#### Kale Salad

1 head kale, shredded (curly kale recommended) 1 cup tomato, chopped or fresh salsa 1 avocado diced ¼ onion finely chopped 1-2 tablespoons olive oil or sesame Juice from ½ lemon sea salt, to taste cayenne pepper to taste



Optional toppings: raisins, pine nuts, fresh ginger, sesame seeds, unsalted nori crumbled or cut into confetti, olives or anything that you might want to try!

#### Instructions:

Massage kale with oil, lemon and salt until wilted and soft. Add tomato, avocado and onion. Toss with cayenne pepper and any additions until mixed well.

Nutrition Facts			
4 Servings			
Calories	127.0		
Total Fat	6.8 g		
Saturated Fat	0.9 g		
Polyunsaturated Fat	1.0 g		
Monounsaturated Fat	3.7 g		
Cholesterol	0.0 mg		
Sodium	90.1 mg		
Potassium	582.0 mg		
Total Carbohydrate	17.3 g		
Dietary Fiber	6.7 g		
Sugars	2.7 g		
Protein	4.8 g		
Vitamin A	539.1 %		
Vitamin B-12	0.0 %		
Vitamin B-6	23.0 %		
Vitamin C	165.5 %		
Vitamin D	0.0 %		
Vitamin E	10.6 %		
Calcium	15.8 %		
Copper	22.7 %		
Folate 8.5 %			
Iron	13.1 %		
Magnesium	14.0 %		
Manganese	43.7 %		
Niacin	10.8 %		
Pantothenic Acid	8.7 %		
Phosphorus	7.1 %		
Riboflavin	13.5 %		
Selenium	2.9 %		
Thiamin	11.7 %		
Zinc	5.6 %		

Nutritional information was calculated at: <u>http://recipes.sparkpeople.com/recipe-calculator.asp</u>

\*This recipe is calculated low salt. Use water for those with stricter salt requirements. Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

# Kale

# <sup>1</sup>How to Enjoy

## **Tips for Preparing Kale**

Rinse kale leaves under cold running water. Chop leaf portion into  $\frac{1}{2}$ " slices and the stems into  $\frac{1}{4}$ " lengths for quick and even cooking.

To get the most health benefits from kale, let sit for a minimum of 5 minutes before cooking. Sprinkling with lemon juice before letting them sit can further enhance its beneficial phytonutrient concentration.

#### The Healthiest Way of Cooking Kale

We recommend Healthy Steaming kale for maximum nutrition and flavor. Fill the bottom of a steamer pot with 2 inches of water. While waiting for the water to come to a rapid boil chop greens. Steam for 5 minutes and toss with our <u>Mediterranean Dressing</u> and top with your favorite optional ingredients.

### A Few Quick Serving Ideas

- Braise chopped kale and apples. Before serving, sprinkle with balsamic vinegar and chopped walnuts.
- Combine chopped kale, pine nuts, and feta cheese with whole grain pasta drizzled with olive oil.

#### What's New and Beneficial About Kale

- Kale can provide you with some special cholesterol-lowering benefits if you will cook it by steaming. The fiberrelated components in kale do a better job of binding together with bile acids in your digestive tract when they've been steamed. When this binding process takes place, it's easier for bile acids to be excreted, and the result is a lowering of your cholesterol levels. Raw kale still has cholesterol-lowering ability - just not as much.
- Kale's risk-lowering benefits for cancer have recently been extended to at least five different types of cancer. These types include cancer of the bladder, breast, colon, ovary, and prostate. Isothiocyanates (ITCs) made from glucosinolates in kale play a primary role in achieving these risk-lowering benefits.
- Kale is now recognized as providing comprehensive support for the body's detoxification system. New research has shown that the ITCs made from kale's glucosinolates can help regulate detox at a genetic level.
- Researchers can now identify over 45 different flavonoids in kale. With kaempferol and quercetin heading the list, kale's flavonoids combine both antioxidant and anti-inflammatory benefits in way that gives kale a leading dietary role with respect to avoidance of chronic inflammation and oxidative stress.

#### Recommendations

You'll want to include kale as one of the cruciferous vegetables you eat on a regular basis if you want to receive the fantastic health benefits provided by the cruciferous vegetable family. At a minimum, include cruciferous vegetables as part of your diet 2-3 times per week, and make the serving size at least 1-1/2 cups. Even better from a health standpoint, enjoy kale and other vegetables from the cruciferous vegetable group 4-5 times per week, and increase your serving size to 2 cups.

Kale is one of the healthiest vegetables around and one way to be sure to enjoy the maximum nutrition and flavor from kale is to cook it properly. We recommend Healthy Steaming kale for 5 minutes. To ensure quick and even cooking cut the leaves into ½" slices and the stems into 1/4" lengths. Let them sit for at least 5 minutes to enhance their health-promoting qualities before steaming.

<sup>&</sup>lt;sup>1</sup> This information was acquired from <u>http://www.whfoods.com/</u>

# Health Benefits Antioxidant-Related Health Benefits

Like most of its fellow cruciferous vegetables, kale has been studied more extensively in relationship to cancer than any other health condition. This research focus makes perfect sense. Kale's nutrient richness stands out in three particular areas-(1) antioxidant nutrients, (2) anti-inflammatory nutrients, and (3) anti-cancer 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." Without sufficient intake of anti-inflammatory nutrients, regulation of our inflammatory system can become compromised, and we can experience the problem of chronic inflammation. Oxidative stress and chronic inflammation - and the combination of these metabolic problems-are risk factors for development of cancer. We've seen research studies on 5 specific types of cancer-including bladder cancer, breast cancer, colon cancer, ovarian cancer, and prostate cancer-and intake of cruciferous vegetables (specifically including kale). As a group, these studies definitely show cancer preventive benefits from kale intake, and in some cases, treatment benefits as well.

Kale's cancer preventive benefits have been clearly linked to its unusual concentration of two types of antioxidants, namely, carotenoids and flavonoids. Within the carotenoids, lutein and beta-carotene are standout antioxidants in kale. Researchers have actually followed the passage of these two carotenoids in kale from the human digestive tract up into the blood stream, and they have demonstrated the ability of kale to raise blood levels of these carotenoid nutrients. That finding is important because lutein and beta-carotene are key nutrients in the protection of our body from oxidative stress and health problems related to oxidative stress. Increased risk of cataracts, atherosclerosis, and chronic obstructive pulmonary disease (COPD) are three such problems. Also among these chronic health problems is cancer since our overall risk of cells becoming cancerous is partly related to oxidative stress.

Within the flavonoids, kaempferol is a spotlight antioxidant in kale, followed by a flavonoid called quercitin. But recent research has also made it clear that at least 45 different antioxidant flavonoids are provided in measurable amounts by kale. This broad spectrum of flavonoid antioxidants is likely to be a key to kale's cancer-preventive benefits and benefits that we expect to be documented for other health problems stemming from oxidative stress.

#### Anti-Inflammatory Health Benefits

We have yet to see research on kale's omega-3 content and inflammation, but we would expect this kind of research to show the omega-3s in kale to be an important part of kale's anti-inflammatory benefits. It only takes 100 calories of kale to provide us with 25-35% of the National Academy of Sciences' public health recommendation for the most basic omega-3 fatty acid (alpha-linolenic acid, or ALA). We suspect that this amount will be plenty to show direct anti-inflammatory benefits from routine kale intake.

We also have yet to see specific research on inflammation and kale's vitamin K content. But we know that kale is a spectacular source of vitamin K (one cup of kale provides far more micrograms of vitamin K than any of our 135 World's Healthiest foods) and we also know that vitamin K is a key nutrient for helping regulate our body's inflammatory process. Taken in combination, we expect these two facts about vitamin K to eventually get tied together in health research that shows kale to be an exceptional food for lowering our risk of chronic inflammation and associated health problems.

#### **Cardiovascular Support**

You can count on kale to provide valuable cardiovascular support in terms of its cholesterol-lowering ability. Researchers now understand exactly how this support process works. Our liver uses cholesterol as a basic building block to product bile acids. Bile acids are specialized molecules that aid in the digestion and absorption of fat through a process called emulsification. These molecules are typically stored in fluid form in our gall bladder, and when we eat a fat-containing meal, they get released into the intestine where they help ready the fat for interaction with enzymes and eventual absorption up into the body. When we eat kale, fiber-related nutrients in this cruciferous vegetable bind together with some of the bile acids in the intestine in such a way that they simply stay inside the intestine and pass out of our body in a bowel movement, rather than getting absorbed along with the fat they have emulsified. When this happens, our liver needs to replace the lost bile acids by drawing upon our existing supply of cholesterol, and, as a result, our cholesterol level drops down. Kale provides us with this cholesterol-lowering benefit whether it is raw or cooked. However, a recent study has shown that the cholesterol-lowering ability of raw kale improves significantly when it is steamed. In fact, when the cholesterol-lowering ability of steamed kale was compared with the cholesterol-lowering ability of the prescription drug cholestyramine (a medication that is taken for the purpose of lowering cholesterol), kale bound 42% as many bile acids (based on a standard of comparison involving total dietary fiber). Amongst all of the cruciferous vegetables, only collard greens scored higher at 46%.

#### **Garden Fresh Tomato Soup**

- 4 cups chopped fresh tomatoes
- 1 slice onion
- 4 whole cloves
- 2 cups chicken broth
- 2 tablespoons olive oil or butter
- 1 teaspoon oregano
- 1 teaspoon thyme
- 4 cloves of garlic
- 2 tablespoons all-purpose flour
- 1 teaspoon salt
- Honey to taste



#### Instructions

Sauté onions on a medium heat in one tablespoon of oil until they are clear. Add thyme and oregano. In a stockpot, over medium heat, combine the tomatoes, onion, cloves garlic and chicken broth. Bring to a boil. Allow the soup to simmer gently at a low heat for about 20 minutes. Remove from heat and run the mixture through blender.

In the now empty stockpot, melt the remaining butter over medium heat. Stir in the flour to make a roux, cooking until the roux is a medium brown. Gradually whisk in a bit of the tomato mixture, so that no lumps form, then stir in the rest. Season with sugar and salt, and adjust to taste.

Nutrition Facts			
4 Servings		Vitamin B-6	12.8 %
Amount Per Serving		Vitamin C	36.1 %
Ũ		Vitamin D	0.0 %
Calories	138.5	Vitamin E	8.0 %
Total Fat	7.7 g	Calcium	3.7 %
Saturated Fat	1.4 g	Copper	15.0 %
	•	Folate	11.6 %
Polyunsaturated Fat	1.2 g	Iron	11.5 %
Monounsaturated Fat	5.7 g	Magnesium	7.2 %
Cholesterol	2.5 mg	Manganese	29.8 %
Sodium	788.9 mg	Niacin	21.1 %
Potassium	694.7 mg	Pantothenic Acid	5.7 %
Total Carbohydrate	17.0 g	Phosphorus	14.1 %
Dietary Fiber	3.0 g	Riboflavin	10.2 %
Sugars	1.6 g	Selenium	7.6 %
Protein	3.0 g	<u>-</u>	10.0.1
Vitamin A	22.7 %	Thiamin	10.9 %
Vitamin B-12	4.2 %	Zinc	3.8 %
		2.2 %	

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