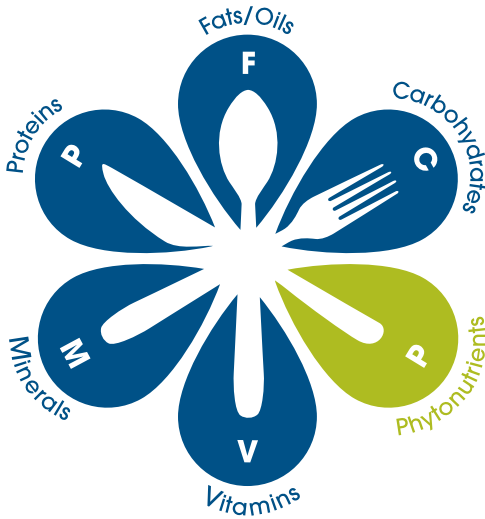




# Micronutrients: Phytonutrients



**Micronutrients** are nutrients the body needs small amounts of in order to function properly. This class of nutrients includes minerals, vitamins, and phytonutrients.

**Phytonutrients**, or phytochemicals, are natural compounds of all plant foods. They are responsible for giving plant foods their distinct colors, tastes, and smells. They also provide plants with protection from pests and environmental stressors. In the human body, phytonutrients play a role in many processes, including (but not limited to) toxin elimination, hormone metabolism, and strengthening the immune system. While the full impact of phytonutrients is not yet understood, it's safe to say that phytonutrients and the foods that contain them are an important part of a healthy diet.

## Sources of Phytonutrients

More than 25,000 phytonutrients are found in plant foods. Fruits and vegetables are rich sources of phytonutrients. So are whole grains, legumes, herbs, spices, nuts, seeds, and teas. In order to get the full benefit of phytonutrients, it's important to incorporate these foods into your diet in their whole form, or as close to their whole form as possible.

Specific phytonutrients and their health benefits are associated with specific colors of foods, including red, orange, yellow, green, blue/purple/black, and white/tan/brown. To promote good health, it is important to eat a variety of phytonutrient-rich fruits and vegetables each day. Aiming for one to two of each color per day is a healthy goal to strive for. The table below lists the health benefits associated with different colors of foods.

Color	Health Benefits	Best Food Sources
<b>Red</b>	Anti-cancer, anti-inflammatory, cell protection, DNA health, immune health, prostate health, vascular health	Apple, beans (Adzuki, Kidney, Red), beet, bell pepper, cranberries, cherries, grapefruit (pink), grapes, onion, plum, pomegranate, potato, radish, raspberries, strawberries, red pepper, rhubarb, rooibos tea, tomato, watermelon
<b>Orange</b>	Antibacterial, anti-cancer, cell protection, immune health, reduced mortality, reproductive health, skin health, source of vitamin A	Apricot, bell pepper, cantaloupe, carrot, mango, nectarine, orange, papaya, persimmon, pumpkin, squash (acorn, butternut, winter), sweet potato, tangerine, turmeric root, yam
<b>Yellow</b>	Anti-cancer, anti-inflammatory, cell protection, cognition, eye health, heart health, skin health, vascular health	Apple, Asian pear, banana, bell pepper, corn, ginger root, lemon, millet, pineapple, potato, starfruit, summer squash

## Phytonutrients (cont.)

Major Mineral	Health Benefits	Best Food Sources
<b>Green</b>	Anti-cancer, anti-inflammatory, brain health, cell protection, skin health, hormone balance, heart health, liver health	Apple, artichoke, asparagus, avocado, bamboo sprouts, bean sprouts, bell pepper, bok choy, broccoli, Brussels sprouts, cabbage, celery, cucumber, green beans, green peas, green tea, dark leafy greens (kale, spinach, etc.), lime, okra, olive, pear, zucchini
<b>Blue, purple, black</b>	Anti-cancer, anti-inflammatory, cell protection, cognitive health, heart health	Bell pepper, berries, cabbage, carrot, cauliflower, eggplant, fig, grapes, kale, olive, plum, potato, prune, rice (black, purple)
<b>White, tan, brown</b>	Anti-cancer, anti-microbial, cell protection, digestive health, heart health, hormone balance, liver health	Apple, cauliflower, cocoa, coconut, coffee, dates, garlic, ginger, jicama, legumes, mushrooms, nuts, onion, pear, sauerkraut, seeds, shallots, soy, tea, whole grains

To learn more about phytonutrients and the foods that contain them, ask your Functional Medicine healthcare practitioner about IFM's Phytonutrient Spectrum suite of documents.