

You may have heard of them. You have no doubt eaten them. If you want to support your immune system, lower your cholesterol, you definitely need more of them. One specific group of phytonutrients, "plant sterols", not exactly the sexiest sounding health nutrients out there, but getting friendlier with them, could influence your health now and for decades to come!

We know that eating fruit and vegetables is good for our health. Not all are rich in the nutrients we need to maintain good health.

Why would this be?

Unfortunately modern agricultural practices have succeeded in minimizing the levels of plant sterols in fruits and vegetables through a combination of the development of modern plant varieties, the use of agrochemical crop sprays. The reason that plants produce these phytonutrients such as plant sterols is to protect themselves against fungus and insect attacks. They also have other important functions in human health through the diet. They have immune balancing effects, reduce nasty inflammatory markers, and have anti-microbial activity.

Recent pioneering work has revealed that striking similarities between plant immune systems and human immune systems exist in that they have an immune system capable of recognizing self and non-self and undergoing a microbial defense similar to ours. This is a basic process in the immune system response to disease. (1) Plant sterols have a very important role in plant immunity, helping the plant to fight of bacterial infections with in plant membranes. (2) Plants also have the capacity to ward of being eaten by insects (herbivorous insects). Rather than sitting back and allowing the insects to devour the plant, plants respond

with the production of toxins and defense proteins. Plant sterols are one of the compounds that the plant uses for defense. Herbivore challenged plants also emit smells that attract insect predators and bolster resistance to future threats.(3)In other words like us, once exposed to a new virus the immune system and the plants response has the means to remember a specific virus and destroy it next time it raises its ugly head!

When plants are sprayed with herbicides and pesticides which most are, the immune response in the plant does not activate the natural defense mechanisms, therefore the plant produces much less of these important phytonutrients that we need. Studies show that the diet should produce approximately 300 mg per day of plant sterols. (4) In fact this is not the case in the majority of our diets. One study showed that pure vegetarians were only getting 25mg per day from eating a fruit/vegetable based diet. (5) You would think that pure vegetarians would be getting more than enough plant sterols, but in fact they are not. This means that we have to supplement daily in order to make sure we obtain these nutrients.

But what if we don't eat enough - Sterol Deficiency Syndrome?

The US Department of Agriculture, Research Service did a study to show that plants sprayed with herbicides and pesticides produced much less active phytonutrients than those unsprayed. In particular the study showed resveratrol, a rich antioxidant/flavonoid from grapes much higher in vines that were unsprayed vs vines sprayed with 4 fungicides registered for grapes.(6)

Since plant sterols then have the capacity to balance the immune system, reduce nasty inflammatory markers, defend us against bacterial and even viral infections, then a diet void or reduced in phytonutrients and flavonoids will lead to more issues with immune related conditions. Common conditions that prevail with a reduced amount of plant sterols in the diet, may present as allergies, chronic colds, flu to lupus, IBS, chronic fatigue, fibromyalgia, and other inflammatory based immune conditions.



Now What?

One capsule of Sterol 117 a plant sterol, antioxidant combination will supply the daily requirement to help bring the phytonutrient count to a healthy level. Not all sterol products are equal. Sterol 117 is enteric coated to get the nutrients into the body and by-pass the acidic area of the stomach which destroys a lot of these delicate phytonutrients. No other product has this important component!

(1) Nurnberger et al. Immunol Rev 2004 Apr; 198:249. Innate immunity in plants and animals: striking similarities and obvious differences.
 (2) Phytosterols Play a Key Role in Plant Innate Immunity against Bacterial Pathogens, Keri Wang et al Plant Physiology April 2012 vol. 158 no. 4 1789-1802
 (3) Plant immunity to insect herbivores. Howe GA et al. Annu Rev Plant Biol. 2008;59:41-66
 (4) South African Jnl of Sc. Vol 93 June 1997. Univ of Natal
 (5) American Jnl of Clin Nutr. 40: Oct 1984,pp 927-930. Padmanabhan P. et al. Vegetarians low in plant sterols in diet
 (6) Hortscience 37(2) :358-361. 2002. Resveratrol content of berries affected by spray program