

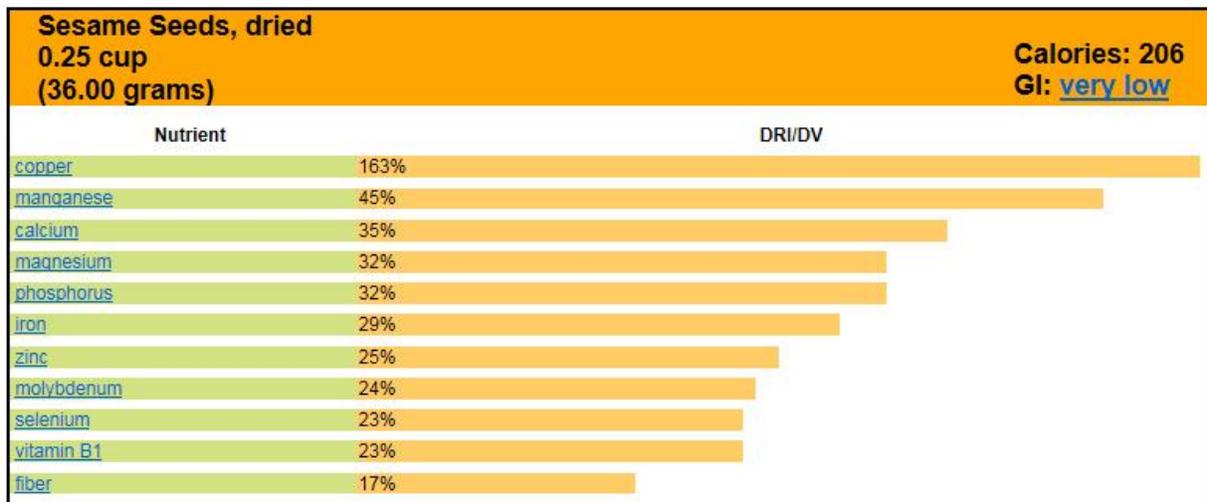
# Sesame seeds

<http://www.whfoods.com/genpage.php?tname=foodspice&dbid=84>



Sesame seeds add a nutty taste and a delicate, almost invisible, crunch to many Asian dishes. They are also the main ingredients in tahini (sesame seed paste) and the wonderful Middle Eastern sweet call halvah. They are available throughout the year.

Sesame seeds may be the oldest condiment known to man. They are highly valued for their oil which is exceptionally resistant to rancidity. "Open sesame"—the famous phrase from the Arabian Nights—reflects the distinguishing feature of the sesame seed pod, which bursts open when it reaches maturity. The scientific name for sesame seeds is *Sesamun indicum*.



This chart graphically details the %DV that a serving of Sesame seeds provides for each of the nutrients of which it is a good, very good, or excellent source according to our Food Rating System. Additional information about the amount of these nutrients provided by Sesame seeds can be found in the [Food Rating System Chart](#). A link that takes you to the In-Depth Nutritional Profile for Sesame

seeds, featuring information over 80 nutrients, can be found under the Food Rating System Chart.

- [Health Benefits](#)
- [Description](#)
- [History](#)
- [How to Select and Store](#)
- [How to Enjoy](#)
- [Individual Concerns](#)
- [Nutritional Profile](#)
- [References](#)

## Health Benefits

Not only are sesame seeds an excellent source of copper and a very good source of manganese, but they are also a good source of calcium, magnesium, iron, phosphorus, vitamin B1, zinc, molybdenum, selenium, and dietary fiber. In addition to these important nutrients, sesame seeds contain two unique substances: *sesamin* and *sesamol*. Both of these substances belong to a group of special beneficial fibers called *lignans*, and have been shown to have a cholesterol-lowering effect in humans, and to prevent high blood pressure and increase vitamin E supplies in animals. Sesamin has also been found to protect the liver from oxidative damage.

## Rich In Beneficial Minerals

Sesame seeds are an excellent source of copper, a very good source of manganese, and a good source of magnesium, calcium, phosphorus, iron, zinc, molybdenum, and selenium. This rich assortment of minerals translates into the following health benefits:

## Copper Provides Relief for Rheumatoid Arthritis

Copper is known for its use in reducing some of the pain and swelling of rheumatoid arthritis. Copper's effectiveness is due to the fact that this trace mineral is important in a number of antiinflammatory and antioxidant enzyme systems. In addition, copper plays an important role in the activity of lysyl oxidase, an enzyme needed for the cross-linking of collagen and elastin—the ground substances that provide structure, strength and elasticity in blood vessels, bones and joints.

## **Magnesium Supports Vascular and Respiratory Health**

Studies have supported magnesium's usefulness in:

- Preventing the airway spasm in asthma
- Lowering high blood pressure, a contributing factor in heart attack, stroke, and diabetic heart disease
- Preventing the trigeminal blood vessel spasm that triggers migraine attacks
- Restoring normal sleep patterns in women who are experiencing unpleasant symptoms associated with menopause

## **Calcium Helps Prevent Colon Cancer, Osteoporosis, Migraine and PMS**

In recent studies, calcium has been shown to:

- Help protect colon cells from cancer-causing chemicals
- Help prevent the bone loss that can occur as a result of menopause or certain conditions such as rheumatoid arthritis
- Help prevent migraine headaches in those who suffer from them
- Reduce PMS symptoms during the luteal phase (the second half) of the menstrual cycle

There is a little bit of controversy about sesame seeds and calcium, because there is a substantial difference between the calcium content of hulled versus unhulled sesame seeds. When the hulls remain on the seeds, one tablespoon of sesame seeds will contain about 88 milligrams of calcium. When the hulls are removed, this same tablespoon will contain about 37 milligrams (about 60% less). Tahini—a spreadable paste made from ground sesame seeds—is usually made from hulled seeds (seeds with the hulls removed, called kernels), and so it will usually contain this lower amount of calcium.

The term "sesame butter" can sometimes refer to tahini made from sesame seed kernels, or it can also be used to mean a seed paste made from whole sesame seeds—hull included.

Although the seed hulls provide an additional 51 milligrams of calcium per tablespoon of seeds, the calcium found in the hulls appears in large part to be

found in the form of calcium oxalate. This form of calcium is different than the form found in the kernels, and it is a less absorbable form of calcium. So even though a person would be likely to get more calcium from sesame seeds or sesame seed butter that contained the hulls, there is a question about how much more calcium would be involved. It would definitely be less than the 51 additional milligrams found in the seed hulls.

## **Zinc for Bone Health**

Another reason for older men to make zinc-rich foods such as sesame seeds a regular part of their healthy way of eating is bone mineral density. Although osteoporosis is often thought to be a disease for which postmenopausal women are at highest risk, it is also a potential problem for older men. Almost 30% of hip fractures occur in men, and 1 in 8 men over age 50 will have an osteoporotic fracture. A study of 396 men ranging in age from 45-92 that was published in the *American Journal of Clinical Nutrition* found a clear correlation between low dietary intake of zinc, low blood levels of the trace mineral, and osteoporosis at the hip and spine.

## **Sesame Seeds' Phytosterols Lower Cholesterol**

Phytosterols are compounds found in plants that have a chemical structure very similar to cholesterol, and when present in the diet in sufficient amounts, are believed to reduce blood levels of cholesterol, enhance the immune response and decrease risk of certain cancers.

Phytosterols beneficial effects are so dramatic that they have been extracted from soybean, corn, and pine tree oil and added to processed foods, such as "butter"-replacement spreads, which are then touted as cholesterol-lowering "foods." But why settle for an imitation "butter" when Mother Nature's nuts and seeds are a naturally rich source of phytosterols—and cardio-protective fiber, minerals and healthy fats as well?

In a study in the *Journal of Agricultural and Food Chemistry*, researchers published the amounts of phytosterols present in nuts and seeds commonly eaten in the United States.

Sesame seeds had the highest total phytosterol content (400-413 mg per 100 grams), and English walnuts and Brazil nuts the lowest (113 mg/100grams and 95 mg/100 grams). (100 grams is equivalent to 3.5 ounces.) Of the nuts and seeds typically consumed as snack foods, pistachios and sunflower seeds were

richest in phytosterols (270-289 mg/100 g), followed by pumpkin seeds (265 mg/100 g).

## Description

Sesame seeds are tiny, flat oval seeds with a nutty taste and a delicate, almost invisible crunch. They come in a host of different colors, depending upon the variety, including white, yellow, black and red.

Sesame seeds are highly valued for their high content of sesame oil, an oil that is very resistant to rancidity. Sesame seeds are the main ingredients in both tahini and the Middle Eastern sweet treat, halvah.

Open sesame—the famous phrase from the Arabian Nights—reflects the distinguishing feature of the sesame seed pod, which bursts open when it reaches maturity. The scientific name for sesame seeds is *Sesamun indicum*.

## History

While sesame seeds have been grown in tropical regions throughout the world since prehistoric times, traditional myths hold that their origins go back even further. According to Assyrian legend, when the gods met to create the world, they drank wine made from sesame seeds.

These seeds were thought to have first originated in India and were mentioned in early Hindu legends. In these legends, tales are told in which sesame seeds represent a symbol of immortality. From India, sesame seeds were introduced throughout the Middle East, Africa and Asia.

Sesame seeds were one of the first crops processed for oil as well as one of the earliest condiments. The addition of sesame seeds to baked goods can be traced back to ancient Egyptian times from an ancient tomb painting that depicts a baker adding the seeds to bread dough.

Sesame seeds were brought to the United States from Africa during the late 17th century. Currently, the largest commercial producers of sesame seeds include India, China and Mexico.

## How to Select and Store

Sesame seeds are generally available in prepackaged containers as well as bulk bins. Just as with any other food that you can purchase in the bulk section, make sure that the bins containing the sesame seeds are covered and that the store has a good product turnover to ensure maximal freshness.

Whether purchasing sesame seeds in bulk or in a packaged container, make sure there is no evidence of moisture. Additionally, since they have a high oil content and can become rancid, smell those in bulk bins to ensure that they smell fresh.

Unhulled sesame seeds can be stored in an airtight container in a cool, dry, dark place. Once the seeds are hulled, they are more prone to rancidity, so they should then be stored in the refrigerator or freezer.

## How to Enjoy

### A Few Quick Serving Ideas

- Add sesame seeds into the batter the next time you make homemade bread, muffins or cookies.
- Use the traditional macrobiotic seasoning, gomasio, to enliven your food. You can either purchase gomasio at a health food store or make your own by using a mortar and pestle. Simply mix together one part dry roasted sea salt with twelve parts dry roasted sesame seeds.
- Sesame seeds add a great touch to steamed broccoli that has been sprinkled with lemon juice.
- Spread tahini (sesame paste) on toasted bread and either drizzle with honey for a sweet treat or combine with miso for a savory snack.
- Combine toasted sesame seeds with rice vinegar, [soy sauce](#) and crushed garlic and use as a dressing for salads, vegetables and noodles.
- Healthy sauté chicken with sesame seeds, [soy sauce](#), garlic, ginger and your favorite vegetables for a healthy, but quick, Asian-inspired dinner.

## Individual Concerns

### Sesame Seeds and Food Allergies

While not among the top eight food allergen groups in the United States, sesame seeds are a food that researchers have found to be associated with an increased

prevalence of food allergy. For helpful information about this topic, please see our article, [An Overview of Adverse Food Reactions](#).

## Nutritional Profile

Sesame seeds are an excellent source of copper, a very good source of manganese, and a good source of calcium, phosphorus, magnesium, iron, zinc, molybdenum, vitamin B1, selenium and dietary fiber.

## Introduction to Food Rating System Chart

In order to better help you identify foods that feature a high concentration of nutrients for the calories they contain, we created a Food Rating System. This system allows us to highlight the foods that are especially rich in particular nutrients. The following chart shows the nutrients for which this food is either an excellent, very good, or good source (below the chart you will find a table that explains these qualifications). If a nutrient is not listed in the chart, it does not necessarily mean that the food doesn't contain it. It simply means that the nutrient is not provided in a sufficient amount or concentration to meet our rating criteria. (To view this food's in-depth nutritional profile that includes values for dozens of nutrients - not just the ones rated as excellent, very good, or good - please use the link below the chart.) To read this chart accurately, you'll need to glance up in the top left corner where you will find the name of the food and the serving size we used to calculate the food's nutrient composition. This serving size will tell you how much of the food you need to eat to obtain the amount of nutrients found in the chart. Now, returning to the chart itself, you can look next to the nutrient name in order to find the nutrient amount it offers, the percent Daily Value (DV%) that this amount represents, the nutrient density that we calculated for this food and nutrient, and the rating we established in our rating system. For most of our nutrient ratings, we adopted the government standards for food labeling that are found in the U.S. Food and Drug Administration's "Reference Values for Nutrition Labeling." [Read more background information and details of our rating system](#).

**Sesame Seeds, dried**  
**0.25 cup**  
**36.00 grams**  
**Calories: 206**  
**GI: [very low](#)**

Nutrient	Amount	DRI/DV (%)	Nutrient Density	World's Healthiest Foods Rating
<a href="#">copper</a>	1.47 mg	163	14.3	excellent
<a href="#">manganese</a>	0.89 mg	45	3.9	very good
<a href="#">calcium</a>	351.00 mg	35	3.1	good
<a href="#">phosphorus</a>	226.44 mg	32	2.8	good
<a href="#">magnesium</a>	126.36 mg	32	2.8	good
<a href="#">iron</a>	5.24 mg	29	2.5	good
<a href="#">zinc</a>	2.79 mg	25	2.2	good
<a href="#">molybdenum</a>	10.62 mcg	24	2.1	good
<a href="#">vitamin B1</a>	0.28 mg	23	2.0	good
<a href="#">selenium</a>	12.38 mcg	23	2.0	good
<a href="#">fiber</a>	4.25 g	17	1.5	good
World's Healthiest Foods Rating	Rule			
excellent	DRI/DV $\geq$ 75% OR Density $\geq$ 7.6 AND DRI/DV $\geq$ 10%			
very good	DRI/DV $\geq$ 50% OR Density $\geq$ 3.4 AND DRI/DV $\geq$ 5%			
good	DRI/DV $\geq$ 25% OR Density $\geq$ 1.5 AND DRI/DV $\geq$ 2.5%			

## In-Depth Nutritional Profile

In addition to the nutrients highlighted in our ratings chart, here is an in-depth nutritional profile for Sesame seeds. This profile includes information on a full array of nutrients, including carbohydrates, sugar, soluble and insoluble fiber, sodium, vitamins, minerals, fatty acids, amino acids and more.

Sesame Seeds, dried		
(Note: "--" indicates data <a href="#">unavailable</a> )		
0.25 cup (36.00 g)		GI: <a href="#">very low</a>
BASIC MACRONUTRIENTS AND CALORIES		
nutrient	amount	DRI/DV

		(%)
Protein	6.38 g	13
Carbohydrates	8.44 g	4
Fat - total	17.88 g	--
Dietary Fiber	4.25 g	17
Calories	206.28	11
<b>MACRONUTRIENT AND CALORIE DETAIL</b>		
<b>nutrient</b>	<b>amount</b>	<b>DRI/DV (%)</b>
Carbohydrate:		
Starch	-- g	
Total Sugars	0.11 g	
Monosaccharides	-- g	
Fructose	-- g	
Glucose	-- g	
Galactose	-- g	
Disaccharides	-- g	
Lactose	-- g	
Maltose	-- g	
Sucrose	-- g	
Soluble Fiber	0.89 g	
Insoluble Fiber	3.36 g	
Other Carbohydrates	4.09 g	
Fat:		
Monounsaturated Fat	6.75 g	
Polyunsaturated Fat	7.84 g	
Saturated Fat	2.50 g	
Trans Fat	0.00 g	
Calories from Fat	160.93	
Calories from Saturated Fat	22.54	
Calories from Trans Fat	0.00	

Cholesterol	0.00 mg	
Water	1.69 g	
<b>MICRONUTRIENTS</b>		
<b>nutrient</b>	<b>amount</b>	<b>DRI/DV (%)</b>
Vitamins		
Water-Soluble Vitamins		
B-Complex Vitamins		
Vitamin B1	0.28 mg	23
Vitamin B2	0.09 mg	7
Vitamin B3	1.63 mg	10
Vitamin B3 (Niacin Equivalents)	3.68 mg	
Vitamin B6	0.28 mg	16
Vitamin B12	0.00 mcg	0
Biotin	3.96 mcg	13
Choline	9.22 mg	2
Folate	34.92 mcg	9
Folate (DFE)	34.92 mcg	
Folate (food)	34.92 mcg	
Pantothenic Acid	0.02 mg	0
Vitamin C	0.00 mg	0
Fat-Soluble Vitamins		
Vitamin A (Retinoids and Carotenoids)		
Vitamin A International Units (IU)	3.24 IU	
Vitamin A mcg Retinol Activity Equivalents (RAE)	0.16 mcg (RAE)	0
Vitamin A mcg Retinol Equivalents (RE)	0.32 mcg (RE)	
Retinol mcg Retinol Equivalents (RE)	0.00 mcg (RE)	
Carotenoid mcg Retinol Equivalents (RE)	0.32 mcg (RE)	
Alpha-Carotene	0.00 mcg	
Beta-Carotene	1.80 mcg	
Beta-Carotene Equivalents	1.80 mcg	

Cryptoxanthin	0.00 mcg	
Lutein and Zeaxanthin	0.00 mcg	
Lycopene	0.00 mcg	
Vitamin D		
Vitamin D International Units (IU)	0.00 IU	0
Vitamin D mcg	0.00 mcg	
Vitamin E		
Vitamin E mg Alpha-Tocopherol Equivalents (ATE)	0.09 mg (ATE)	1
Vitamin E International Units (IU)	0.13 IU	
Vitamin E mg	0.09 mg	
Vitamin K	0.00 mcg	0
<b>Minerals</b>		
<b>nutrient</b>	<b>amount</b>	<b>DRI/DV (%)</b>
Boron	-- mcg	
Calcium	351.00 mg	35
Chloride	3.60 mg	
Chromium	-- mcg	--
Copper	1.47 mg	163
Fluoride	-- mg	--
Iodine	-- mcg	--
Iron	5.24 mg	29
Magnesium	126.36 mg	32
Manganese	0.89 mg	45
Molybdenum	10.62 mcg	24
Phosphorus	226.44 mg	32
Potassium	168.48 mg	5
Selenium	12.38 mcg	23
Sodium	3.96 mg	0
Zinc	2.79 mg	25
<b>INDIVIDUAL FATTY ACIDS</b>		

<b>nutrient</b>	<b>amount</b>	<b>DRI/DV (%)</b>
Omega-3 Fatty Acids	0.14 g	6
Omega-6 Fatty Acids	7.69 g	
<b>Monounsaturated Fats</b>		
14:1 Myristoleic	-- g	
15:1 Pentadecenoic	-- g	
16:1 Palmitol	0.05 g	
17:1 Heptadecenoic	-- g	
18:1 Oleic	6.67 g	
20:1 Eicosenoic	0.03 g	
22:1 Erucic	-- g	
24:1 Nervonic	-- g	
<b>Polyunsaturated Fatty Acids</b>		
18:2 Linoleic	7.69 g	
18:2 Conjugated Linoleic (CLA)	-- g	
18:3 Linolenic	0.14 g	
18:4 Stearidonic	-- g	
20:3 Eicosatrienoic	-- g	
20:4 Arachidonic	-- g	
20:5 Eicosapentaenoic (EPA)	-- g	
22:5 Docosapentaenoic (DPA)	-- g	
22:6 Docosahexaenoic (DHA)	-- g	
<b>Saturated Fatty Acids</b>		
4:0 Butyric	-- g	
6:0 Caproic	-- g	
8:0 Caprylic	-- g	
10:0 Capric	-- g	
12:0 Lauric	-- g	
14:0 Myristic	0.04 g	
15:0 Pentadecanoic	-- g	

16:0 Palmitic	1.60 g	
17:0 Margaric	-- g	
18:0 Stearic	0.75 g	
20:0 Arachidic	-- g	
22:0 Behenate	-- g	
24:0 Lignoceric	-- g	
<b>INDIVIDUAL AMINO ACIDS</b>		
<b>nutrient</b>	<b>amount</b>	<b>DRI/DV (%)</b>
Alanine	0.29 g	
Arginine	0.84 g	
Aspartic Acid	0.52 g	
Cysteine	0.11 g	
Glutamic Acid	1.26 g	
Glycine	0.39 g	
Histidine	0.17 g	
Isoleucine	0.24 g	
Leucine	0.43 g	
Lysine	0.18 g	
Methionine	0.19 g	
Phenylalanine	0.30 g	
Proline	0.26 g	
Serine	0.31 g	
Threonine	0.23 g	
Tryptophan	0.12 g	
Tyrosine	0.24 g	
Valine	0.31 g	
<b>OTHER COMPONENTS</b>		
<b>nutrient</b>	<b>amount</b>	<b>DRI/DV (%)</b>
Ash	1.60 g	
Organic Acids (Total)	-- g	

Acetic Acid	-- g
Citric Acid	-- g
Lactic Acid	-- g
Malic Acid	-- g
Taurine	-- g
Sugar Alcohols (Total)	-- g
Glycerol	-- g
Inositol	-- g
Mannitol	-- g
Sorbitol	-- g
Xylitol	-- g
Artificial Sweeteners (Total)	-- mg
Aspartame	-- mg
Saccharin	-- mg
Alcohol	0.00 g
Caffeine	0.00 mg

## Note:

The nutrient profiles provided in this website are derived from The Food Processor, Version 10.12.0, ESHA Research, Salem, Oregon, USA. Among the 50,000+ food items in the master database and 163 nutritional components per item, specific nutrient values were frequently missing from any particular food item. We chose the designation "--" to represent those nutrients for which no value was included in this version of the database.

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