

## Phytonutrients and the Green Smoothie

Many health-minded people are keenly aware of phytonutrients (aka phytochemicals and micronutrients) and the critical role they play in our long term health. Phytonutrients are produced by plants and give them their distinct taste, texture and smell. They also serve as an arsenal against attack from insects, bacteria, fungi or viruses and for dealing with other stressful situations. The more stress a plant experiences, the more phytochemicals they produce. That's why plants that are organic or wild taste richer than conventional produce – more phytonutrients!

Some of the astounding things these nutrients do for us are lower cholesterol, lower blood pressure, enhance immune system response, detoxify the blood, fight fungi/bacteria/virus, anti-inflammatory, alter estrogen metabolism, relieve allergies, serve as antioxidants (slow aging), repair DNA damage, upgrade disease preventing genes, downgrade disease promoting genes and kill cancer cells!

Some diseases phytonutrients prevent/heal: heart disease, stroke, diabetes, breast cancer, ovarian cancer, cervical cancer, prostate cancer, lung cancer, skin cancer, many more cancers, slow wrinkling of the skin, lower stress levels, help induce sleep, treat depression, stimulate long-term memory, reduces risk of arthritis & easy symptoms, help prevent osteoporosis, fight cavities & tartar, acne, protect against food poisoning, protect against bladder infections, help prevent flu and cough, limit pain and speed repair of muscle tears, suppress appetite, and many many more!

This is a very impressive résumé for phytonutrients!

Ingestion through our food is the easiest and most natural way for us to obtain phytonutrients. However, they are found **ONLY** in plants - fruits, vegetables, whole grains, legumes, nuts, seeds, herbs, spices & teas. They **ARE NOT** found in meat, dairy or eggs and are rarely found, at beneficial levels, in processed foods (**WHOLE** grain food is one exception). In fact, some research has shown that when animal products and overly processed foods are consumed with phytochemicals that they reduce or even negate the benefits!

Interestingly, phytonutrients are always surrounded by other phytonutrients. For instance, a red tomato has around 10,000 phytochemicals, and while this

seems to be an unusually high number, hundreds together in a plant are not uncommon. What is remarkable is that many of these chemicals work synergistically. They seem to promote health in an orchestrated, but not yet fully understood way. In other words, when two or more of these nutrients come together in your digestive tract, after a day of eating all sorts of plant food, their benefits increase. As an example, scientists found that eating broccoli and tomatoes in the same day was better at combating cancer than either one of them separately. With possibly over a million phytonutrients, eating a full repertoire of plant foods increases your chances of reaping all of their many health benefits.

Everyday reputable research points in only one direction. For the best of health and longevity you should adopt a whole food, plant-based diet. It's easy, delicious and rewarding on so many different levels.

### A Fountain of Phytonutrients!

Cellulose is the framework on which all plants are built. It is indigestible to humans, but it is critical to our health in many ways. The unfortunate thing about cellulose is that each cell membrane is made up of this indigestible fiber and therefore we have to fracture cells, by chewing, to release the phytonutrients locked up inside.

I don't have to tell you that most people do a very poor job of masticating their food. Less than 25 percent of cells are ruptured by the even the most ardent chewers. This is a tremendous loss of nutrients that simply passes right through our bodies without digestion. The good news is cooking can breakdown the cell walls, the bad news is that some nutrients and valuable enzymes are lost or damaged in the heating process.

Plant leaves are storehouses of vast numbers of phytonutrients and we should be tapping into this rich resource much more often than we do. Prehistorically, leaves very likely were a valuable source of calories for humans and heavily eaten every day. The problem that modern humans have with all these raw leaves is that it takes, what seems like, forever to chew and they aren't particularly tasty without a heavy dose of dressing. Many people, including myself, have likened it to eating a lawn. That is enough for most people to pass on raw kale or collards and dig into a scrumptious marinara pasta dish or garlic roasted potatoes instead.

But don't give up on raw kale and collards just yet! Their uninspiring taste can be disguised by blending with another great source of phytochemicals - fruit! If you are worried about combining fruits and veggies you'll be glad to know that the blending process seems to eliminate the difficulties in digesting them together. Many of you have had smoothies before, but now I invite you to make it into the super drink it can and should be. This is an easy and delicious way to load up on phytonutrients everyday. It requires little work and yields great returns in health!

Take any standard blender (a powerful one is preferred) and add two cups of COLD filtered water. Add six big leaves of raw kale, collard, bok choy or any other dark, green, leafy, organic vegetable. Remove any tough stems and blend on high. Once it becomes liquid, add a handful of seeds (flax, sunflower, pumpkin, etc) and/or nuts (walnut, pecan, cashew, etc). In addition to their abundant phytonutrients, their fats increase absorption of all nutrients by a factor of 10! Blending fractures most cell walls and the amount of nutrients you will be drinking will be well in excess of 5 times the equivalent raw greens chewed!

After blending for 10-20 seconds, add a banana, berries, sprouts, herbs, wild edibles (lambquarters, dandelion, purslane, etc), spices (ginger, cinnamon, etc) or whatever fruits and soft veggies you have on hand (let your imagination run wild). Blend for another 10 seconds; add water if necessary. If it's not sweet enough for your taste; add more fruit.

With time, incorporate more dark leafy greens in your green smoothie and vary the kinds of plants you add. Take your time drinking it. Mix it with your saliva as you would if chewing and drink it S-L-O-W-L-Y. A good motto to follow is to chew your smoothie and allow the digestion process to properly begin in your mouth!

Add ice or frozen fruit in the summer for a cold refreshing drink. You can store the mix in the refrigerator for 24 hours and clean up is as quick as a rinse under the faucet. In about a week you will be a smoothie expert and after a month you will start seeing the dividends on your investment in improved health!

## A Basic Recipe for a Green Smoothie:

A blender

Add 2 cups cold filtered water (watermelon scoops work great)

Add 6 dark leafy green vegetable(s)

Add 1 tablespoon of flaxseed

Blend on high one minute

Add a handful of berries

Add 1 banana

Add ½ teaspoon or more of cinnamon

Continue blending for 1 minute more (add water as necessary)

Savor approximately one quart of delicious green smoothie!

Bio: Jim Corcoran is a retired fire captain/paramedic/training officer. He has a BS in Emergency Medicine, is a certified fitness instructor and is certified in the Living Foods Lifestyle. Jim published a health newsletter for many years. He has also witnessed health improvements in himself and others using the green smoothie!