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### Susan Bishop Dana Medical Library



# The Nutritional Value

01

# Fruits and Vegetables

### **"EAT YOUR FRUITS & VEGETABLES"**

Research shows why it is good advice

Healthy diets rich in fruits & vegetables can help to:

- Avoid heart disease, stroke, and diabetes
- Control blood pressure



- Guard against cataracts and macular degeneration
- Reduce the risk of cancer





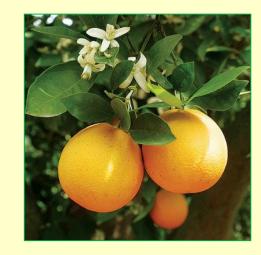


### Harvard-based Nurses' Health Study and **Health Professionals Follow-up Study** Results showed that the higher the average daily intake of

- fruits and vegetables, the lower the chances of developing cardiovascular disease
- Those who averaged 8 or more servings a day were 30 percent less likely to have had a heart attack or stroke compared with those in the lowest category of intake (less than 1.5 servings a day)
- Combined findings from Harvard studies with several other long-term studies in the U.S. and Europe found a similar protective effect

### Important Contributors to **Cardiovascular Health**

• Green leafy vegetables such as lettuce, spinach, swiss chard, mustard greens



Citrus fruits such as oranges, lemons, limes, grapefruit (and their juices)

**Cruciferous vegetables** such as broccoli, cauliflower, cabbage, brussel sprouts, bok choy, kale





### **Dietary Approaches to Stop Hypertension** (DASH) Study

- Trial examined *effect on blood pressure* of a diet rich in fruits, vegetables, and low-fat dairy products and restricted amount of saturated and total fat
- Research found that people with high blood pressure who followed this diet reduced their systolic blood pressure by about 11 mm Hg and *diastolic blood pressure* by almost 6 mm Hg

As much as medications can achieve

N Engl J Med 336(16): 1117-24, 1997 Apr 17



SYS

### The Produce of a Vermont Summer are Fresh, Nutritious, & Tasty

### When local produce is available

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### The Reds, Blues, Purples of Summer

### BEETS

- Red pigment (betalaine) a type of flavonoid, which is a class of plant products that have beneficial effects on the immune system, connective tissue, and cellular metabolism
- Good source of folate a water-soluble **B vitamin**
- Beet greens are an excellent source of *fiber, beta-carotene* (Vitamin A), calcium, and iron



Beets are a cool weather vegetable and are not harmed by frost.

In ancient civilizations only the green part of the plant was eaten.





### BERRIES

### Blackberry, Raspberry, Blueberry, Strawberry

- Blueberries contain *significant amounts* of anthocyanoside: the *antioxidant compounds* that produce *blues*, *reds*, and *purples* in fruits and vegetables.
- **Strawberries** ripen fairly early in Vermont's growing season. They are great as a *low calorie dessert* and in salads made with spinach or leafy greens.



Berries were an important part of the food supply for Native Americans. Raspberries were used in their medicines,

dyes, & food preservatives.



### CABBAGE

Member of large family of *cruciferous vegetables* that include broccoli, cauliflower, kale

> **Population studies show that consumption of** cruciferous vegetables lowers cancer risk The Encyclopedia of Nutrition and Good Health, 2005

- Good source of Vitamin C, folic acid, beta carotene, fiber
  - In the United States cabbage is also known for the many legends in which it is featured . . .

"The man in the moon was sent up there because he stole a



cabbage from his neighbor on December 24"

"Babies are found in the cabbage patch"







Contains substantial amounts of *lycopene*, an antioxidant that may help protect against cancer

- Very good source of *fiber*
- Good source of Vitamins A & E
- Rich in *Potassium*



First found thousands of years ago in Peru and Ecuador



Tomatoes are the 2nd most popular vegetable in the United States



### The Healthy Greens of Summer

### **KALE –** One of Nature's Healthiest Vegetables

- > Excellent source of *antioxidant vitamins* A, C, K Eating a diet rich in the powerful antioxidant Vitamin K can reduce the overall risk of developing or dying from cancer - According to a study in the American Journal of Nutrition, 2010
- High fiber content helps to lower cholesterol levels and reduces the risk of heart disease
- Rich in 2 eye-health promoting compounds

The cultivation of Kale in the U.K. was encouraged during World War II. This vegetable was easy to grow and provided important nutrients to supplement those missing from a normal diet because of rationing.





### **LETTUCE – Salad Greens**

Incorporating mixed-green salads into your diet helps you to meet the USDA's dietary recommendations of 2–3 cups of vegetables a day



Most lettuce varieties contain 94% water, making it a low density food, which *aids in weight loss* 

- Good source of Vitamin A, C, K and potassium, calcium, iron
- Adding lettuce to your diet is a great way to *increase your* fiber intake

First cultivated by Ancient Egyptians who turned it from a weed, whose seeds were used for oil, into a plant grown for its leaves.



The Northeast offers the ideal growing conditions for this cool-weather crop.



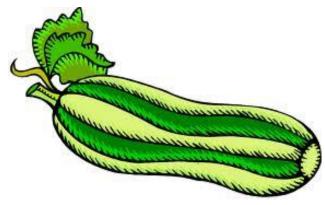
### BROCCOLI

- > Contains significant amounts of *Vitamin A and C*
- Good source of minerals such as calcium and potassium
- Especially good source of *dietary fiber one cup contains* approximately **5.1 grams**
- Good source of lutein the antioxidant that *contributes to* eye health

In Greece & Italy, broccoli has been a favorite vegetable

for 2000 years. Brought to the United States in the early 1900s by Italian immigrants, broccoli has risen to become one of America's favorite vegetables.





## **ZUCCHINI – Summer Squash**

High water content (over 95%), low in calories, high nutritional value

- > One raw zucchini, including its skin, provides the *daily* recommended value of Vitamin C (56%) & Vitamin K (11%)
- Good source of minerals manganese and phosphorus nutrients essential for building & maintaining healthy bones
- Good source of *dietary fiber*

Popular vegetable with Native Americans who ate it for some 5,000 years.







## The Flavors of Summer

### **SWEET CORN – America's #1 field crop**

Sweet corn is picked when immature and prepared and eaten as a vegetable, rather than a grain

Good source of *fiber, Vitamin C* and *B-complex* vitamins

- > Contains ample amounts of *protein*
- Significant source of important *antioxidants*

Cornell University researchers reported that cooking sweet corn significantly boosts the grain's health-giving antioxidant activity.



Native American tribe (Iroquois) gave the first recorded sweet corn (called Papoon) to European settlers in 1779.





### **CARROT** – A favorite vegetable in households across the country – Loved by Children

- > Contains ample amounts of *antioxidants*
- Very good source of *dietary fiber*
- > Especially high in *Vitamins A, C, K, B6*
- > High in lutein which plays a role in *protecting the eye* and *maintaining vision*



Satisfying snack when eaten raw and a tasty addition to a variety of mixed dishes.

The first carrots, which were white, purple, and yellow, were cultivated in Afghanistan.





### **Garlic & Onion**

Members of the Allium genus family of vegetables, Garlic & Onion can be eaten raw, cooked, or used as a *flavor enhancer* to many dishes.

Research has shown that consumption of Garlic and Onion can:

- Lower blood cholesterol levels
- **Reduce blood pressure** 
  - **Boost the immune system**
- **Reduce inflammation**



According to the **Journal of Nutrition** people have used **garlic** for medicinal purposes since antiquity.

The National Cancer Institute recognizes garlic as one of several vegetables with *potential anticancer properties*.





### **CAULIFLOWER** – Actually a flower

The part of the plant that is eaten is the head

of undeveloped, tender flower stems and buds

- > Excellent source of Vitamin C
- Contains many vital B-complex vitamins
- Very good source of *Dietary Fiber* and *Protein*

The blue/green leaves surrounding the head protect it from the light so it doesn't turn green.



Raw florets are **tasty in salads**, as a crunchy appetizer **with dips**, or **pickled**.

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For more information about the Nutritional Value of Fruits & Vegetables check out the **Natural Standard database** http://www.naturalstandard.com/

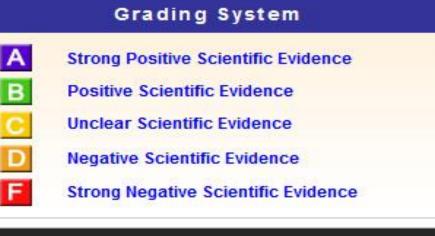








Natural Standard was founded by healthcare providers and researchers to provide high-quality, evidence-based information about complementary and alternative medicine including dietary supplements and integrative therapies. Grades reflect the level of available scientific data for or against the use of each therapy for a specific medical condition.





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"Natural Standard provides a critical and transparent review of the evidence regarding herbs and supplements. As such, it is an extremely valuable resource for both clinicians and investigators."

- David Eisenberg, MD
- Director, Osher Institute
- Division for Research and Education in
- Complementary & Integrative Medicine
- Harvard Medical School

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