

To juice or not to juice?

It's the season for detox. The Internet and social media are replete with stories about the health advantages of juicing. Let's take a look at some of the pros and cons associated with this popular trend.

Juicing is often advocated as a way to maximize the acknowledged benefits of fresh fruits and vegetables. There's no question that many Americans aren't getting the requisite 5-9 servings that experts recommend. Undoubtedly, some might find drinking their fruits and vegetables preferable to laborious preparation; others reason that, if a little is good, a lot might be better.

Why bother with all that chewing when you can chug your phytonutrients?



Clearly, you can concentrate the essence of many servings of produce in a glass of juice. And juicing might allow you to access the nutritional qualities of vegetables like watercress, beets, and kale that you might be wary of consuming whole.

I went through a juicing phase in in the 80s with a Champion juicer that was as powerful as a wood chipper. The process was a little messy and laborious, with lots of pulp going in the garbage, and lots of indelible green and red stains on the tabletop. I consumed so many orange-pigmented carotenoids that my fellow doctors at the hospital where I was training said that I'd better get checked for hepatitis. It was just carotenemia, a benign skin discoloration caused by high veggie consumption.

I felt good, and very virtuous. At minimum, the juicing supplanted poor quality junk food and sugar. It gave my system a rest from the constant task of digestion. In some ways, the juicing provided a physiological reboot, like a short bout of **intermittent fasting**. And, it assured that I would remain well-hydrated.

So, if it works for you, I would encourage you to try short bouts of juice fasting. Or, consume a glass of freshly-prepared juice daily. But keep in mind certain caveats:

It MUST be organic: Because you're concentrating the juice of many fruits and vegetables, you may also be concentrating the pesticide and herbicide residues they contain. Buying organic could add to the costs of a juicing regimen, but it's worth it.

Juice is not a complete food: Just because those fruits and vegetables are rich in certain nutrients, they don't represent a full-spectrum of the vitamins, minerals, amino acids, and essential fats your body needs. If you subsist on juices to the detriment of a balanced intake of other food groups, you could develop critical deficiencies.

Too much sugar: Unfortunately, juicing is particularly attractive to people with blood sugar problems. Like hummingbirds, they are happy constantly sipping plant nectars. But this perpetuates a blood sugar roller-coaster, resulting in hypoglycemia and carb-craving. This can be offset by avoiding the temptation to spike your juice with lots of sweet carrots, beets, apples, pineapples or watermelon, and using more green leafy vegetables.

Can you be too alkaline? Yes, you can. But, you might ask, "I thought it was good to be as alkaline as you can get, isn't it?" While it's not good to be acidic—which is more about sedentary lifestyle and consumption of sugar and processed foods than it is about eating some animal protein—you can go overboard with alkalinizing foods.

According to the **Metabolic Typing paradigm** of William Donald Kelley and others, excess alkalinity may lead to allergies, anxiety and a host of other complaints. Some people are, from a constitutional standpoint, born carnivores, and don't do well on a raw foods diet.

Oxalate controversy: Oxalates occur naturally in plants, especially spinach, rhubarb, Swiss chard, almonds, cashews, grapes, plums, pumpkin and sunflower seeds, quinoa, buckwheat, cocoa and black tea. Since excess oxalate is implicated with the most common type of kidney stones, it's suggested that stone formers go on a low oxalate diet.

But it turns out that around 80% of the oxalate excreted in the urine is formed in the body, not obtained via the diet. Except in certain cases of rare hereditary oxaluria, or when severe fat malabsorption occurs, intake of dietary oxalate doesn't lead to problems. A balanced diet with limited refined carbohydrates that contains adequate magnesium helps to offset the additive effect of dietary oxalates.

However, it's believed that some patients with vulvodynia, fibromyalgia or autism might obtain relief with a low-oxalate diet. But clearly, the overwhelming majority of folks who juice regularly never develop kidney stones or the above conditions. So the controversy will continue to rage pending more definitive research.

Goitrogens: Certain cruciferous vegetables like cabbage and bok choy, are rich in goitrogens, which have an anti-thyroid effect, interfering with iodine uptake. In one case, an 88 year old Chinese woman was found by her family to be lethargic. She was unable to walk or swallow for three days, and was brought to the emergency room. It was discovered that she had consumed an estimated 2-3 pounds of raw bok choy daily for several months in the belief that it would help control her diabetes. Tests revealed her to have almost no thyroid function at all. She recovered completely with administration of thyroid hormone.

There's controversy over the extent to which other cabbage family vegetables like broccoli, kale, Brussels sprouts and cauliflower contribute to hypothyroidism. But one thing is certain: cooking mostly degrades the goitrogenic compounds they contain.

Many plant nutrients require fat for absorption: Carotenoids like beta carotene, lutein, zeaxanthin and lycopene; vitamin K; vitamin E; and essential fatty acids all require fat for optimal absorption. That's why it's preferable to have cooked tomato sauce instead of raw tomatoes, to sauté your kale in olive oil rather than juicing it, to enjoy your basil in pesto sauce rather than as a low-fat mozzarella garnish, or to consume your raw salad with homemade walnut oil dressing.

Pulp is beneficial: Scientists have recently discovered that certain fractions of fruits and vegetables that are not mechanically extractable (e.g. with juicing) play an invaluable role in human health. Some of them are necessary for maintaining a healthy microbiome. Juicing—as opposed to blenderizing—removes these valuable fibers. Merely adding back refined fibers like bran or psyllium doesn't replace them.

Juices are very “yin”: When I was Macrobiotic in the 70s and 80s, juices were verboten. Why? They were said to have an unbalancing effect on the body, promoting “yin” to the detriment of “yang”. This produces coldness, weakness, and even mental lassitude. You may find this unscientific, but a central tenet of Traditional Chinese Medicine is to minimize intake of raw foods.

Juicing can be weakening and debilitating and is not right for all conditions or

constitutions: There may be something to the stereotype of the emaciated, sallow, spacey, tie-dyed shirt-clad juice guy at your local health bar. Excessive dependency on juicing—to the exclusion of adequate protein and fat—can undermine your health. There's sometimes a fine line between "detoxing" and devitalization.

It may lead to eating disorders: Escaping dependency on regular eating by substituting large portions of juice can produce an irresistible "high." People with a susceptibility to anorexia may succumb to addictive patterns of food deprivation and caloric insufficiency. If you find yourself obsessively drawn to strenuous, repeated bouts of "detoxification," to the detriment of your overall health, you might need to consider seeing an eating disorder specialist.

BOTTOM LINE: Juicing has distinct benefits. Pomegranate juice may help the prostate; Watermelon juice may ease post-exercise soreness; beet juice may extend your workouts, lower your blood pressure and combat altitude sickness; cranberry juice may prevent urinary tract infections. But don't go overboard, especially with sweet juices, and blenderize fruits with a Vitamix or a Nutri-bullet instead of extracting the juice and throwing away the beneficial pulp. And, while you're at it, don't forget to eat FOOD.