

Nutritive Importance of *Moringa oleifera*

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EDITORIAL

Moringa oleifera, native to India, grows in the tropical and subtropical regions of the world. It is commonly known as 'drumstick tree' or 'horseradish tree'. *Moringa oleifera* is a multi-purpose herbal plant used as human food and an alternative for medicinal purposes worldwide. It has been identified by researchers as a plant with numerous health benefits including nutritional and medicinal advantages. *Moringa oleifera* contains essential amino acids, carotenoids in leaves, and components with nutraceutical properties, supporting the idea of using this plant as a nutritional supplement or constituent in food preparation. Some nutritional evaluation has been carried out in leaves and stem. An important factor that accounts for the medicinal uses of *Moringa oleifera* is its very wide range of vital antioxidants, antibiotics and nutrients including vitamins and minerals. Almost all parts from *Moringa* can be used as a source for nutrition with other useful values.

Moringa oleifera is a plant that has been praised for its health benefits for thousands of years. It is very rich in healthy antioxidants and bioactive plant compounds. So far, scientists have only investigated a fraction of the many reputed health benefits. *M. oleifera* is very important for its medicinal value. Traditionally, the leaves, fruits, flowers, and immature pods of this tree are edible; Various parts of this plant such as the leaves, roots, seed, bark, fruit, flowers and immature pods act as cardiac and circulatory stimulants, possess antitumor, antipyretic, antiepileptic, anti-inflammatory, antiulcer, antispasmodic, diuretic, antihypertensive, cholesterol lowering, antioxidant, antidiabetic, hepatoprotective, antibacterial and antifungal activities, and are being employed for the treatment of different ailments in the indigenous system of medicine, particularly in South Asia. The beneficial functions of *M. oleifera* are strongly associated with its phytochemicals such as flavonoids or isothiocyanates with bioactivity.

Moringa contains many healthful compounds such as:

- Vitamin A
- Vitamin B1 (Thiamine)
- B2 (Riboflavin)

- B3 (Niacin), B-6
- Folate and Ascorbic Acid (Vitamin C)
- Calcium
- Potassium
- Iron
- Magnesium
- Phosphorus
- Zinc

It is also extremely low in fats and contains no harmful cholesterol.

M. oleifera is used as an alternative to imported food supplements to treat and combat malnutrition, especially among infants and nursing mothers, by virtue of its chemical constituents. A recent study has shown that dried *M. oleifera* leaves contain lead at very high values of 352.0mg/L. Therefore, it is very important to identify the mineral composition of *M. oleifera* leaves that are widely consumed by humans and animals. *Moringa* has lot of minerals that are essential for growth and development among which, calcium is considered as one of the important minerals for human growth. A good dietary intake of zinc is essential for proper growth of sperm cells and is also necessary for the synthesis of DNA and RNA. *M. oleifera* leaves show around 25.5-31.03 mg of zinc/kg, which is the daily requirement of zinc in the diet.

Moringa can also be preserved for a long time without loss of nutrients. Drying or freezing can be done to store the leaves, drying can be done using economical household appliance like stove to retain a continuous supply of nutrients in the leaves. Preservation by dehydration improves the shelf life of *Moringa* without change in nutritional value. An overdose of *Moringa* may cause high accumulation of iron. High iron can cause gastrointestinal distress and hemochromatosis. Hence, a daily dose of 70 g of *Moringa* is suggested to be good and prevents over accumulation of nutrients.

More studies are needed to corroborate the primary mechanisms of *Moringa*. The effect of environmental factors affecting the nutrient levels of leaves and other parts of *M. oleifera* grown across the globe require further analysis.

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