

Curry leaf and its health benefits

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Introduction

The curry tree, *Murraya koenigii* or *Bergera koenigii*, is a tropical and sub-tropical tree in the family Rutaceae (the rue family, which includes rue, citrus, and satinwood), native to Asia. (Louis St, 2019). The plant is also sometimes called sweet neem, though *M. koenigii* is in a different family to neem, *Azadirachta indica*, which is in the related family Meliaceae.

(en.m.wikipedia.org/wiki/curry_leaf)

Origin

Curry Leaf (*Murraya koenigii*) is native to South Asia famous among various cuisines for its flavor and aroma. (Bhusal D et al, 2021)

Size and Shape

It is a small tree, growing 4.6 metres (13 – 20 ft) tall, with a trunk up to 40 cm (16 in) in diameter. The aromatic leaves are pinnate, with 11 – 21 leaflets, each leaflet 2 – 4 cm (3/4 – 1+1/2 in) long and 1 – 2 cm (1/2 – 3/4 in) broad. The plant produces small white flowers which can self-pollinate to produce small shiny-black drupes containing a single, large viable seed. The berry pulp is edible, with a sweet flavor. (Parmar C et al, 1982)

Murraya koenigii may be utilized to alleviate

the symptoms of a variety of diseases as evident from the pre-clinical data. (Reddy B.M et al, 2018).



Medicinal Importance

Murraya koenigii (Curry Leaves/Kadhi Patta/Mitha Nimba/Giri Nimba) is one such medicinally important herb which is widely used as spice, condiments and also used to treat various diseases in India. It is a staple in Indian dishes and is well known for its subtle flavor and used confidently in daily cooking

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Curry leaves contain many important ingredients like carbohydrates, proteins, fibres, calcium, phosphorus, iron, magnesium, copper, minerals and vitamins like nicotinic acid, vitamin B, C, A and E, antioxidants, plant sterols, glycosides and flavonoids. The oil is used externally for bruises, eruption, in soap and perfume industry (Prajapati et al., 2003).

Herbal drugs being relatively low cost with minimal side effects are used extensively in treating various diseases since ages. Curry Leaf occupies a huge space in traditional Ayurveda medicine. Small deciduous shrub with every part of medicinal properties and nutrition makes it a potential future industrial crop. Literatures suggest the antibacterial, antifungal, antiprotozoal activity of *Murraya koenigii* especially in leaf, stem, bark, and oil. (Bhusal D et al, 2021)

Murraya koenigii one of the most common used herbs in various dishes as flavouring agent, besides its flavor it possesses numerous medicinal properties which makes it unique from other herbs. (Verma N et al, 2022).

External applications of the leaves have been beneficial in bruises, eruption, and to treat bites of poisonous animals. The leaves being bitter, acrid and cooling have been shown to have cooling, anthelmintic and analgesic action. It is known to cure piles, reduce body heat, thirst, inflammation, and

itching. The branches of *Murraya koenigii* are used to strengthen gums, popularly used to clean teeth as dat. (Gupta et al., 2011). It is traditionally used as a whole or in parts as antiemetics, antidiarrheal, febrifuge, blood purifier, antifungal, depressant, anti-inflammatory, body aches, for kidney pain and vomiting (Rana et al., 2004; Kumar et al., 1999; Purohit et al., 2009; Iyer et al., 1990; Nutan et al., 1998).

Due to richness in polyphenols, terpenes saponins its mouth wash can reduce the viral load of SARs-COV2 (Math et al 2020)

It has been revealed hepatoprotective against ethanol induced hepatotoxicity. Pre treatment with curry leaves extract may replenish Curry leaves extract acts as immunomodulatory agents acts by stimulating humoral immunity and phagocytic function (Shah et al (2008).

Pre treatment with curry leaves extract may replenish cardiomyocytes and promote the defence against dox-orubicin induced cardiotoxicity (Jaysinghe et al 2012).

Root juice consumption gives renal pain relief (Nishan Subramaniam 2015).

Possesses significant hypoglycemic potential in STZ- induced diabetic in rats. It's more effective than gibenclamide a known antidiabetic drug. Mahanimbine has been observed to decrease the blood sugar in mice. (Arul Selvan et al 2006)

Ether extract from curry leaves reported to decrease the cancer cells in mice (Ghosh et. al 2012).

Its ethanolic extract has been found to have the highest antioxidant and free radical scavenging activity (Ningappa et. al 2008). The importance of this beneficial plant should be emphasized and the bioactive components of *Murraya koenigii* should be analyzed further and, an extensive research and development work should be undertaken on the plant and its products for better economic and therapeutic utilisation. (Reddy B.M et al,2018).

References

1. Arulselvan P, Subramanian S. Effect of *Murraya koenigii* Leaf extract on carbohydrate metabolism studied in streptozotocin induced diabetic rats. *Int J Biol chem.*, 2007
2. Dubey Supriya Umesh Kumar, A Review Paper on Benefits of *Murraya Koenigii* Plant in Covid-19 Pandemic, *International Research Journal of Plant Science*, (2022) Volume 13, Issue 6
3. Bhusal Dipika & Thakur Dharendra Pratap, CURRY LEAF: A REVIEW, Institute of Agriculture and Animal Science, Paklihawa Campus, Tribhuvan University, Nepal, *Reviews in Food and Agriculture (RFNA)* NA DOI: <http://doi.org/10.26480/rfna.01.2021.36.38>, 2021
4. Ghosh, D., Firdaus, S.B., Mitra, E., Dey, M., and Bandyopadhyay, D. (2012) Protective effect of aqueous leaf extract of *Murraya koenigii* against leaf induced oxidative stress in rat liver, heart and kidney : A dose response study. *Asian journal of Pharmaceutical and Clinic research*, 5 (SIPPL.4)
5. Gupta P, Nahata A, Dixit VK. An update on *Murraya koenigii* spreng: A multifunctional Ayurvedic herb. *Zhong Xi Yi Jie He Xue Bao Journal of Chinese Integrative Medicine*. 2011
6. Iyer UM, Mani UV. Studies on the Effect of Curry Leave Supplementation on Lipid Profile, Glycated Proteins and Amino Acids in NIDDM Patients. *Plant Foods Human Nutrition*. 1990
7. Jaysinghe A.N. Sandamali, Ruwani P., Hewawasam, kamani A. P.W. Jayatilaka, Lakmini K.B. Mudduwa. Cardioprotective Potential of *Murraya koenigii* (L.) sperm Leaf extract against Doxorubicin Induced cardiotoxicity in Rats. Research article / open Access. <https://doi.org/10.1155/2020/6023737/vol-2020>.
8. Kapoor Mayuri, *Plants Collection 2023*, Lucknow, U.P., India
9. Kumar VS, Sharma A, Tiwari R, Kumar S. *Murraya koenigii* (curry leaf): a review. *Journal of Medical and Aromatic Plant Sciences*, 1999

10. Math M.V., Kattinaw Y.R. ----- Br J. oral maxillofac. Surg. 2021 May; 59 (4), doi : 10.1016/J.bjoms.2020.11.005
11. Missouri Botanical Garden, St. Louis, MO, USA. 2019. Retrieved 13 August 2019
12. Ningappa, M.B., Dinesha, R., and Srinivas, L (2008). Antioxidant and free radical scavenging activities of polyphenol-riched curry leaf (*Murraya koenigii* L.) extracts. Food chemistry, 106(2)
13. [https://doi.org/https://doi.org/10.1016/j.foodchem, 2007.06.057](https://doi.org/10.1016/j.foodchem.2007.06.057)
14. Nishan, M., and Subramaniam, P. (2015). *Murraya koenigii* (curry leaves). a review on its potential, international journal of pharm Tech Research, 7 (4)
15. Nutan MTH, Hasan CM, Rashid MA, Bismurrayafoline E: A New Dimeric Carbazole Alkaloid Form *Murraya koenigii*. Fitoterapia. 1999; 70(2)
16. Patil Rupali Arun, Mukund Langade Padmaya Babarao Dighade Pramod and Hiray Ashok Yogesh; 2012. Antinociceptive acute and chronic administration of *Murraya koenigii* L. Leaves in experimental animal models, Indian J Pharmacol. 44 (1)
17. Parmar, C. and M. K. Kaushal. 1982. *Murraya koenigii*. pages 45–48. In: Wild Fruits. Kalyani Publishers, New Delhi, India. In: NewCROP, New Crop Resource Online Program, Center for New Crops and Plant Products, Purdue University. 1982. Retrieved 14 August 2019
18. Prajapati ND, Purohit SS, Sharma AK, Kumar T. A Handbook of Medicinal Plants. Jodhpur: Agrobios, 2003
19. Purohit SS, Sharma AK, Prajapati ND, Kumar T. A handbook of medicinal plants: a complete source book. Edition 2. Jodhpur: Agrobios (India). 2009
20. Rana VS, Juyal JP, Rashmi, Blazquez MA. Chemical constituents of the volatile oil of *Murraya koenigii* leaves. International Journal of Aromatherapy, 2004
21. Reddy B.Maheswari, Dhanpal C K, Lakshmi BVS, A review on curry leaves (*Murraya koenigii*): versatile multi-potential medicinal plant, International Journal of Advances in Pharmacy Medicine and Bioallied Sciences, An International, Peer-reviewed, Indexed, Open Access, Multi-disciplinary Journal, www.biomedjournal.com, 2018
22. Shah, Abhishek, wakade S.Alok, Juvevar R Archana, Immunomodulatory activity of methanolic extract of *Murraya koenigii* (L) Spreng Leaves Indian Journal of Experimental Biology Vol.46, July 2008
23. Singh Suman, Omre P K, Mohan Sandhya Madan, CURRY LEAVES (*Murraya koenigii* Linn. Sprengal)- A MIRACLE PLANT, Indian J.Sci.Res.4 (1),2014

24. Verma Nidhi, Kumari Dharmshila Dr., An Updated review on *Murraya koenigii* (Curry Leaves) : A Miraculous Plant with Several Speciality, INTERNATIONAL JOURNAL OF RESEARCH CULTURE SOCIETY Monthly Peer-Reviewed, Refereed, Indexed Journal Volume - 06, Issue - 01, JAN - 2022
25. (en.m.wikipedia.org/wiki/curry_leaf)
26. <https://medium.com/@mayuri.kapur88/curry-leaf-and-its-health-benefits-fa0d4977581f>

