

# ANTIOXIDANTS

## FACTSHEET

Antioxidants are naturally occurring plant substances that protect the body from damage caused by harmful molecules called free radicals. Antioxidants help prevent oxidation, which can cause damage to cells and may contribute to aging. They may improve immune function and perhaps lower the risk for infection, cardiovascular disease, and cancer. Antioxidants exist as vitamins, minerals and other compounds in foods. A diet containing plenty of fruits and vegetables, whole grains and nuts can supply all the antioxidants your body needs. Diets rich in antioxidants can be very beneficial.

A few of the better known antioxidants include carotenoids (a form of vitamin A) — the substance that gives fruits and vegetables their deep rich colors. Apricots, broccoli, pumpkin, cantaloupes, spinach and sweet potatoes are good choices. Foods containing vitamins C and E are also good sources of antioxidants, as well as selenium and zinc.

### **Most Commonly Known Antioxidants & their food sources:**

- **Carotenoids** (a form of vitamin A) the substance that gives fruits and vegetables their deep rich colors. May be effective allies against prostate cancer  
Apricots, peaches, broccoli, pumpkin, cantaloupes, carrots, spinach and sweet potatoes
- **Vitamin C** enhances the immune response and protects against infection.  
Citrus fruits like oranges and lime etc, green peppers, broccoli, green leafy vegetables, strawberries and tomatoes
- **Vitamin E** May help prevent the oxidation of LDL or “bad” cholesterol which contributes to plaque buildup in the arteries.  
Nuts & seeds, whole grains, green leafy vegetables, vegetable oil and liver oil
- **Selenium** Fish & shellfish, red meat, grains, eggs, chicken and garlic

### **Some common phytochemicals & their food sources:**

- Flavonoids / polyphenols
  - o soy
  - o red wine
  - o purple grapes or Concord grapes
  - o pomegranate
  - o cranberries
  - o tea
- Lycopene
  - o Tomato and tomato products
  - o pink grapefruit
  - o watermelon
- Lutein
  - o dark green vegetables such as kale, broccoli, kiwi, brussels sprout and spinach
- Lignan
  - o flax seed
  - o oatmeal
  - o barley
  - o rye

### **Antioxidant enzymes made by the body:**

- superoxide dismutase (SOD)
- catalase
- glutathione peroxidase

### **Benefits of Antioxidants**

- Protect Against Heart Disease

The American Heart Association recommends a diet high in fruits, vegetables and other foods that contain antioxidants to help fight cardiovascular disease. They do not recommend antioxidant supplements, however, because there is no scientific evidence to support

the idea that they have any beneficial effect on heart disease.

- **Protect Against Cancer**

Lycopene is concentrated in tomato soups, sauces, tomato paste and other tomato products, and is also available in smaller amounts in fresh tomatoes, watermelon and pink grapefruit. Cancers of the mouth, pharynx, esophagus, stomach, colon and rectum can be prevented by lycopene and lutein may help decrease your risk of macular degeneration.

- **Boost Immunity**

Vitamin C's ability to reduce the severity of the common cold is indicative of its effect on the immune system, according to experts at the Cleveland Clinic. Most fruits and vegetables provide some Vitamin C. Citrus fruits, kiwi, tomatoes and sweet peppers are particularly good sources.

- **Fight Aging**

While it has not been shown that antioxidants actually increase anyone's lifespan, they do protect against some of the degenerative effects on the body of age-related diseases that can lead to early death. Studies on laboratory animals at the U.S. Agricultural Research Service suggest that a diet high in antioxidants, especially those found in blueberries, strawberries and spinach may also help fight the loss of brain function associated with aging

Eating a diet that includes a variety of fresh, deeply colored fruits and vegetables, such as broccoli, spinach, tomatoes, sweet peppers, carrots, mangoes, kiwi, berries and cantaloupe and other plant foods, such as grains, legumes (beans, lentils, and split peas) and nuts, is the safest and most effective way to boost your antioxidant supply and reap the health benefits these substances may convey.

## **References:**

American Dietetic Association, (2010). Retrieved June 1, 2010, from <http://eatright.org>