

PHYTONUTRIENTS

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Phytonutrients, also called phytochemicals, are the natural chemicals that the plants produce. These chemicals are used by plants to stay healthy and to protect themselves from germs, fungi, bugs, and other threats.

Phytonutrients aren't essential for keeping us alive but when you eat or drink phytonutrients, they may help prevent disease and keep your body working properly since they have antioxidant and anti-inflammatory properties. Many phytonutrients give plants their pigments, so a good way to tell if a fruit or vegetable is rich in phytonutrients can be by its colour.



There are more than 25,000 phytonutrients in plant foods. Some of the most common phytonutrients are:

- Carotenoids: beneficial for eye health and immune health.
- Ellagic acid: reduces risk of cancer and lowers cholesterol.
- Flavonoids: protect against cancer and cardiovascular disease.
- Resveratrol: supports cardiovascular and cognitive health.
- Glucosinolates: cancer prevention and metabolic function
- Phytoestrogens: reduce the risk of cancer, heart disease, and osteoporosis.

What's the difference between an antioxidant and a phytochemical?

Phytochemicals or phytonutrients, as mentioned above are a broad variety of chemicals produced by plants to protect themselves from outside threats. The word itself is derived from the greek word φυτόν (phyton) which means plant. As a side effect, phytochemicals are also beneficial for human health, although they are not by definition essential for survival. Some of the most common phytochemicals are listed below, together with in which foods can you find them and their proposed health benefits.

Phytonutrient	Proposed Benefits	Food Sources	Fun Facts	Phytonutrient	Proposed Benefits	Food Sources	Fun Facts
Beta-Carotene	Immune System	Pumpkin	Think orange	Resveratrol	Heart Health	Red Wine	1 cup of red grapes can have up to 1.25 mg of resveratrol ¹
	Vision	Sweet Potato	and dark, leafy green veggies		Cancer	Peanuts	
	Skin Health	Carrots			Lung Health	Grapes	
	Bone Health	Winter Squash			Inflammation		
		Cantaloupe					
		Apricots					
		Spinach					
		Collard Greens					
		Kale					
		Broccoli					
Lycopene	Cancer (Prostate) Heart Health	Tomatoes	The heating process makes lycopene easier for the body to absorb	Anthocyanidins	Blood Vessel Health	Blueberries Blackberries Plums Cranberries Raspberries Red Onions Red Potatoes	Think red and purple berries
		Pink Grapefruit					
		Red Peppers					
		Watermelon					
		Tomato Products					
Lutein	Eye Health	Collard Greens	This phytonutrient is found in the macula of the eye	Isoflavones	Menopause Cancer (Breast) Bone Health Joint Inflammation Lower Cholesterol	Soybeans	½ cup of boiled soybeans offers 47 mg of isoflavones ²
	Cancer	Kale					
	Heart Health	Spinach Broccoli Brussels Sprouts Lettuces Artichokes					

Antioxidants are compounds produced in your body and found in our food. They help defend our cells and DNA from damage caused by potentially harmful molecules known as free radicals. Antioxidants are naturally found in many foods, especially plants. They help ward off cell damage by “cleaning up” or removing waste products in our cells, called free radicals, before they can do harm.



Many plants contain compounds that act as antioxidants. For example vitamin A, vitamin C, vitamin E, and the mineral selenium. These vitamins and minerals that have antioxidant properties are essential nutrients, meaning that we need them for other aspects of our health. So no matter what, you should be eating them regularly.

A few kinds of food that are high in antioxidants are dark chocolate, pecans, blueberries, strawberries, beans, spinach

In conclusion phytochemicals and antioxidants are both beneficial for our health. Which means that we should eat fruits and vegetables every day. Compared to phytochemicals antioxidants are more specialized. Their purpose is fighting free radicals, while phytochemicals have a wider range of uses and benefits, which include antioxidative properties.

Sources:

<https://www.self.com/story/what-antioxidants-are-and-actually-do>

<https://fruitsandveggies.org/stories/what-are-phytochemicals/>

<https://www.healthline.com/nutrition/foods-high-in-antioxidants#section12>

<https://www.livescience.com/52541-phytonutrients.html>

<https://www.webmd.com/diet/guide/phytonutrients-faq#1>

<https://pixabay.com/photos/fruit-vegetables-market-428057/>



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