

## Antioxidants in Green Tea

Oxygen isn't harmful to your body, is it?

Oxygen is an essential element that all members of the animal kingdom need. Oxygen is that element that triggers the body to burn glucose and fat to provide heat and energy. But as essential as oxygen is, it does have its negative effects.

During the process of oxidation, highly reactive byproducts called free radicals are produced. These free radicals act on other molecules, turning them into free radicals like themselves and disrupting their normal functioning. This eventually leads to massive cell destruction, tissue damage, and can even cause degenerative diseases like cancer, heart disease, Alzheimer's disease, Parkinson's disease, rheumatoid arthritis, and atherosclerosis.

Fortunately, the human body comes equipped to use antioxidants as a natural defense against these harmful free radicals. Antioxidants are naturally occurring chemical substances found in fruits and vegetables. They act on free radicals by hunting them down and neutralizing them.

Among the many plants that contain disease-fighting antioxidants is the *camellia sinensis* (the tea plant). For centuries, tea has been served in Chinese households as beverage that promotes health and general well-being. Green tea is especially favored due its many astounding health benefits.

Green tea has been consumed in India, China, Japan, and Thailand throughout history. In traditional Chinese and Indian medicine, green tea is used as a stimulant, a diuretic (to promote the excretion of urine), an astringent (to control bleeding and help heal wounds), and to improve heart health.

The benefits of green tea are largely attributed to the presence of polycatechins. Among flavonoids, catechin is ranked high in its antioxidant effects and properties. Catechin is the substance in green tea which makes the beverage an excellent source of antioxidants. Other substances in green tea with antioxidant effects are tannin and vitamins such as A (carotene), C, and E.

Catechins are powerful polyphenolic antioxidants. The antioxidants in green tea have powerful anti-carcinogenic, cardio-protective, neuro-protective, and anti-microbial actions. A particularly bioactive catechin called epigallocatechin gallate has been singled out as very important because of its possible antioxidant effects in preventing cancer.