating healthy foods, exercising regularly, maintaining weight, avoiding stress, and getting enough sleep can increase endurance. If you have not enough daily nutritional needs, you can take supplements and vitamins to get additional nutritional intake. Still, you need to be wise in choosing and using it," Retno said.

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