

Immunity Food for Different Age Groups

Anjali Gautam, Manisha Kaushal*, Devina Vaidya, Ruchi Sharma, Chahat Thakur, Anupama Anand, and Harpreet Kaur Saini
Department of food science and Technology, Dr Y.S Parmar University of horticulture and forestry, Nauni, Solan

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Introduction

An immune system is a system of biological structures and processes within an organism's that protect against disease. In order to function properly an immune system must detect a wide variety of agents, from bacteria and viruses to parasitic worms. Immuno senescence (decreasing strength of the immune system with age) is a complex process that affects the immune system on the whole and compromises the ability to adequately respond to invading pathogens. It seems there is no single impairment to be blamed; rather it is a multi-faceted dysfunction that affects individuals to different extents. In addition to this, the elderly population tends to present a chronic low-grade inflammatory state (inflammageing) that has been linked to the development of many age-related diseases (atherosclerosis, Alzheimer's disease and diabetes). The reduced responsiveness of the elderly immune system to pathogens, prolonging infection duration and severity may contribute to this inflammatory state. The impact of nutrition on immune health is often studied by comparing patterns of ageing, disease, and longevity across populations from geographically distinct areas. For example, people in regions of the



Vitamin E:

Vitamin E is a lipid soluble antioxidant protecting the membrane of all cells and is particularly abundant in immune cells. Naturally occurring sources of vitamin E include almonds and raw seeds such as sunflower, pumpkin and sesame seeds, plant oils and leafy greens.

Vitamin D:

Vitamin D may be derived from three sources: nutritional sources, UVB-dependent endogenous production (i.e. created in our skin from sunlight) and supplements. In humans, vitamin D is mainly synthesised in the skin after exposure to UVB, whereas only a minor part is derived from dietary sources.

Probiotics:

Our gastrointestinal tract (GI tract) must be able to distinguish between positive (e.g. nutrients from food) and negative components (e.g. harmful bacteria in food) in everything we consume, meaning a strong immune response in the GI tract is essential. Probiotics are defined as live microorganisms that reach the intestinal tract in sufficient numbers and exert health benefits on the person consuming them.

Proteins:

Proteins are essential nutrients for the human body. Proteins are polymer chains made of amino acids linked together by peptide bonds. This can result in accelerated body protein loss and impaired physiological functions. Under nutrition is defined as “a state of energy, protein or other specific nutrient deficiency, which produces a measurable change in body function and is associated with worse outcome from illness as well as being specifically reversed by nutritional support”



The role of dairy products in improving the immune system:

Dairy products such as fermented milk and skimmed yogurt made from unpasteurized milk, yogurt, and turkey cheese are rich in natural yeast. They play a vital role in fermenting undigested plant fibres and converting them into chemicals that seep into the bloodstream and help strengthen the immunity system, and help to lower cholesterol, which reduces the risk of heart disease, and to increase the useful microorganisms that reduce the allergist, malignant tumors, intestinal ulcers, diarrhea and reduce high blood pressure.

The role of vegetables and fruits in improving the immune system

It is preferable to eat fresh vegetables and salads at every meal, as well as fresh fruits to increase the efficiency of the immune system, especially for the patient of the digestive system and to clean the body.

The most important fruits that improves the immune system

Pomegranate, grapefruit, orange, strawberry, avocado, bananas, grapes, apples, pears, melons, berries, cantaloupe, cherries, kiwi, persimmons, pineapples, apricots, lemons, peaches, dates.

The most important vegetable that improves the immune system

Cabbage, broccoli, cauliflower, beetroot, carrots, pepper, radish, watercress, parsley, celery, red onion, garlic, pumpkin, eggplant, tomatoes, green beans, potatoes, spinach, artichoke, turnip.

The role of drinking water in improving the immune system

Drinking two to three cups on the stomach early morning as well as drink extra amounts of water throughout the day by a glass of water 30 minutes before eating helps digestion, a glass of water before the bath helps to lower blood pressure, a glass of water before sleep prevents heart attack.

The most important cereals and legumes that improves the immune system

Soybeans, oats, flax, chickpeas, lentils, red beans, barley, fennel, sesame, non-peeled brown rice, corn, and wheat.

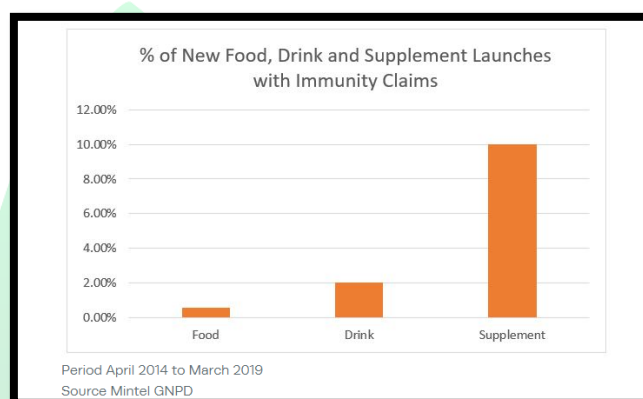
The most important fruit juices and vegetable juices that improve the immune system

Beet juice, celery juice, fresh cabbage juice, asparagus juice, black grape juice, carrot juice, fresh apple juice, fresh lemon juice, orange juice, pineapple juice, pomegranate juice,

cranberry juice, raspberry juice, apricot juice, peach juice, pear juice, strawberry juice, cucumber with lemon juice and grapefruit with lemon juice.

The most important green food that improves the immune system

Juices extracted from the organic wheat plant and small organic barley leaf extract, organic oats grasses extract, spirulina, chlorella, organic green dandelion, green broccoli, organic spinach, organic kale, organic parsley, organic cauliflower, sea kelp, sea dulse, marine Green Algae, and Marine Vegetables.



The most important functional foods that improve the immune system

Fiber, fish oils, mushroom, tempeh (fermented soybean product), turmeric, black tea, green tea, oligosaccharides, fermented dairy products, wheat germ, flaxseed oil, olive oil, corn oil, garlic, raspberries, ginger, lignin, lycopene, seafood rich in omega-3 (tuna and salmon). In addition to foods that improve the immune system, some vitamins share food in this content, including vitamins E, D, C, A, Folic acid, B12 and B6 which play a role in improving the immune system.

The most important mineral elements that improve the immune system

Metal elements such as iron, zinc, selenium, and copper play an important role in improving the immune system.

The role of healthy food in improving the immune system

Perhaps the most important elements that maintain our immune system is a healthy balanced diet, which contains all the nutrients of proteins, carbohydrates, fats, vitamins and minerals in a balanced proportions with the adoption of healthy eating habits.



In Future:

It is clear that there is substantial evidence to support the use of food to modulate immune health. However, in the context of ageing, the use of immune-supporting nutrients alongside protein may have significant advantages over some of the other foods outlined in this paper such as fats and vitamins alone. Protein with added functional value could enable us to provide older adults with much-needed protein at the same time as impacting positively on their immune system. If we work to create novel nutrient combinations, which can positively impact the immune system, we may be able to create new ingredients which can be advantageous for muscle health, immune health and overall wellness in older adults – a worthy target.