

Dark Green Leafy Vegetables

Dark green leafy vegetables are important sources of several nutrients:

1. Trace mineral make up a very small amount of the total weight of our bodies - less than .005%, but they take part in almost every enzymatic reaction in the body. The trace minerals include iodine, copper, manganese, zinc, cobalt, molybdenum, selenium, chromium, fluorine, and silicon. On an average, trace minerals are completely lacking in close to 40% of the calories consumed due to processing of sugars, fats, and grains. In Canada, trace mineral are supplemented, but although helpful, that may not be optimal as there is a great deal of conflicting research as to the recommendations for optimal consumption. Dark green leafy vegetables are good sources of trace minerals.

2. Folic acid is the Vitamin associated with the formation of neural tube defects in children whose mothers have low folic acid levels (although there may be other responsible factors). Recommendation allowance for adults is 200 ug. Any woman thinking of conceiving children should be taking in 400 ug. of Folic acid per day.

3. Carotenes consist of several fractions; however, lutein and zeaxanthin, which are found in kale, collard greens, spinach, Swiss chard, mustard green, red pepper, okra, and romaine lettuce protect against macular degeneration of the eyes. Beta carotene, which is found in sweet potatoes, carrots, apricots, spinach, collard greens, winter squash, pumpkin, and cantaloupe, is possibly important in the prevention of heart disease. It prevents initial oxidation of low density lipoproteins (LDL), and these LDL cannot invade artery walls unless they are first oxidized. (Vit C is important, too.)

4. Some dark green leafy vegetables and other vegetables have high levels of oxalic acid which can bind with Calcium and inhibit its utilization by the body. The use of high oxalic acid foods should be limited to a couple of times a month. There is some indication that cooking of high oxalic acid foods reduces this tendency; however, those susceptible to calcium oxalate kidney stones would be advised to avoid foods high in oxalic acid including, spinach, Swiss chard, sorrel, water cress, beets, and rhubarb, and tea.

5. Fiber is low in Calories but high in bulk which reduces the Calorie density of the diet. It has several fractions which vary in solubility and function in the body.

Form of Fiber	Cellulose & Hemicellul.	Gums & Pectin	Lignin
Source	Fruits, veg, legumes, cereal bran, nuts & seeds	Fruits, veg, seeds(flax), oats & barley	whole grains, seeds, woody veg
Solubility	Partially	Yes	No
Helps Regulate Blood Sugar	Yes	Yes	No
Increases satiety-causes feeling of fullness before excess Cal. intake	Partially	Yes	Forms bulk but does not absorb water
Bowel function, Constipation and Hemorrhoids	Reduces pressure & softens stool	No	Makes stools move faster
Lowers serum Cholesterol	Some beans - yes	Yes	Yes
Blocks Mineral absorption	?	No	Yes, but cooking may reduce
Recommend 20-35 gm of total fiber intake		25% or 5-9 gms should be soluble	

6. Cruciferous vegetables (broccoli, brussels sprouts, cabbage, cauliflower, watercress, kale, kohlrabi, mustard, radish, rutabaga, and turnips) possess indoles and sulfur containing compounds which are protective against the formation of cancers in the colon. However, they can also restrict iodine uptake so should not be used to excess.

7. Dark green leafy vegetables are significant sources of most of the B vitamins especially riboflavin but not Thiamin (B_1) or Niacin (B_3). They are also important sources of vitamins C, K, and E and the major minerals Calcium, Magnesium, Potassium, and Iron. The iron in vegetables is not as available for utilization by the body, but the availability can be enhanced when it is taken with Vit C or cooked with foods high in acid (tomato, lemon, citrus juice or vinegar).

8. Dark green leafy vegetables help buffer and keep the pH of the blood more alkaline as they are good sources of calcium, potassium, sodium, magnesium and iron which all form compounds which bind acids.

9. In traditional forms of medicine, foods which are eaten fresh, whole, and properly cooked are said to contribute to a healthy immune system and give a person vigor to lead an active life style. A small amount of raw food can be taken daily by all except those with very weak or cold constitutions.