

**If there is one word that best describes seabuckthorn it is ANTIOXIDANT. The fruit, seed and leaves contain an impressive array of antioxidant compounds.**

### **Why do we need anti-oxidants?**

Smoking, drinking alcohol, exposure to environmental pollutants, and also exposure to ultraviolet light or nuclear radiation can all trigger the production of "free radicals" on the skin's surface, or inside the body. Free radicals are very simple compounds of oxygen, in which the innocent molecule has acquired an extra electron. Free radicals are very reactive particles and they aggressively attack all the surrounding molecules within the cell. The attacked molecules are oxidized, becoming structurally damaged and even making them toxic for the body. Vitamins with antioxidant properties form a natural line of defense against free radicals; they "catch" free radicals and neutralize them. These anti-oxidant vitamins, all present in Sea-Buckthorn oil, are vitamin A (derived from -carotene), vitamin C (ascorbic acid) and vitamin E (-tocopherol).

By Louis Neipris, M.D., HealthAtoZ writer

Fruits and vegetables are rich sources of antioxidants - those natural substances that are said to help ward off heart disease and cancer. There is still debate, though, on how beneficial antioxidants really are.

### **What are antioxidants?**

Antioxidants are substances found in the diet and produced by the body. These substances help repair the damage to cell membranes and DNA caused by free radicals. This damage contributes to various disease processes. When free radicals interfere with cell growth, cancer could result. Vitamins and similar substances found in our diet are antioxidants, which disable the toxic effects of free radicals.

### **Antioxidants and specific cancers**

There is conflicting evidence about whether or not vitamin supplements containing antioxidants can prevent disease. Vitamin A studies in smokers showed no protection against lung cancer. Another study showed that vitamins A and C might prevent adenomas (pre-cancerous polyps) in the stomach from progressing to cancer. Of all the antioxidants, perhaps one called lycopene is the most powerful. Lycopene is a member of the same chemical family as vitamin A (beta-

carotene), and is found in tomato products. Studies have shown that it protects against prostate and colorectal cancers.

### **Does taking vitamins help fight heart disease?**

It is clear that the body needs antioxidants and even produces its own. There is conflicting evidence about whether or not antioxidant vitamin supplements prevent heart (or any) disease. For example, the strong antioxidant vitamin E - once believed to be heart-healthy - may interfere with the effects of cholesterol-lowering drugs. No one study has presented overwhelming evidence favoring any one vitamin or antioxidant, let alone specific information about how much of that supplement is needed in our diets.

### **A balanced diet is still your best source of antioxidants.**

Two and a half cups of vegetables and two cups of fruit supply all the antioxidants we need each day. However, most Americans take some kind of vitamins, which are probably beneficial, especially if their diets are deficient in required nutrients. Talk to your doctor first if you think you need to take vitamins, minerals or any dietary supplement. There are several commercial over-the-counter brands to choose from. However, while there are plenty of antioxidants in these pills, there is no clear added benefit over those supplied in a balanced diet.

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#### External Sources

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Erhardt, J. et al. "Lycopene, beta-carotene, and colorectal adenoma." *Am. J. Clinical Nutrition* 81 (Dec. 2003) 1219-1224

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