

Nutritional Value of Sesame

Prachi Patel, Amit Tomar, A.K. Mishra, S.P. Singh, H.H. Khan and R.P. Singh

Krishi Vigyan Kendra, Gajraula, Amroha
(Directorate of Extension)

Sardar Vallabhbhai Patel University of Agriculture & Technology, Meerut-250110, U.P.,
India

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Introduction:

Sesame seeds are tiny, oil-rich seeds that grow in pods on the *Sesamum indicum* plant. Un-hulled seeds have the outer, edible husk intact, while hulled seeds come without the husk. The hull gives the seeds a golden-brown hue. Hulled seeds have an off-white color but turn brown when roasted. Sesame seeds have many potential health benefits and have been used in folk medicine for thousands of years. They may protect against heart disease, diabetes, and arthritis. However, you may need to eat significant amounts—a small handful per day—to gain health benefits.

Health Benefits of Sesame Seeds:

In addition to their culinary uses, these seeds possess nutritive, preventive, and curative properties, which render them usable in traditional medicines. Sesame seed oil is a rich source of phytonutrients such as omega-6 fatty acids, flavonoid phenolic antioxidants, vitamins and dietary fiber. These seeds, thus, offer a variety of benefits. The health benefits of sesame seeds include the following:

- 1. High Protein Vegetarian Diet:** Sesame seeds are a good source of dietary protein, with high-quality amino acids making up 20% of the seed. Thus, they are perfect to form part of a high-protein vegetarian diet. Just sprinkle them over your salads, veggies, and noodles.
- 2. Prevent Diabetes:** Sesame seeds contain magnesium and other nutrients that have been shown to combat diabetes. The usage of sesame seed oil as the sole edible oil has been found to be effective in lowering the blood pressure and plasma glucose in hypersensitive diabetics.

3. **Cure Anemia:** Sesame seeds, particularly the black ones, are rich in iron. Hence, they are highly recommended for those suffering from anemia and weakness.
4. **Cardiovascular Health:** Sesame seed oil prevents atherosclerotic lesions and hence, is beneficial for the heart health. They contain an antioxidant and anti-inflammatory compound called sesamol that also exhibits anti-atherogenic properties, thus improving the cardiovascular health. Sesame seeds are high in the monounsaturated fatty acid, oleic acid, which helps in lowering the bad cholesterol and increasing the good cholesterol in the body. This prevents the risk of coronary artery disease and strokes.
5. **Anti-Cancer Properties:** *Sesame* seeds contain magnesium which has anti-cancer properties. They also contain an anti-cancer compound called phytate. Sesame seeds have proven to be effective in reducing the risk of colorectal tumors, thus preventing colorectal cancer.
6. **Digestive Health:** *Sesame* seeds support a healthy digestive system and colon as they are rich in fiber. This high fiber content helps in smooth functioning of the intestine, thus facilitating waste disposal and relieving constipation.
7. **Relief from Rheumatoid Arthritis:** *Sesame* seeds contain copper, a mineral that is vital for antioxidant enzyme systems, thus reducing the pain and swelling associated with arthritis. Besides, this mineral provides strength to the blood vessels, bones, and joints.
8. **Respiratory Health:** *Magnesium* contained in sesame seeds prevents asthma and other respiratory disorders by preventing airway spasms.
9. **Protection from Radiation Damage:** Sesamol, found in sesame seeds and sesame oil, has been found to prevent the DNA from being damaged by radiation. It also prevents damage to the intestines and the spleen.
10. **Bone Health:** *Sesame* seeds contain zinc that boosts the bone mineral density and the bone health. The deficiency of this mineral can cause osteoporosis in the hip and spine area. Sesame seeds are a great source of calcium, a trace mineral that is vital to bone health (9).
11. **Oral Health:** *Sesame* seeds and sesame seed oil help in boosting the oral health by removing dental plaque and whitening your teeth. Oil pulling, i.e. swishing your

sesame seed oil in your mouth, can reduce the amount of streptococcus mutants in both the teeth and the mouth saliva and boost the overall health.

12. Nullify The Effects Of Alcohol: Sesame seeds help the liver to decompose the harmful effects of alcohol as well as other substances that generate poisoning in the body.

13. Treatment Of Anxiety: *Sesame* seeds contain several nutrients that have stress-relieving properties. Minerals like magnesium and calcium act as an antispasmodic by regulating the muscle function i.e. contraction and relaxation. Thiamin (vitamin B₁) has calming properties that aid in proper nerve functioning. The deficiency of this vitamin can lead to muscle spasms, moodiness, and depression. Tryptophan is an essential amino acid that is involved in the production of serotonin, a neurotransmitter that reduces pain and regulates the sleep pattern and mood. The inadequacy of serotonin production and transmission in the brain can result in anxiety and depression.

14. Lower Cholesterol: *Black* sesame seeds benefit in lowering the cholesterol levels. They contain two substances called sesamin and sesamolin, which belong to a group of fibers called lignans. Lignans have a cholesterol lowering effect as they are rich in dietary fiber. *Black* sesame seeds also contain plant compounds called phytosterols which have a structure similar to that of cholesterol. Their consumption not only decreases the blood cholesterol levels, but also reduces the risk of developing certain types of cancer. Sesame seeds have the highest phytosterol content of all seeds and nuts.

15. Eye Health: *According* to traditional Chinese medicine, there is a strong relationship between the internal organs and external parts such as the eyes and the liver. The liver stores blood and since a certain branch of the liver channel goes to the eyes, the liver can also send blood to the eyes to support their functioning. *Black* sesame seeds are beneficial for the liver as they increase the liver blood, thereby nourishing the eyes. Their therapeutic effects help in treating blurred vision and tired, dry eyes.

16. Nourish The Organs: *Black* sesame seeds have been found to increase energy, nourish the brain and slow down aging. The regular consumption of *black* sesame

seeds can help reduce the symptoms of backache, painful or tight and stiff joints, and weakness in the joints.

17. Blood Pressure Reduction: *Nowadays* hypertension is a common health problem among women and men from various age groups. Studies have indicated that using this oil can help reduce hypertension. The magnesium in this oil helps reduce blood pressure. The extensive range of minerals and vitamins in this oil help boost your immunity. Its antioxidants and these nutrients help the body fight cancer causing elements in a better way. The phytates present in these seeds are known for their cancer preventing properties too.

18. Anti-Inflammatory Effects: *Using* black sesame seed oil, either topically or by consumption, can help reduce ailments and conditions caused by inflammation. The high amount of copper in this oil helps the users cope better with inflammation caused conditions affecting the body joints.

19. Healing Properties: *Sesame* seed oil is a natural anti-inflammatory agent and has excellent healing properties. Its antibacterial properties help to get rid of skin pathogens like staphylococcus and streptococcus as well as common skin fungi such as athlete's foot fungus. Sesame seed oil mixed with warm water can control vaginal yeast infections.

20. Treatment of Sunburns: When used after the exposure to the wind or the sun, sesame seed oil can treat sunburns. It prevents the harmful ultraviolet rays of the sun from damaging your skin, thus preventing the appearance of wrinkles and pigmentation. The regular usage of this oil significantly reduces the risk of skin cancer and prevents the skin from the effects of chlorine in swimming pool water (16).

21. Skin Detoxifier: *The* antioxidants contained in sesame seed oil help in detoxifying your skin (17). When applied on the skin, the molecules of this oil attract oil-soluble toxins that can be washed away with hot water and soap. Mix half a cup of sesame seed oil with half a cup of apple cider vinegar and a quarter cup of water. This should be applied every night after splashing your face with water.

22. Suitable For Babies: *Baby* skin, particularly the area covered with diapers, often gets rashes due to the acidity of body wastes. Sesame seed oil protects their tender

skin against these rashes (18). Applying it to the nose and ears provides protection against common skin pathogens. It also combats dryness of skin.

- 23. Glowing Skin:** *Sesame* seed oil can provide you with glowing skin. It maintains skin flexibility by keeping it soft and supple, and heals the areas of mild cuts, scrapes and abrasions. It helps tighten the facial skin, particularly the area around the nose, and controls the enlargement of pores. It also controls eruptions and neutralizes the poisons which develop on the surface and in the pores.
- 24. Treatment of Cracked Heels:** *If* you have cracked heels or sore feet, you can apply sesame seed oil every night before going to bed and cover your feet with cotton socks. This should be done for a couple of days to get soft and supple feet.
- 25. Encourage Hair Growth:** *Sesame* seeds contain essential fatty acids such as omega-3, omega-6 and omega-9 which promote hair growth. Sesame seed oil stimulates hair growth by nourishing, conditioning, and promoting a healthy scalp. The regular massage with warm sesame oil penetrates your scalp, thus increasing the blood circulation. It is comparable to a liquid vitamin that feeds your hair roots and shafts (20).
- 26. Prevention of Scalp Problems:** *Sesame* seeds are rich in replenishing vitamins, minerals and nutrients that are vital for a healthy scalp. Massaging your scalp with sesame seed oil combats dryness, flakiness and clogged pores that cause hair thinning and hair loss. Besides, its antifungal, antibacterial and anti-inflammatory properties help in treating scalp infections and dandruff and soothing an irritated scalp.
- 27. Natural Sunscreen:** *Sesame* seed oil acts as a natural sunscreen for your hair by protecting it from the damaging effects of the sun's ultraviolet rays and pollution.
- 28. Deep Conditioning:** *Sesame* seed oil acts as a deep conditioning treatment for dry, damaged hair, split ends or chemically treated hair. It restores the lost moisture and strengthens the hair shaft, enabling dull and brittle hair to regain its shine, bounce, elasticity and softness.
- 29. Hair Darkening Qualities:** *Sesame* seed oil is known for its hair darkening qualities that make it effective for people suffering from premature graying of hair. It can be used with carrier oils like olive or almond oil to reap the maximum benefits.

Sesame Seeds Nutrition Facts:

All varieties of sesame seeds are extremely nutritious. They have a high oil content of 40% to 60%. They are a rich source of minerals like copper and manganese. They also contain magnesium, calcium, phosphorus, iron, selenium, vitamin B1 and zinc, and are rich in dietary fiber and monounsaturated fats. The nutritional value of sesame seeds is explained below:

Table-1: Sesame seeds (sesamum indicum), whole, dried, nutritional value per 100 g.

Principle	Nutrient value	Percentage of RDA
Energy	573 Kcal	29%
Carbohydrates	23.45 g	18%
Protein	17.73 g	32%
Total Fat	49.67 g	166%
Cholesterol	0 mg	0%
Dietary Fiber	11.8 g	31%
Vitamins		
Folates	97 µg	25%
Niacin	4.515 mg	28%
Pantothenic acid	0.050 mg	1%
Pyridoxine	0.790 mg	61%
Riboflavin	0.247 mg	19%
Thiamin	0.791 mg	66%
Vitamin A	9 IU	<1%
Vitamin C	0	0%
Vitamin E	0.25 mg	2%
Electrolytes		
Sodium	11 mg	1%
Potassium	468 mg	10%
Minerals		
Calcium	975 mg	98%
Copper	4.082 mg	453%
Iron	14.55 mg	182%
Magnesium	351 mg	88%
Manganese	2.460 mg	107%
Phosphorus	629 mg	90%
Selenium	34.4 µg	62.5%
Zinc	7.75 mg	70%
Phyto-nutrients		
Carotene-β	5 µg	—

Crypto-xanthin-β	0 μg	—
Lutein-zeaxanthin	0 μg	—

(Source: USDA national nutrient data base)

Conclusion:

The power of the sesame seed dates back thousands of years ago when it was used by the Egyptians as a medicine, while the women of ancient Babylon mixed honey with sesame seeds to prolong youth and beauty. While we can't guarantee sesame seeds will keep you looking younger, it can actually be really good for your skin and can often be found in many skin care products. Healthy skin is just one of the many benefits of adding sesame seeds to your diet. Below we take a look at the top benefits to adding this seed to your diet. There are many ways to start enjoying sesame seeds in your diet but perhaps the most popular is to simply sprinkle it on top of your favourite meals. Sprinkle them over a salad and enjoy the nutty taste and added texture of the seeds with your meal. As well as adding sesame seeds to your favourite meals, using them in baking in the form of breads and cakes is becoming increasingly popular. If you would like to start enjoying the benefits of sesame seeds in bread be sure to try your hand at our multi seed bread recipe which uses Linwoods milled flaxseed, sunflower, pumpkin & sesame seeds and goji berries.