

ISSN 0017 - 8861

Estd 1923

# Health

A JOURNAL DEVOTED TO HEALTHFUL LIVING

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Vol. 102 • No. 05

MAY 2024

₹ 20



# THE ESSENTIAL ROLE OF ANTIOXIDANTS IN A BALANCED DIET



In the quest for optimal health and well-being, the importance of antioxidants in our diet cannot be overstated. As we navigate through a world filled with environmental pollutants, stressors, and processed foods, the need for these powerful compounds has never been greater. Antioxidants play a crucial role in protecting our cells from oxidative damage, combating inflammation, and reducing the risk of chronic diseases. In this comprehensive guide, we will delve into the essential role of antioxidants in maintaining a balanced diet and explore the myriad benefits they offer for our overall health. Discover the journey on how incorporating antioxidant-rich foods into your daily meals can transform your health and vitality.

## What Are Antioxidants?

They're chemicals that fight a process in your cells called

oxidation. The main source is plant-based foods, but your body makes some, too. You're probably familiar with vitamins C and E, beta-carotene, and the minerals selenium and manganese. Plant nutrients and chemicals like flavonoids, phenols, polyphenols, and phytoestrogens are also antioxidants.

## What Do Antioxidants Do?

Each one works differently. Together they form a team that fights free radicals. These chemicals cause the oxidation process that damages your cells and the genetic material inside them. Your body makes free radicals as it processes food, sunlight, and toxins like smoke, pollution, and alcohol. Antioxidants either stop free radicals before they form or break them down so they're harmless.

## Vitamin E

Incorporate vitamin E into your diet with foods like almonds, sunflower seeds, and spinach, all of which are rich sources of this fat-soluble antioxidant. Beyond protecting cell walls from free radical damage, vitamin E

may also play a crucial role in preventing the oxidation of LDL cholesterol, thereby reducing the risk of cardiovascular diseases like atherosclerosis. Furthermore, vitamin E can be found in oils such as olive oil and sunflower oil, as well as in avocados and wheat germ, offering versatile options to include this important antioxidant in your daily meals and snacks.

Where to get it: Whole grains, vegetable oils (olive, sunflower, canola), nuts, and green leafy vegetables.

## **Vitamin C**

Vitamin C, abundant in citrus fruits like oranges and strawberries, is a water-soluble antioxidant that not only supports the immune system but also may aid in the prevention of cancers affecting the stomach, lung, and digestive system. Additionally, vitamin C is found in various fruits and vegetables such as kiwi, bell peppers, and broccoli, offering a wide range of options to incorporate this essential nutrient into your diet.

Where to get it: green vegetables, tomatoes, and citrus fruits like oranges and grapefruits. Choose raw foods because cooking may destroy it.

## **Beta-carotene**

Beta-carotene, found abundantly in colorful fruits and vegetables like carrots, sweet potatoes, and spinach, is a fat-soluble compound crucial for eye health and immune function. While it's best obtained from food sources, caution is advised when considering supplements due to potential health risks. Additionally, beta-carotene acts as a powerful antioxidant, protecting cells from damage caused by harmful free radicals. Foods rich in beta-carotene not only promote healthy vision but also support overall well-being and immune function.

Where to get it: Fruits, grains, carrots, squash, spinach, and other green vegetables.

## **Selenium**

Selenium is an essential mineral found in soil and water, crucial for optimal thyroid function and overall health. While research indicates its potential role in cancer prevention, particularly lung, colon, and prostate cancer, excessive supplementation can result in adverse effects such as digestive issues, hair and nail loss, and even liver cirrhosis. It's important to consume selenium in moderation and primarily through dietary sources like Brazil nuts, seafood, and whole grains.

Where to get it: Grains, onions, garlic, nuts, soybeans, seafood, meat, and liver.

## **Flavonoids**

Flavonoids, abundant in colorful fruits and vegetables like berries, grapes, and spinach, are a diverse group of over 4,000 antioxidants found in nature. Each plant offers a unique combination of flavonoids, known to provide protection against a wide range of health concerns including heart disease, cancer, arthritis, aging, cataracts, memory loss, stroke, inflammation, and infection. Incorporating a variety of plant-based foods ensures a diverse intake of these beneficial compounds for overall health and well-being.

Where to get them: green tea, grapes, red wine, apples, chocolate, and berries.

## **Lycopene**

This carotenoid may help protect against prostate, lung, and breast cancer. Lycopene is a naturally occurring pigment that belongs to the carotenoid family, responsible for giving fruits and vegetables their vibrant red color. Lycopene is predominantly found in tomatoes, watermelon, pink grapefruit, and guava. Research suggests that lycopene may help reduce the risk of chronic diseases

such as heart disease, certain cancers, and age-related macular degeneration. Lycopene acts as a potent antioxidant, neutralizing free radicals and protecting cells from oxidative damage. Studies indicate that lycopene may contribute to skin health by protecting against UV-induced damage and promoting skin elasticity.

Where to get them: Cooked and processed tomatoes are a good and common source: Think marinara sauce on your pasta. Heating the tomatoes makes it easier for your body to absorb the lycopene. Add a bit of fat like olive oil to further help your body use this nutrient.

## **Omega-3 and Omega-6 Fatty Acids**

Omega-3s help protect against heart disease, stroke, arthritis, cataracts, and cancer. Omega-6s help improve eczema, psoriasis, and osteoporosis. Your body can't make these essential fatty acids, which help stop inflammation. And most Americans get far more omega 6 in their diet and far less omega 3 than they need. Eating less omega 6 and more omega 3 is a recommended goal for many. Just keep in mind that a balanced ratio is four parts omega-6 to 1 part omega 3. There are supplements, but it's better when these fatty acids come from food.

Where to get them:

- Omega-3s: Salmon, tuna, sardines, walnuts
- Omega-6s: Vegetable oils, nuts, poultry

Incorporating Lycopene and Omega-3s Into Your Diet:

- Enjoy a colorful salad with tomatoes, spinach, and bell peppers for a lycopene-rich meal.
- Add omega-3-rich foods like salmon or flaxseeds to your weekly meal plan.
- Consider supplementing with high-quality lycopene or omega-3 supplements to ensure adequate intake, especially if dietary sources are limited.

### **Can't You Just Take a Pill?**

Nope. Long-term studies on tens of thousands of people show that antioxidants in pill form don't lower your odds of bad health. People who took them got heart disease, cancer, and cataracts at the same rate as those who didn't. One exception is age-related macular degeneration. Antioxidant supplements slowed progress a little for some people in late stages of this eye disease.

### **Are Fruits and Veggies the Secret?**

Sort of. Vegetables and fruits have lots of antioxidants. And it's true that if you eat more of them, you're less likely to get any number of diseases. What isn't clear is why. It may be the antioxidants, or it might be other chemicals in those foods. It could even be that people who eat them make healthier lifestyle choices overall. Scientists continue to explore the issue.

### **Too Much of a Good Thing?**

It's hard to get too many antioxidants from the food you eat. That isn't the case, however, for those in supplement form. Too much beta-carotene may raise your lung cancer risk if you smoke. Too much vitamin E could make you more likely to get prostate cancer or have a stroke. These products can also change the way certain medicines work. Tell your doctor about any you take to make sure they don't get in the way of your medication. ★

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