



Home on the Range



Folate, also called folic acid or folacin, is a

complex vitamin that is needed

to allow for complete development of red blood cells. More importantly, folic acid helps to prevent the development of the amino acid homocysteine in the blood. If homocysteine is not held in check, heart attacks and stroke may result. Folic acid prevents the build up of homocysteine, particularly in overweight individuals. It is a simple way to lower the risk of cardiovascular disease.

As the average person continues to eat to excess and exercise less, increased intake of foods rich in folate like asparagus are necessary to prevent development of coronary artery disease and various other cardiovascular maladies.

Folate is a general term for the various forms of the B vitamin, the parent which is folic acid. It is most publicized for prevention of pregnancy defects involving the development of the neural tube. Folic acid aids in the prevention of neural tube defects such as spina bifida (a potentially crippling defect in which the spinal cord is improperly encased in bone) and anencephaly (failure of brain development). Women are encouraged by their doctors to build up their folate stores at least 28 days before becoming pregnant. Plant foods with high levels of folacin such as asparagus, orange juice and pulses such as beans and peas should be consumed particularly in the first weeks of pregnancy to safeguard the fetus. The recommended daily allowance (RDA) for folate is 400 micrograms per day. Pregnant women are encouraged to consume at least this amount in their daily nutrition.

ASPARAGUS THE OTHER GREEN VEGETABLE

HOW IMPORTANT IS FOLATE?



Asparagus is the richest vegetable source of folate with 262mcg in a one cup serving.

Food Sources of Folate

	micrograms		
Asparagus, 1 cup boiled	262	Spinach, 1 cup raw	108
Asparagus, 100g raw	128	Green Peas, 1 cup boiled	101
Papaya, 1 medium	115	Wheat germ, 1/4 cup	80
Orange Juice, 1 cup	110	Broccoli, 1 cup boiled	78
		Orange, 1 medium	40

There are creative ways to include rich sources of folate in your diet without pillaging the crudite plate. Here is a quick, tasty combination of asparagus and orange juice for a booster of folate in your diet. Serve as a side dish for dinner or centerplate for lunch.

SESAME ORANGE ASPARAGUS Ingredients

- 1 pound Washington Asparagus (slice diagonally in 2 inch pieces)
- or
- 10 oz package Frozen Cut Asparagus
- 2 tablespoon Olive Oil
- 3 tablespoon Grated Carrot
- 1 tablespoon Sesame Seeds
- 1/2 cup Orange Juice
- 1/2 tsp Sesame oil

Cook asparagus covered in a small amount of boiling water (or in microwave) for 4 to 6 minutes (For frozen, cook according to package directions). Drain water. Heat olive oil in skillet. Add grated carrot and sesame seeds. Cook to toast sesame seeds 2-3 minutes. Add orange juice and sesame oil. Bring to boil and immediately reduce to simmer. Stir in asparagus, tossing to coat and heat through. Serve with orange slices. Makes 4 servings.

FOLIC ACID MAY BE THE TROJAN HORSE AGAINST CANCER

Perhaps we will soon eat folate-rich foods like asparagus or a supplement to sneak cancer-fighting drugs directly into tumor cells.

A team of Purdue University researchers led by Dr. Philip Low have discovered that cancer cells possess a voracious appetite for folate. They gobble up the B vitamin to support rapid cell division. Cancer cells express a protein called a folate receptor to capture folate more effectively than normal cells.

Dr. Low's researchers are now exploiting cancer cells' craving for folate by using folate as a therapeutic "Trojan Horse" to secretly deliver cancer-fighting drugs directly to tumor cells. They are essentially slipping medicine in with cancer's favorite food. Once the folate food or supplement attaches itself to the folate receptor, it can enter the cell with an anticancer agent to wreak havoc on the cancer cell.

ASPARAGUS GLUTATHIONE THE NEW CANCER FIGHTER

Dietary glutathione intake from food sources such as asparagus has been associated with protection against certain forms of cancer in addition to potent anti-viral properties.

Research that is now in progress at the Institute for Cancer Prevention (ICP), formerly American Health Foundation, in Valhalla, NY is demonstrating that asparagus, the food with the highest glutathione concentration, is a potentially effective means of enhancing the body's defense systems and preventing cancer development.



The ICP study examines the bioavailability of asparagus along with the antioxidant status in human blood and oral mucosa. Preliminary results are positive along with glutathione levels in asparagus measuring much higher than original benchmarks.

Tests conducted in June of 2002 indicate that asparagus from Washington State contain of 70mg/100g of glutathione—more than twice the amount in any other common food item. The ICP study, under the direction of Dr. Despina Kominou will provide the basis for a major grant underwriting to the National Institute of Health (NIH). The proposed clinical study will investigate the powerful cancer preventive properties of normal consumption of asparagus.

The promise of glutathione from asparagus as the leading whole foods source is now in the early phases of research. Clinical trials will determine if indeed asparagus, as the leading source of glutathione, may be the ultimate disease prevention food to eat.



EYES OF BLUE YOU NEED ASPARAGUS TOO!

Blue-eyed folks have a 2000% greater probability of age-related macular degeneration (AMD). The reason is lutein, a cousin of beta carotene which is essential for maintenance of the human visual system. Lutein requirements increase dramatically among blue-eyed individuals who have far less of this antioxidant pigment at the back of their eyes than brown-eyed individuals.

Lutein is not currently considered an essential nutrient. Humans do not synthesize lutein. In fact most depend entirely on dietary sources. The Joint Food Safety and Standards Group of MAFF, the Scottish Executive Department of Health has been one of the lead researchers of dietary sources of lutein.

Although standard measurement levels have not been established, the MAFF report cites the significant sources of lutein including asparagus, cabbage, peas and egg yolks. The MAFF study along with a current study at the Moran Eye Center of the University of Utah School of Medicine have found lutein levels to be a dietary safeguard against vision loss.

- 1 lb. Asparagus
- 1/2 cup Olive Oil
- 1/2 cup Grated Carrot
- 1/2 cup Sesame Seeds
- 1/2 cup Orange Juice
- 1/2 tsp Sesame oil
- 1/2 cup Hamsters pieces, chopped to taste
- Salt and Black Pepper

Cook asparagus in large skillet with olive oil, carrots, sesame seeds, orange juice, and sesame oil. Bring to boil and immediately reduce to simmer. Stir in hamsters, tossing to coat and heat through. Serve with orange slices. Makes 4 servings.

