

Exploring Knowledge about Medicinal Uses of Moringa

Arti Balshiram Gaykhe, Apeksha Dalvi, Madhuri Vilas Neharkar,
Ashwini Sandip Gadhawe, Nilam Vitthal Ichake
Samarth Institute of Pharmacy, Belhe, Maharashtra, India

Abstract: *Moringa oleifera*, originating from India, thrives in tropical and subtropical areas globally. It's often referred to as the 'drumstick tree' or 'horseradish tree.' This resilient plant can endure harsh droughts and mild frost, leading to its widespread cultivation worldwide. Its exceptional nutritional content makes every part of the tree valuable for nutritional uses.

The leaves contain a wealth of minerals, vitamins, and vital phytochemicals. Extracts from these leaves are applied in treating malnutrition and enhancing breast milk production in nursing mothers. They show promise as antioxidants, potential agents against cancer, inflammation, diabetes, and microbes. The seeds of *M. oleifera* serve as a natural coagulant, extensively utilized in water treatment. Scientific research sheds light on moringa's potential in diabetes and cancer treatment and its integration into various commercial products. This review delves into the diverse applications of moringa, spanning medicinal uses, cultivation, nutritional value, commercial aspects, and significant pharmacological properties of this remarkable tree.

In traditional medicine, various parts of the *Moringa oleifera* tree, such as leaves, seeds, bark, roots, sap, and flowers, find wide usage. Leaves and immature seed pods are incorporated into human diets as food products. Among these parts, leaf extracts demonstrate the highest antioxidant activity. Safety studies conducted in animals with aqueous leaf extracts indicate a high level of safety, with no reported adverse effects in human studies. There have been five human studies utilizing powdered whole leaf preparations of *M. oleifera*, showcasing anti-hyperglycemic (antidiabetic) and anti-dyslipidemic activities. These effects have been confirmed in animal studies using extracts and leaf powders. An increasing number of published studies highlight that aqueous, hydroalcoholic, or alcohol extracts of *M. oleifera* leaves possess various biological activities, including antioxidants, tissue protection (liver, kidneys, heart, testes, and lungs), pain relief, ulcer prevention, blood pressure regulation, radiation protection, and immune modulation.

A diverse range of polyphenols, phenolic acids, flavonoids, glucosinolates, and potentially alkaloids are thought to contribute to these effects. The standardization of products remains a challenge. Nevertheless, the outcomes of published studies involving *M. oleifera* have shown significant promise. Conducting further human studies using standardized extracts is strongly recommended to enhance understanding and reliability. © 2015 The Authors Phytotherapy Research Published by John Wiley & Sons Ltd

Keywords: *Moringa oleifera*; Miracle Tree ; Antidiabetic ; Anticancer ;Coagulant

REFERENCES

<https://www.sciencedirect.com/science/article/pii/S2213453016300362>

- [1]. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6266645/>
- [2]. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9916933/>
- [3]. Volume 2021 | Article ID 6627265 | <https://doi.org/10.1155/2021/6627265> Moringa oleifera is a Prominent Source of Nutrients with Potential Health Benefits, Zahidul Islam, I.S. M. Rashadul Islam, I Faruk Hossen, I Kazi Mahtab-ul-Islam, I Md. Rakibul Hasan, and Rezaul Karim .
- [4]. Waterman, C., Fahey, J.W. and Olson, M. (2021). A review of scientific results on uses of moringa-based leaf products. *Acta Hort.* 1306, 121-134 , DOI: 10.17660/ActaHortic.2021.1306.15
- [5]. *Pharmacognosy Journal*, 2017, 9, 1, 1-7.
- [6]. DOI:10.5530/pj.2017.1.1, Published: December 2016

- [7]. <https://minimalistbaker.com/best-moringa-powders-review/>
- [8]. Year: 2011 | Volume: 3 | Issue: 4 | Page No.: 317-328
- [9]. DOI: 10.3923/ajbkr.2011.317.328, A Review on Horse Radish Tree (Moringa oleifera): A Multipurpose Tree with High Economic and Commercial Importance. +447389646377
- [10]. A Review of Moringa Oleifera Lam Seed Oil Prospects in Personal Care Formulations. AA Warra*
- [11]. Department of Biochemistry, Kebbi State University of Science and Technology, P.M.B. 1144, Aliero, Nigeria..
- [12]. Research & Reviews: Journal of Pharmaceutics and Nanotechnology <http://www.ijaresm.com/a-review-moringa-oleifera-and-its-medicinal-uses>
- [13]. <https://oamjms.eu/index.php/mjms/article/view/8894>
- [14]. Subrata Kumar Biswas*, Anusua Chowdhury, Joysree Das , Ajoy Roy and S.M Zahid Hosen, Authors Address: Assistant Professor, Department of Pharmacy (BGC Biddyanagar), BGC Trust University Bangladesh, BGC Tower (Fazal Tower), 1675 O.R. Nizam Road, Chittagong-4000, Bangladesh.
- [15]. <https://minimalistbaker.com/best-moringa-powders-review/>