Antioxidant Mini Guide

**Vitamin A, Beta Carotene**

**Food Sources**
- Vitamin A: Fish liver oils, animal livers
- Beta carotene: Green, yellow fruits and vegetables, such as: Alfalfa, apricots, asparagus beets, broccoli, cantaloupe, carrots, Swiss Chard, dandelion greens, garlic, kale, mustard, papayas, parsley, peaches, red peppers, sweet potatoes, spinach, spirulina, pumpkin, squash, turnip greens and watercress.

**Action**
Vitamin A (Beta Carotene is converted to Vitamin A as the body needs it) prevents night blindness and other eye problems as well as some skin disorders such as acne. It enhances immunity, acts as an antioxidant in protecting against pollution and cancer formation. Needed for epithelial tissue maintenance and repair. It is important in the formation of bones and teeth, aids in fat storage, and the utilization of protein.

**Cautions**
No vitamin overdose can occur with beta carotene, though the skin may turn slightly yellow orange in color. However, Vitamin A should not be taken in large amounts in pill form or as cod liver oil, especially those suffering from liver disease. Pregnant women should avoid amounts over 25,000 IU. Children should avoid amounts >1800 IU. Antibiotics, laxatives and some cholesterol lowering drugs interfere with vitamin A absorption.

**Vitamin C**

**Food Sources**
- Found in green vegetables, berries, and citrus fruits. Asparagus, avocados, beet greens, broccoli, Brussels sprouts, cantaloupe, collards, currants, grapefruit, kale, lemons, mangos, mustard greens, onions, oranges, papayas, parsley, green peas, sweet peppers, persimmons, pineapple, radishes, rose hips, spinach strawberries, Swiss chard, tomatoes, turnip greens, and watercress.

[http://www.umassmed.edu/behavmed/nutrition/](http://www.umassmed.edu/behavmed/nutrition/)
**Action**
Vitamin C is an antioxidant that is required for tissue growth and repair, adrenal gland function, and healthy gums. It enhances immunity, protects against bruising and promotes the healing of wounds. Also aids in interferon production. Vitamin C works well with vitamin E, greatly extending the antioxidant activity of both. The body cannot manufacture vitamin C and it must be obtained through the diet or supplements. Vitamin C will block the action of nitrates, preventing the formation of cancer causing nitrosamines.

**Cautions**
Levels of vitamin C are reduced by aspirin, analgesics, antidepressants, anticoagulants, oral contraceptives, and steroids. Some oral glycemic agents and sulfa drugs may not be as effective when taken with vitamin C. Pregnant women should use <5000mg/day. May cause diarrhea in large amounts.

**Food Sources**
Cold or expeller pressed vegetable oils, whole grains, dark green leafy vegetables, nuts and seeds, and legumes. Significant quantities are also found in dry beans, brown rice, cornmeal, eggs, desiccated liver, milk, oatmeal, organ meats, sweet potatoes and wheat germ.

**Action**
An antioxidant that assists in cancer and heart disease. Improves circulation, repairs tissue, useful in fibrocystic disease, premenstrual and menopausal symptoms. Also promotes normal clotting and healing, reduces scarring from some wounds, reduces blood pressure, aids in cataracts and leg cramps. Also prevent cell damage by inhibiting lipid peroxidation and formation of free radicals. The body needs zinc to maintain the proper levels of vitamin E in the blood. Works particularly well with selenium.

**Cautions**
Vitamin E is relatively unstable during storage and concentration varies widely with different foods. Do not take iron with vitamin E at the same time, it interferes with iron absorption. Recent research suggests supplements in the range of 100-200 IU/day.