

Antioxidants in Vegetable Crops

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Introduction:

Antioxidants are the substances those inhibit oxidation, these may protect your cells against free radicals, which plays role in heart diseases, cancers and other diseases. There are majorly two types of antioxidants- natural and synthetic. Natural antioxidants are primarily phenolics that may occur in parts of the plants, such as fruits and vegetables, nuts, seeds, leaves, roots, barks, etc. Talking about the antioxidants in vegetables, the vegetables high in antioxidants are spinach, kale, carrots, broccoli, potatoes, cabbage, asparagus, pumpkins, sweet potatoes, etc.

Need of antioxidants:

Just as a burning fire needs oxygen, every cell in our body needs a steady supply of oxygen to derive energy from digested food. But consuming oxygen comes with a price; it also generates free radicals, unstable molecules that can damage healthy cells. Antioxidants interact with and stabilize free radicals, preventing the damage they might cause.



Top 10 antioxidant containing vegetable crops:

Measured by the ORAC scores, which refers to the Oxygen Radical Absorbance Capacity, an analysis that is used to measure the total absorbance power of food and other substances. The higher the ORAC score, higher the antioxidant capacity.

Vegetables	ORAC score for 3.5 oz (100 ml)
Kale	1770
Spinach	1260
Brussels sprouts	980

Broccoli florets	890
Beets	840
Red bell peppers	710
Onions	450
Corns	400
Eggplant	390
Carrots	210

Antioxidant Power:

Researchers have investigated and identified more than 100s of antioxidants in our foods especially vegetables from vitamins to pigments, here are the main ones:

<u>Antioxidant</u>	<u>Function</u>	<u>Food Source (Vegetables)</u>
Vitamin C	Protects against heart diseases, cataracts	Tomatoes, Sweet peppers, Broccoli
Vitamin E	Prevents heart diseases, prostate cancers, slow progression of alzheimers	Turnips, Broccoli, Mstard greens, etc
<u>Carotenoids</u>		
Beta carotene	Protective against cancers and heart diseases.	Dark green vegetables including carrots, kale, spinach etc.
Lutein, Zeaxathin	Protective against muscular degeneration	Dark green leafy vegetables, corns, sweet peppers, cabbage
Lycopene	Protective against heart diseases, cancers	Tomatoes
<u>Flavonoids</u>		
Anthocyanins	Protective against cancer	Red cabbage
Selenium	May help prevent prostate cancer, colon cancer and lung cancer	Onions, Garlic
Quercetin	Protective against heart diseases and blood pressure	Onions, Kale, Broccoli
Co-enzyme Q10	May help reduce the risk of heart diseases. Works together with vitamin E	Spinach, Cauliflower and broccoli and leguminous vegetables



Conclusion:

Recent researches on antioxidants' supplementation have yielded conflicting results. But there is no doubt about one thing- eating a diet high in antioxidant-rich foods is a smart choice. Eating a spectrum of foods abundant in antioxidants may be beneficial in improving the antioxidants level in body which helps to scavenge free radical damage, combat oxidative stress, lower the risk of various chronic diseases. Various vegetables are a rich source of a variety of antioxidants, therefore, having food abundant in vegetables especially green leafy vegetables helps us to lead a healthy life and as the saying truly said –“The more Vegetables you eat, the more blessings you get.”