

Dr. Becker's Pre and Postoperative Nutrition Regimen

Kale is one of the healthiest vegetables available.

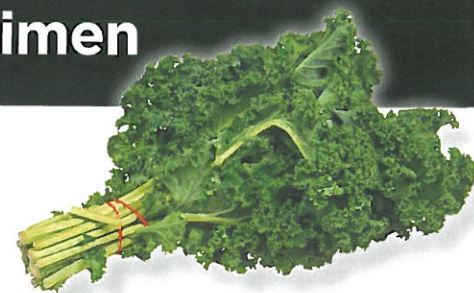
It has potent antioxidant and anti-inflammatory properties; however, it is difficult to consume sufficient quantities due to its bitter taste and high roughage content. By blending kale with pineapple, it is made into a delicious drink retaining all the benefits of kale and adding the nutritive value of pineapple. Blending retains the fiber which in itself has tremendous health properties. Kale's nutrient richness stands out in three particular areas: Antioxidant nutrients, Anti-inflammatory nutrients, and Anticancer nutrients in the form of glucosinolates.

Without sufficient intake of antioxidants, our oxygen metabolism can become compromised and we can experience a metabolic problem called "oxidative stress." The omega-3s found in kale is an important part of kale's anti-inflammatory benefits.

Health Benefits

Potential Anti-Inflammatory and Digestive Benefits

Bromelain is a complex mixture of substances that can be extracted from the stem and core of the pineapple. Among dozens of components known to exist in this crude extract, the best studied components are a group of protein-digesting enzymes (called cysteine proteinases). Originally, researchers believed that these enzymes provided the key health benefits found in bromelain, a popular dietary supplement containing these pineapple extracts. In addition, researchers believed that these benefits were primarily limited to help with digestion in the intestinal tract. However, further studies have shown that bromelain has a wide variety of health benefits, and that many of these benefits may not be related to the different enzymes found in this extract. Excessive inflammation, excessive coagulation of the blood, and certain types of



tumor growth may all be reduced by therapeutic doses of bromelain when taken as a dietary supplement. Bromelain extracts can be obtained from both the fruit core and stems of pineapple.

Antioxidant Protection and Immune Support

Vitamin C is the body's primary water-soluble antioxidant, defending all aqueous areas of the body against free radicals that attack and damage normal cells. Free radicals have been shown to promote the artery plaque buildup of atherosclerosis and diabetic heart disease, cause the airway spasm that leads to asthma attacks, damage the cells of the colon so they become colon cancer cells, and contribute to the joint pain and disability seen in osteoarthritis and rheumatoid arthritis. This would explain why diets rich in vitamin C have been shown to be useful for preventing or reducing the severity of all of these conditions. In addition, vitamin C is vital for the proper function of the immune system, making it a nutrient to turn to for the prevention of recurrent ear infections, colds, and flu .

Manganese and Thiamin (Vitamin B1) for Energy Production and Antioxidant Defenses

Pineapple is an excellent source of trace mineral manganese, which is an essential cofactor in a number of enzymes important in energy production and antioxidant defenses. For example, the key oxidative enzyme superoxide dismutase, which disarms free radicals produced within the mitochondria (the energy production factories within our cells), requires manganese. Just one cup of fresh pineapple supplies 128.0% of the DV for this very important trace mineral. In addition to manganese, pineapple is a good source of thiamin, a B vitamin that acts as a cofactor in enzymatic reactions central to energy production.

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Nutrients in Kale

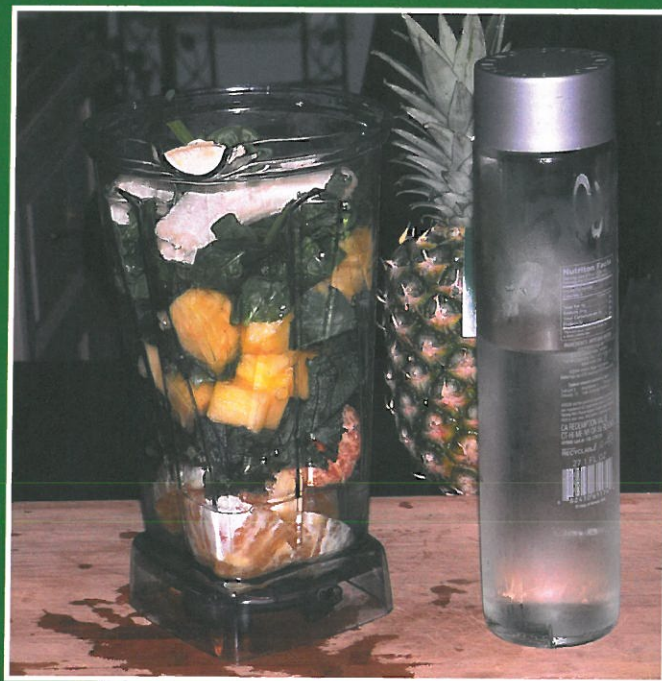
1 Cup • 130 Grams
Nutrient % Daily Value

Vitamin K1 327.6%
Vitamin A 354.1%
Vitamin C 88.8%
Manganese 27%
Fiber 10.4%
Copper 10%
Tryptophan 9.3%
Calcium 9.3%
Vitamin B6 9%
Potassium 8.4%
Iron 6.5%
Magnesium 5.8%
Vitamin E 5.5%
Omega-3 fats 5.4%
Vitamin B2 5.2%
Protein 4.9%
Vitamin B1 4.6%
Folate 4.2%
Phosphorus 3.6%
Vitamin B3 3.2%

Nutrients in Pineapple

1.00 cup (165.00 grams)
Nutrient % Daily Value

Vitamin C 131.4%
Manganese 76.5%
Fiber 9.2%
Vitamin B6 9%
Copper 9%
Vitamin B1 8.6%
Folate 7.4%
Calories (82) 4%



Directions

Place in blender (Not Juicer)

1/2 Pineapple
1 whole Peeled Orange
Banana
1 cup Spinach
1 cup Kale
1 cup water or OJ

Any other fruit may be added:

Blueberries
Strawberries
Peaches
Apples

Other Vegetables

Carrots
Greens

Blend and enjoy!

