



Eating the Rainbow

(but not the Skittles Rainbow)

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Berries Urban Farm

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Phytonutrients? What Are They?

Natural compounds called phytonutrients or phytochemicals, are components of plants that are powerful defenders of health. Studies show that people who eat more plant foods have reduced risk of chronic diseases such as diabetes, heart disease, and cancer. Phytonutrients provide many functions in the plant itself, such as providing protection from pests and environmental stressors, along with imparting color and distinctive tastes and smells. In the human body, phytonutrients stimulate enzymes that help the body get rid of toxins, boost the immune system, improve cardiovascular health, promote healthy estrogen metabolism, and stimulate the death of cancer cells.

Fruits and vegetables are rich sources of phytonutrients, along with whole grains, legumes, herbs, spices, nuts, seeds, and teas. Phytonutrients in food come in all different colors—green, yellow-orange, red, blue-purple, and white.

To promote good health, it is important to eat fruits and vegetables of varied color each day. Aiming for one to two of each color per day is a healthy goal to strive for! While darker-colored plants are generally higher in phytonutrients, fruits and veggies from the white family do have potent contributions to make.



Starting with color is the first step when developing a healthy way of eating. It is foundational to all food plans within functional medicine, as plants are good medicine for chronic disease prevention and treatment.



VEGGIES: BENEFITS PER COLOR



GREEN

Contains lutein, an antioxidant that reinforces improved vision, they have potassium, vitamin C, vitamin K and folic acid.



ORANGE

Rich in beta carotene & vitamin C they help promote excellent vision, healthy skin and support a strong immune system



RED

Are rich in phytochemicals like lycopene and anthocyanins, that improve heart health and diminish the risk of cancer



PURPLE

Rich in antioxidants and phytochemicals that are anti-aging, reduce the risk of cancer and support mental clarity



WHITE

They are rich in phytochemicals & potassium and help reduce cholesterol level, lower blood pressure and prevent diabetes

RED

Red Food Compounds

Anthocyanidins Astaxanthin Carotenoids Ellagic Acid Ellagitannins Fisetin Flavones
Flavonols Flavan-3-ols Flavanones Luteolin Lycopene Proanthocyanidins
Quercetin

Benefits

Anti-cancer Anti-inflammatory Cell protection DNA health Immune health Prostate health
Vascular health

Foods



Apples Beans (Adzuki, Kidney, Red) Beets Bell pepper Blood oranges Cranberries Cherries
Grapefruit (pink) Goji berries Grapes Onions Plums Pomegranate Potatoes Radicchio
Radishes Raspberries Strawberries Sweet red peppers Rhubarb Tomato Watermelon

RED

Red foods contain phytonutrients that may help reduce the risk for certain cancers, along with helping to protect the brain, heart, liver, and immune system.

The Food List: Red Foods

There is a vast selection of red foods for you to choose from on the food list. The red fruits on the list include apples, blood oranges, cranberries, cherries, goji berries, grapes, plums, pomegranate, raspberries, strawberries, watermelon, and rhubarb. Pomegranate is extra special for its ellagic acid, an important component for your liver to get rid of toxins. Strawberries, grapes, and apples contain the compound, fisetin, which has anti-cancer, antiaging, and anti-inflammatory properties. If you buy dried cranberries, cherries, plums (prunes) or grapes (red raisins), make sure there is minimal or no added sugar. As mentioned above, watermelon and pink grapefruit are

two excellent sources of lycopene (but cooked tomatoes seem to be the best!). When it comes to red vegetables, there are red bell peppers, beets, red onions, red potatoes, radicchio, radishes, sweet red peppers, and tomatoes. This category of foods also presents you with options for red-colored legumes to choose from such as adzuki beans and kidney beans.

Try something you are not as familiar with such as pomegranate, in the form of the seeds from the fruit, or even goji berries, which are perfect for a trail mix. Keeping the skin on red-skinned foods, like apples, onions, and potatoes will provide you with those essential phytonutrients.

Lycopene

Lycopene is a red-colored phytonutrient that may protect against cancers of the prostate, breast, and skin, and reduce the risk of heart attacks. It is typically found in tomatoes and tomato-based products such as tomato juice, spaghetti sauce, tomato soup, and tomato paste, in addition to being in watermelon, pink grapefruit, and guava. The one thing about this red phytonutrient to remember is that cooked tomato products result in the lycopene being more “available” to the body to be absorbed. Here is one instance where cooking vegetables could be beneficial.

Also, since it is fat-soluble like many of the other carotenoids, it requires fat together with cooking to optimize

absorption into the body. Therefore, an ideal combination might be making a cooked tomato sauce into which you add olive oil.

Anthocyanins

Anthocyanins are phytonutrients you can find in red berries such as raspberries, sweet cherries, strawberries, cranberries, and in other red foods like apples (with skin), beets, cabbage, onion, kidney beans, and red beans. They help with reducing the risk of cancer and protecting the heart and brain.

Ways to get more red foods:

- * Add fresh tomatoes, goji berries, raspberries, pomegranate seeds, or pink grapefruit sections to your green salads.
- * If you eat pasta, use marinara (red) sauce instead of an alfredo (white) sauce to increase your lycopene and reduce your fat intake.
- * Use marinara sauce on vegetables.
- * Make a Mediterranean salad with tomatoes, olives, garlic, herbs, and feta cheese.
- * Prepare salsa using chopped tomatoes, chopped red onions, and chili peppers.
- * If you drink juice, try blood orange, grapefruit, and/or guava juice.
- * Great snack ideas include watermelon slices, raspberries, cherries, strawberries, and apple slices.

in blood sugar you may tend to see eating these foods. Adding some organic butter or oil to these foods will bring down the glycemic response as well as adding protein to the meal.

Some of the richest sources of carotenoids from orange foods include carrots, mango, papaya, and pumpkin. Finally, you will notice that turmeric root is on this list – an important food as well as a spice when it has been dried into a powder. Turmeric powder contains curcuminoids, which are potent anti-inflammatory compounds. You may want to sprinkle turmeric or grate turmeric root into stir-fries, onto meats, or even into a smoothie!

Orange Food Compounds

Alpha-carotene Beta-carotene Beta-cryptoxanthin Bioflavonoids Carotenoids
Curcuminoids Naringenin

Benefits

Anti-bacterial Anti-cancer Cell protection Immune health Reduced mortality Reproductive health Skin health
Source of vitamin A

Foods

Apricots Bell pepper Cantaloupe Carrots Mango Nectarine Orange Papaya
Persimmons Pumpkin Squash (acorn, buttercup, butternut, winter) Sweet potato
Tangerines Turmeric root Yams

Beta-Carotene

When most people think of orange phytonutrients, they think of beta-carotene, and when they think of beta-carotene, they think of carrots. Beta-carotene is important because it can turn into vitamin A in the body. Vitamin A has many functions such as promoting healthy vision, immune and inflammatory systems, cell growth, reproduction, and bone health. There are actually several plant compounds that convert to vitamin A in the body (called “carotenoids”) under the right conditions, and beta-carotene is just one.

Most food sources of vitamin A are of animal origin such as seafood, eggs, fish, and dairy products like yogurt, milk, and cheese. Therefore, if you are a vegan or do not eat select animal products, it will be essential for you to eat high-carotenoid-containing foods which tend to be colorful and of the red, orange, yellow, and green varieties.

Additionally, it may not be enough to have carotenoids be your sole source of vitamin A as there are a number of factors that can limit the conversion of carotenoids into beta-carotene such as genes, digestive issues, excessive alcohol use, toxicity, and certain prescription or over-the-counter medications.

To get the most amount of carotenoids like beta-carotene from your food, here is another example where cooking foods like carrots will be important. Cooking carotenoid-containing vegetables that are higher in fiber will require the heat from cooking to free the carotenoids from the food matrix (including the fiber). Now once you've liberated or freed the carotenoids from the food, you need fat to be the key to drive them into the body. Carotenoids are "fat-soluble" or they require the presence of fat to become more available to the body. Therefore, having a bit of cooked carrots drizzled with olive oil would be the ideal combination to maximize getting the beta-carotene in those carrots absorbed in the gut.

Bioflavonoids

The other popular group of phytonutrients associated with orange-colored foods is the bioflavonoids. Bioflavonoids are found in oranges, grapefruit, tangerines, clementines, peaches, nectarines, and even yellow-colored foods like lemons and pineapple. In contrast to beta carotene, bioflavonoids are water-soluble, so they don't require cooking.

In fact, cooking could be detrimental and lead to breakdown of these important compounds. The reason why: bioflavonoids are important is because they work together with vitamin C to reduce the risk of heart attacks and cancer, and help maintain strong bones/teeth, healthy skin, and good vision. It is often the case in nutrition that you see vitamins, phytonutrients, and minerals working together to create the best effect!

Ways to get more orange foods:

- * Have a sweet potato instead of a baked potato.
- * Sprinkle turmeric powder onto tofu and vegetable stirfry.
- * Put orange slices into your water pitcher.
- * Drink carrot and/or orange juice instead of soft drinks.
- * Have a clementine, tangerine, nectarine, or peach as a mid-morning or afternoon snack.
- * Puree carrots, butternut squash, and/or pumpkin and use as a soup base.
- * Make a tropical fruit smoothie containing fresh, cubed mango, papaya, and orange in a base of coconut milk with your choice of protein powder.
- * Make a trail mix containing dried orange fruits like apricots, mango, and papaya.

YELLOW

Yellow foods are beneficial because they contain compounds that are anti-cancer, anti-inflammatory, and may protect the brain, heart and vasculature, eyes, and skin.



Yellow Apples



Yellow Figs



Lemons



Yellow Kiwi



Lemons



Yellow Pears



Pineapple



Yellow Watermelon



Yellow Beets



Yellow Peppers



Yellow Potatoes



Rutabagas/
Turnips



Summer Squash



Yellow Corn



Yellow Tomatoes



Winter Squash/
Acorn Squash

The Food List: Yellow Foods

Like the other categories, it is recommended that you get a variety of yellow foods. Note that some of the yellow foods like banana, corn, and Yukon potatoes are starchy and should be eaten in a mixed meal to slow down sugar absorption for blood sugar responses.

There are yellow fruits to choose from such as Golden Delicious apples, Asian pears, lemons, pineapple, and starfruit. Pineapple is particularly high in the enzyme, bromelain, which can be helpful in breaking down foods. Lemons are wonderful as an addition to water to give you more bioflavonoids. The yellow vegetables include yellow bell peppers, corn, and potatoes. You'll also find ginger root on this list. Ginger contains many anti-inflammatory compounds. You can grate fresh ginger into tea or into a stir-fry. You can also use the powdered ginger spice in baked products like a (gluten-free) spice bread.

Yellow Food Compounds

Lutein Rutin Zeaxanthin

Benefits

Anti-cancer Anti-inflammatory Cell protection Cognition Eye health Heart health
Skin health Vascular health

Foods

Apple Asian pears Banana Bell peppers Corn Corn-on-the-cob Ginger root
Lemon Millet Pineapple Potatoes Starfruit Succotash Summer squash Ground Cherries

YELLOW FOOD-PHYTONUTRIENTS

Lutein & Zeaxanthin

Similar to lycopene and beta-carotene, lutein and zeaxanthin are both carotenoids. These two carotenoids are not just found in yellow foods. Green foods like kale and spinach contain these important carotenoids, although they are not visible to the eye. A good yellow food source of lutein is corn. Since corn is in many foods as a processed ingredient, it is preferable to get your corn as corn-on-the-cob or the whole kernel form of corn. Keep in mind that corn tends to be starchy and can increase your blood sugar, so you will want to have it in a larger meal containing other foods that are higher in fiber, protein, and even fat. Like the other carotenoids, lutein and zeaxanthin are fat-soluble so they need fat to make their way into your body. Cooking corn-on-the-cob and eating it with a little organic butter would be a better option than not having any fat!

Ways to get more yellow foods:

- * Slice a banana into your warm oatmeal cereal.
- * Keep frozen corn kernels on hand and add them to stir-fries, rice and bean dishes, and, when warmed up slightly, even sprinkled on a Southwestern-style chicken salad.
- * Have slices of a Golden Delicious apple or an Asian pear as a mid-morning or afternoon snack together with a thin layer of nut butter (e.g., almond butter or cashew nut butter).
- * Add diced yellow bell pepper to a vegetable stir-fry.
- * Have Yukon Gold and French fingerling potatoes rather than a starchy, white Russet potato.
- * Grate ginger into a stir-fry of Asian vegetables like snap peas, cabbage, and carrots.
- * Make a ginger tea into which you squeeze fresh lemon.
- * Have pineapple slices as a dessert.

GREEN

Green fruits and vegetables

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Kiwi



Brussels sprouts



Cucumbers



Honeydew melon



Lettuce



Dark leafy greens



Green beans



Zucchini



Limes



Avocados



Green grapes



Green onions



Peas



Asparagus



Green pepper



Green apples



Spinach



Artichokes



Broccoli



Green cabbage

Green foods are healthy because they contain compounds that are anti-cancer, anti-inflammatory, and may protect the brain, heart and vasculature, liver, and skin. One of the unique attributes of some green foods is that because they help the liver to work better, they can also assist with keeping hormones in balance.

The Food List: Green Foods

There is definitely no shortage of green foods! And surprisingly, most people eat too few of them. There are many options available to you to maximize your phytonutrient intake. There is a long list of phytonutrients that can be found inside these green foods. Remember that even though yellow foods contain lutein, the carotenoid that is helpful for eye health, it is also present in the green vegetables (especially kale, parsley, and spinach!).

Other phytonutrients include the indoles and phytoestrogens (both which help with liver health and hormone balance), chlorophyll (what gives green vegetables their “green” color), folate (an important B vitamin), and phytosterols (can help with balancing cholesterol). For the most part, the deeper the green color of the plant, the more nutritious it will be (however, there may be some exceptions). Iceberg lettuce is probably the least nutritious of the green leafy vegetables. Dandelion greens are most likely among the highest in nutrition. Look for greens that are loose leaves rather than tightly bound within a head to maximize your phytonutrients.

The green fruits listed here are apples (Granny Smith), avocado, limes, olives, and pears. Avocado and olives are considered fruits here since they contain a pit. These two foods are the “super foods” of the Mediterranean diet.

BLUE & PURPLE



Blue fruits are rare in nature and finding one that is truly blue is really hard. Although there are several fruits that seem to be blue, they are actually shades of purple thanks to the combination of anthocyanins (which are blue) and carotins (which are red).

Not only that, according to experts, the type of color and pigment anthocyanins create depends on their quantity and the pH inside the plant tissue. Luckily, there is quite a list of fruits that are various shades of blue and purple.

FRUIT

PRUNES PLUMS BLUEBERRIES ELDERBERRIES BLACK CURRANTS BLACKBERRIES
BLACK MULBERRIES BLACK RAISINS CONCORD GRAPES BLACK GRAPE JUICE
PURPLE FIGS PURPLE GRAPE PASSIONFRUIT JUNE BERRY

VEGGIES

EGGPLANT SWEET POTATOES POTATO CARROTS PEPPERS TOMATOES BEANS
KOHLROBBI KALE CABBAGE TURNIP

BENEFITS

Blue foods, including fruits, are rich in blue and purple pigments. These pigments are invaluable for your health as these are very potent antioxidant and anti-inflammatory substances.

In fact, main substances that I am talking about include phytochemicals such as anthocyanins and resveratrol.

- Help fight inflammation
- Improve the body's ability to absorb calcium and other nutrients
- Help to lower LDL cholesterol (which is the “bad” cholesterol)
- Support eye health, specifically health of the retina
- Help to boost the immune system
- Support healthy digestion for the GI tract
- Act as anticarcinogens (battles cancer-causing cells) especially throughout the digestive tract
- Reduce tumor growth
- Limit the activity of cancer cells throughout the body

There are a lot of colors of vegetables and fruits and among the fascinating ones are blue and purple. The blue and purple fruits and vegetables contain active compound well known as anthocyanins. It is one of the phytochemicals that responsible to the blue and purple pigment of the color. Below are the list of blue and purple colored of fruits and vegetables and their list of health benefits.

1. Beetroot

Beetroot is well known to be excellent immunity booster due to its vitamin c benefits content and several types of minerals such as potassium and iron. <https://drhealthbenefits.com/vitamin-supplement/vitamin-c/vitamin-c-benefits>

The top health benefits of beets are including good for cardiovascular system by lowering the blood pressure, natural energy booster, containing anti-inflammatory properties and as rich of fiber, just like any vegetables that are rich of fiber beetroot is also good for digestion and excellent for detoxification. <https://drhealthbenefits.com/food-beverages/fruits/health-benefits-beets>

2. Purple Cauliflower

If you are familiar with the health benefits of cauliflower, the purple cauliflower is slightly different due to its color pigment content. The bright and beautiful purple color is due to content well known as anthocyanins.

It is among the list of potent flavonoids which are good for blood regulation, body weight management and blood sugar. For those who don't know, flavonoids are one type of antioxidants which are also good to fight cancer.

3. Purple Asparagus

It is a common knowledge that asparagus is one of the healthiest vegetables on earth.

However, the health benefits of purple asparagus are more than what you already know because the darker the color of the vegetables, the richer its antioxidants content. <https://drhealthbenefits.com/food-beverages/vegetables/health-benefits-of-purple-asparagus>

It means, compared to the regular asparagus (green and white), purple asparagus is richer in antioxidants content. Moreover, it is also rich of fiber that is excellent for digestion and weight loss program.

4. Blackberry

When it comes to the list of nutrients you could find in blackberry, the list could be very long. However, the dark color and the juicy texture is a strong indication that this fruit is super rich of antioxidants, vitamin E, vitamin A and beta-carotene.

As rich of antioxidants both fresh blackberry and blackberry tea is highly recommended as part of daily diet for cancer patients. Moreover, the high level of minerals like manganese is also excellent for brain health, so blackberry is also recommended for children in development stage.

5. Purple Carrot

Carrot is everyone's favorite due to its beta-carotene content which is great for human health. However, not all carrot is bright orange because there is one variety with dark purple color.

Besides beta-carotene just like in ordinary orange variety of carrot, purple carrot is also rich of vitamin A and antioxidants which content is almost similar to blueberries.

In other words, due to its antioxidant, vitamin A and beta-carotene contents both orange and purple carrot is good for eyes. There are a lot of health benefits of carrot and purple carrot is probably giving you more compared to the orange one.

6. Purple Corn

Corn is one of the common commodities around the world and even in some countries corn is used as staple foods.

However, purple corn is not as popular as the regular yellow corn variety but you should know that the purple color of corn is the strong indication that it contains more antioxidants.

However, purple corn has different texture with the regular yellow corn and the way it's cooked is also slightly different.

7. Plums

Are you looking for healthy snack during a weight loss program? Plums are excellent choice because not only the fruit is tasty and juicy but also super low in calories.

The sweet juicy taste of plums is still safe even for diabetic patients to consume due to some active compounds contained in plums that are great to regulate blood sugar level and at the same time provide additional protection to cardiovascular health.

Moreover, it is also rich of fiber which is good for digestion. Plum is also delicious when they are made into jams or prunes.

8. Purple Potato

In baking and culinary world there are a lot of food coloring alternative but if you could go natural and then purple potato is the best solution to natural food coloring.

The low calories and low sugar content of potato is great for diabetic patients because even diabetic patients still need carbohydrate to produce energy.

In other words, potato is excellent alternative of rice. However, don't mistaken purple potato with purple yams because they are coming from different family and even the texture and taste is different, though the appearance is almost similar.

9. Purple Kale

Are you sick of green leafy vegetables? And your children avoid everything you serve in plate with green color? You could switch the regular green kale with the purple one because it is not only healthy but also has attractive color that may improve your appetite. By doing this you get all the health benefits of kale but with different color there is a strong indication that purple kale is actually richer in antioxidant contents compared to the green kale.

10. Purple Broccoli

Purple broccoli is very nutritious and also the great source of some essential vitamins and minerals such as vitamin C, vitamin E, vitamin A, vitamin B complex, especially folic acid which is good for pregnant mother. Furthermore, just like the regular green broccoli, purple broccoli is also rich of calcium, iron and fiber.

Those are just some top choices of blue-purple group of fruits and vegetables; the list is even longer and some of them are:

11. You don't need to Popeye the Sailor Man to be healthy as long as you could have access to all the [health benefits of purple spinach](https://drhealthbenefits.com/food-beverages/vegetables/health-benefits-of-purple-spinach). <https://drhealthbenefits.com/food-beverages/vegetables/health-benefits-of-purple-spinach>
12. [Health benefits of purple yams](https://drhealthbenefits.com/food-beverages/vegetables/health-benefits-purple-yams) <https://drhealthbenefits.com/food-beverages/vegetables/health-benefits-purple-yams> are not only for vegan but also for everyone who needs extra plant-based protein.
13. Add figs to your diet for all the [health benefits of figs](https://drhealthbenefits.com/food-beverages/fruits/health-benefits-of-figs-fruit) <https://drhealthbenefits.com/food-beverages/fruits/health-benefits-of-figs-fruit> you could enjoy during the season.
14. There are a lot of varieties and [health benefits of passion fruit](https://drhealthbenefits.com/food-beverages/fruits/health-benefits-of-passion-fruit) but the purple ones always becomes the most favorite. <https://drhealthbenefits.com/food-beverages/fruits/health-benefits-of-passion-fruit>
15. There are a lot of [health benefits of eggplant for weight loss](https://drhealthbenefits.com/diet-fitness/weight-loss/health-benefits-of-eggplant-for-weight-loss), for pregnancy, for lowering cholesterol and so on. <https://drhealthbenefits.com/diet-fitness/weight-loss/health-benefits-of-eggplant-for-weight-loss>
16. The tasty blueberry is nothing compared to the [benefits of blueberry](https://drhealthbenefits.com/food-beverages/fruits/benefits-of-blueberry) for human health. <https://drhealthbenefits.com/food-beverages/fruits/benefits-of-blueberry>
17. The [health benefits of red cabbage](https://drhealthbenefits.com/food-beverages/vegetables/health-benefits-of-red-cabbage) lies on the beautiful reddish purple colored and its crunchy texture. <https://drhealthbenefits.com/food-beverages/vegetables/health-benefits-of-red-cabbage>

WHITE



White and brown:
The onion family contains allicin, which has anti-tumor properties.

15 White Fruit and Vegetables with Amazing Health Benefits!

www.livelovefruit.com



White Pears

Decrease cholesterol synthesis and lower risk of heart disease.

White Potato

Help Regulate blood pressure and keep your heart strong.

Fennel

Reduces inflammation and prevents occurrence of cancer.

Ginger

Helps prevent cancer by inducing apoptosis (cell death)

Garlic

Contain diallyl trisulfide, which protects heart after a heart attack

White Mushroom

Improve weight management and improve immune system.

Cauliflower

Anti-inflammatory, aids digestion and protects the heart.

Banana

Potassium lowers blood pressure and reduces heart attacks or stroke.

Parsnips

Polyacetylene antioxidants are anti-cancer, anti-fungal and anti-viral

White Onions

Rich in chromium which regulates blood sugars levels and slows bone loss

Allicin is found in white veggies and fruit, this phytonutrient reduces cholesterol, protects against cardiovascular disease and helps lower blood pressure. You can obtain this by eating from the onion family: onions, garlic, shallots and leeks

Quercetin is a phytonutrient that is a powerful antioxidant, it can reduce mutations and help resist bone loss. You can eat onions or apples to receive these super powers.

Starting with color is the first basic step to make when developing a healthy way of eating for everyone. It is foundational to all food plans within functional medicine, as plants are good medicine for chronic disease prevention and treatment.