

# Phytonutrients: eating by color for kids

Phytonutrients, also known as phytochemicals, are bioactive compounds found in plant-based foods, namely vegetables, fruit, herbs, whole grains, beans, legumes, nuts, and seeds. Examples of phytonutrients include polyphenols, resveratrol, carotenoids, phytosterols, anthocyanins, and flavonoids.

Phytonutrients exert a range of health-promoting effects in the body, such as anti-microbial, anti-inflammatory, neuroprotective, and anti-oxidant effects. As a result, these plant compounds have been associated with a reduced risk of certain chronic diseases, such as cancer and cardiovascular disease.

The color of foods can provide an indication of the phytonutrients they contain. Including a variety of colorful plant-based foods in your child's diet will provide a variety of health-promoting phytonutrients.

## Daily recommended servings for vegetables and fruit

Population	Vegetables	Fruit
<b>Children</b> 2-3 years old	1 cup	1 cup
<b>Children</b> 4-8 years old	1 1/2 cup	1 to 1 1/2 cups
<b>Girls</b> 9-13 years old	2 cups	1 1/2 cups
<b>Girls</b> 14-18 years old	2 1/2 cups	1 1/2 cups
<b>Boys</b> 9-13 years old	2 1/2 cups	1 1/2 cups
<b>Boys</b> 14-18 years old	3 cups	2 cups

This table was summarized from the USDA's [ChooseMyPlate.gov](https://www.choosemyplate.gov)

Aim to give your child the daily recommended servings of vegetables and fruit, including at least one food from each color group. The following table outlines examples of phytonutrients, food sources, and common health benefits of each color group.

# Phytonutrients: food sources & benefits

	Phytonutrients	Food sources	Benefits
	Anthocyanidins Carotenoids Ellagitannins Fisetin Flavonols Lycopene Proanthocyanidins Quercetin	Cherries Beets Pink grapefruit Pomegranates Radishes Red apples Red berries Red grapes	Anti-inflammatory Antioxidant Cancer prevention DNA health Heart health Immune health
	Alpha-carotene Beta-carotene Beta-cryptoxanthin Bioflavonoids Carotenoids Curcuminoids Naringenin	Bell peppers Butternut squash Cantaloupe Carrots Mango Oranges Sweet potato Turmeric	Anti-bacterial Anti-inflammatory Cancer prevention Immune health Reproductive health Skin health
	Lutein Zeaxanthin	Apples Banana Corn Grapefruit Lemons Pears Pineapple Plantains Squash	Anti-inflammatory Antioxidant Cognitive health Heart health Eye health Skin health

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	Phytonutrients	Food sources	Benefits
	Beta-carotene Chlorophyll Flavones Flavonols Glucosinolates Phenols Phytosterols Sulforaphane	Asparagus Avocado Broccoli Celery Cucumbers Green grapes Kiwi Leafy greens and herbs	Anti-inflammatory Cancer prevention Cognitive health Hormone balance Liver health Skin health
	Anthocyanidins Hydroxystilbenes Proanthocyanidins Pterostilbene Resveratro	Blackberries Blueberries Eggplant Figs Grapes Plums Purple cabbage Purple sweet potatoes	Anti-inflammatory Antioxidant Blood sugar support Cancer prevention Cognitive health Heart health
	Allicin Allyl sulfides Lignans Lignins Phytosterols Sesamin Tannins Terpenoids	Cauliflower Coconut Garlic Ginger Mushrooms Onions Turnips Bean and lentils Nuts and seeds Whole grains	Cancer prevention Anti-microbial GI health Heart health Hormone balance Liver health

# References

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