Keep Your Immunity Strong: Sip-Smarter with 100% Juice



Registered dietitians know good health means more than just eating right. It also means getting regular exercise, proper sleep and reducing stress. The immune system is complex, and it needs a constant supply of many essential nutrients to support its function. Drinking 100% juice daily, in appropriate amounts, can help. One hundred percent juices may contain several nutrients that can aid in maintaining and supporting your immunity. These include:



Vitamin C - Vitamin C is a water-soluble vitamin that is essential for the normal function of the immune system.^(1,2) It promotes the production and protection of immune cells, reduces oxidative stress and enhances beneficial immune cell activities. Since the body stores little vitamin C, this nutrient must be replenished regularly.



Potassium, folate and thiamin - The immune system is complex and highly integrated and therefore requires the participation of virtually every macro- and micronutrient to help support innate and acquired immunity functions.⁽³⁾ These three nutrients along with others found in juice, like vitamin B6 and magnesium, can help support overall immune function.



Vitamin D - Vitamin D is known to enhance and regulate normal immune response, which helps the body protect against harmful bacteria and viruses. (4) It also has anti-inflammatory properties. Low levels are linked to increased risk of respiratory illness. (4,5) Look for 100% juices that are fortified with vitamin D to help contribute meaningful amounts of this vitamin to the diet. (6,7)



Bioactives - Bioactives, like carotenoids, polyphenols and anthocyanins are beneficial plant compounds found in fruits and vegetables. Research shows they may help support and enhance immunity by fighting off viral infections and inflammation. (8,9) One hundred percent juices contain similar bioactives to whole fruit and are considered major contributors of polyphenol and bioactive intake in the US diet. (10)



Water - Proper hydration plays a key role in supporting the body's daily activities and helps ensure your body works efficiently. It also keeps you energized and clear-headed so you can focus. Staying well hydrated is vital during illness and recovery. All 100% juices have a high-water content and are an ideal way to rehydrate after exercise and stay hydrated and healthy throughout the day.

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References

- 1. Carr AC, Maggini S. Vitamin C and immune function. Nutrients. 2017; 9:1211.
- 2. European Food Safety Authority. Scientific Opinion on the substantiation of health claims related to vitamin C and protection of DNA, proteins and lipids from oxidative damage (ID 129, 138, 143, 148), antioxidant function of lutein (ID 146), maintenance of vision (ID 141, 142), collagen formation (ID 130, 131, 136, 137, 149), function of the nervous system (ID 133), function of the immune system (ID 134), function of the immune system during after extreme physical exercise (ID 144), non-haem iron absorption (ID 132, 147), energy-yielding metabolism (ID 135), and relief in case of irritation in the upper respiratory tract (ID 1714, 1715) pursuant to Article 13(1) of Regulation (EC) No 1924/20061. EFSA Journal. 2009;7(9):1226, [28 pp.]
- 3. Gombart AF, Pierre A, Maggini S. A review of micronutrients and the immune system-working in harmony to reduce the risk of infection. Nutrients. 2020;12(1):236.
- Lang PO, Aspinall R. Vitamin D status and the host resistance to infections: what it is currently (not) understood. Clin Ther. 2017;39(5):930-945.
- Hughes DA, Norton R. Vitamin D and respiratory health. Clin Exp Immunol. 2009;158(1):20-
- Vin Tangpricha, Polyxeni Koutkia, Suzanne M Rieke, Tai C Chen, Alberto A Perez, Michael F Holick, Fortification of orange juice with vitamin D: a novel approach for enhancing vitamin D nutritional health, The Amer J of Clin Nutr. 2003:77(6):1478–1483.

- Rachael M Biancuzzo, Azzie Young, Douglass Bibuld, Mona H Cai, Michael R Winter, Ellen K Klein, Allen Ameri, Richard Reitz, Wael Salameh, Tai C Chen, Michael F Holick, Fortification of orange juice with vitamin D2 or vitamin D3 is as effective as an oral supplement in maintaining vitamin D status in adults, The Amer J of Clin Nutr. 2010:91(6): 1621–1626. https://doi.org/10.1093/ajcn/77.6.1478
- 8. Somerville VS, Braakhuis AJ, Hopkins WG. Effect of flavonoids on upper respiratory tract infections and immune function: a systematic review and meta-analysis. Adv Nutr. 2016;7(3):488-497.
- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Vitamin C, Vitamin E, Selenium, and Carotenoids. Washington, D.C.: National Academy Press; 2000:325-387
- Ho KKHY, Ferruzzi MG, Wightman JD. Potential health benefits of (poly)phenols derived from fruit and 100% fruit juice. Nutr Rev. 2020 Feb 1;78(2):145-174.
- 11.Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Water, Potassium, Sodium, Chloride, and Sulfate. Washington, D.C.: National Academy Press; 2005:73-166.