

**Ask the Dietitian April 2020**

Question: Are there any special foods or a pill that can help boost my immune system and make me safe from infection?

Answer: The human body's immune function is a highly developed and sophisticated system that has evolved over thousands of years to fight off 'invaders.'

The basic components for this complicated system can be found in a balanced and varied diet, mostly plant based, nuts, seeds, whole grains and with adequate protein and fats.

There is no single food or nutrient that is a 'cure all,' rather nutrients — both macro (protein, fats and carbohydrates) and micro (vitamins, minerals, phytochemicals) work together to build a strong defense. These nutrients influence the immune system, our inflammatory response and overall health and well being.

The optimal diet will provide the nutrients that build the actual cells (T cells, B cells, macrophages etc.,) of your immune system, foods that contain protein provide the building blocks. Additionally, metabolic co-factors (micro nutrients) help to drive the cells by promoting energy function and other nutrients (phytochemicals and anti-oxidants) help to reduce damage to the cells caused by metabolism and other environmental factors.

The body's defense system produces oxidative (chemicals) stress in the body in an effort to create a hostile environment for pathogens, unfortunately these chemicals can also damage the host (us). Anti-inflammatory foods can help reduce the damage done to cells and organs by substances called cytokines, (the body chemicals that can both help and hurt us at the same time).

One of the fundamental roles of nutrition is to support the immune system and we know that eating a balanced and varied diet, even in the short term, can impact your health by optimizing the balance between pro and anti-oxidant inflammatory responses, fend off pathogens and have the ability to recover more quickly from illness.

Additionally, there are antiviral plant chemicals (flavonoids, polyphenols, alkaloids, lectins, terpenes) found in fruits, vegetables, whole grains, teas and more, that can inhibit cell penetration, stop virus binding and viral replication by blocking RNA synthesis. Keeping your intestinal barrier healthy by eating fruits, vegetables, whole grains and fermented foods to provide pre and probiotics, can also help repel invaders! Much of the immune system resides in our gut so feed it what it likes and it will work for you!

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