

S.T.A.H.L. NEWS

STUDENTS TALKING ABOUT HEALTHY LIFE STYLES

Brought to you by the Nutrition Connection in the Center for Health and Well-Being

About Immune Boosting

As we approach cold and flu season, it is important to know that our **immune system** is

directly affected by our **NUTRITION**. This intricate connection is partly due to

our **MICROBIOTA**, or the "good bacteria" in our gut, & the **powerful NUTRIENTS** that **support our body** in fighting infections!¹

An <u>undernourished body struggles</u> to fight infections.¹

Undernourished can mean not eating enough BUT it can also mean not eating the "right" foods.

A diet high in energy-dense, nutrient-lacking food can cause a weak immune system to immerge.¹

However, a well balanced diet with nutrient-dense food¹ can support a seemingly unstoppable immune system.

What's in our foods that make them so powerful for immune function?

- **Antioxidants** find and attack reactive free radicals within your body. If these free radicals are not controlled they can create unnecessary inflammation, preoccupying your immune system and creating suppressed reactions to pathogens.3
- **Probiotics** are the gut "bugs" in certain foods like yogurt, kombucha, and some supplements that help develop a healthy microbiome.
- **Prebiotics** are the "food" that the gut "bugs" act on which generally includes fibrous fruits and vegetables.
- **Polyphenols** are able to target pathways within the body that trigger immune system regulation. 4
- Minerals & Vitamins are the powerhouses for the immune system because they are used in reactions that produce immune cells, support immune cells, and help immune cells better attack pathogens.

Research Dive

Sept. 25, 2023

Your gut microbiome is unique to you. As more research is done there develops more understanding of the true dependency between our gut bacteria and our health including immune function.

Simply put, a healthy microbiome translates to a better functioning immune system!

One research article looked at plant-based fiber versus fermented foods and their effects on the microbiota health.2

When individuals were put on respective diets for 6 weeks, results showed that fermented foods were able to better increase microbiota diversity and remodeling.² This type of change also resulted in less inflammation and a better functioning immune system.²





Food Focus



Kefir, yogurts with live cultures, sauerkraut, kombucha, kimchi, miso⁵

Bananas⁵, citrus (oranges, grapefruits, lemons, limes), papaya, kiwi³

Vegetables

Fermented Foods

Leeks, onions, garlic, asparagus, artichokes,⁵ red bell peppers, broccoli, spinach³

Protein

Poultry, almonds, sunflower seeds³

Echinacea, green tea⁵, ginger, turmeric³







Try these EASY but, immune boosting recipes this tlu season!

The QR code contains various recipes that combine many of the ingredients mentioned into delicious meals for better immune function!





eferences:
Childs CE, Calder PC, & Miles EA. Diet and immune function. *Nutrients*. Aug 2019; 11(8): 1933
Wastyk HC, Fragiadakis GK, Perelman D, Dahan D, Merrill BD, Yu FB, et al. Gut microbiota-targeted diets modulate human immune status. *Cell. Aug 2021;184(16):4137-4153
Brambilla D. Manncuso C, Scuderi MR, Bosco P, Cantarella G, Lempereur L, et al. The role of antioxidant supplement in immune system, neoplastic , and neurodegenerative disorders: a point of view for an assessment of risk/ben. Fernando 1 & Schend J. 15 Foods that boost the immune system. *Meeilthline Website. https://www.healthline.com/health/food-nutrition/loods-that-boost-the-immune-system.* Reviewed & updated June 2023. Accessed Sept 2023.
Ding S, Jiang J, and Fang J. Regulation of immune function by polyphenols/ J Immunol Res. April 2018; 2018: doi:10.1115/2018/18/18/1264074
The Nutrition Source: Nutrition & Immunity. *Harvard Website. https://www.hsph.harvard.edu/nutritionsource/nutrition-and-immunity/. Published 2023. Accessed Sept 2023.
Barrie L & Kennedy K. 22 Recipes that can strengthen your immune system. *Everyday Health Website. https://www.everydayHealth.com/diet-nutrition/recipes-that-can-help-strengthen-your-immune-system/. Reviewed March 202