

## **A REVIEW ON MEDICINAL PROPERTIES OF *NEEM* (*Azadirachta Indica* A. JUSS.)**

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Article Received on  
08 August 2022,

Revised on 29 August 2022,  
Accepted on 19 Sept. 2022

DOI: 10.20959/wjpr202213-25685

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### **ABSTRACT**

Neem (*Azadirachta indica*) is one of important medicinal plant of the family Meliaceae. Being one among the constituents of panchtikta ghrit, punarnavadi kwath etc, very widely used in Ayurveda for the treatment of various disorders. it is highly valued from time immemorial because of its vast medicinal properties. it is extensively used as antioxidant, eye disorder dental problems, anti microbial, immunostimulatory, anti ulcerative, wound healing activity.

**KEYWORDS:** panchtikta ghrit, punarnavadi kwath.

### **INTRODUCTION**

Through the improvement of antioxidant activity, suppression of bacterial growth, and modification of genetic pathways, plant products or natural products demonstrate a vital function in disease prevention and therapy. Due to their low side effects and inexpensive qualities, several plants are still being eagerly used as medicines in the management of diseases. It is widely acknowledged that allopathic medicines cost a lot of money and have detrimental effects on healthy tissues and on various biological activities. Growing interest has been given to medicinal plants in the search for new drugs to treat diverse human illnesses.

Due to its several therapeutic benefits, *Azadirachta indica*, commonly known as *Neem*, has gained prominence on a global scale recently. *Neem* has long been a staple of ayurvedic therapy. *Neem* creates a wide range of chemically varied and structurally complex biologically active compounds. From various *neem* parts, more than 140 chemicals have been isolated. All parts of the *nee Pareek m* tree, including the leaves, blossoms, seeds, fruits,

roots, and bark, have historically been used to cure fever, inflammation, infections, skin ailments, and dental problems.

## **BOTANICAL DESCRIPTION OF *Neem*(*Azadirachta Indica* )**

### **MORPHOLOGY**

The neem tree grows to a height of 15 to 20 metres and rarely 35-40m, has a broad, rounded crown that can measure up to 20 to 25 metres in diameter. Although it is primarily evergreen, it occasionally loses leaves in the dry season. Neem is an amycorrhizal dependent plant with a deep taproot. In older trees, the bark turns grey, becomes fissured, and flakes. In humid areas, aged trees exude a sticky foetid sap. The branches reach out and are many. At maturity, the leaves are alternate, petiolated, clustered at the ends of the branches, unevenly pinnate, glabrous, and dark glossy green in size, with 10–20 leaflets. The leaflets are slightly denticulate, sickle-shaped, and 5–10 cm long by 1.2–4 cm wide. The blooms grow in enormous clusters and are abundant, fragrant, and white (up to 30cm long). Neem fruit are smooth, 1-2 cm long drupes that are green when unripe and have a milky white juice that turns yellow to brown as it ages. They have a thin epicarp, a mushy mesocarp that is mucous-like, and a firm endocarp. Variable numbers of ovoid (1-2 cm) oil seeds are present in them.

### **Review of Literature**

#### **Taxonomical classification**

Domain-eukaryotes

kingdom-plantae

phylum-spermatophyta

subphylum-angiospermae

class-dicotyledonae

Family-Meliaceae

Genus-Azadirachta

Species- *A.indica*

#### **Scientific name**

*Azadirachta indica* A.juss.

#### **Preffered common name**

*Neem* tree

**English name**

Indian lilac, margosa tree

**Ayurvedic description of *Neem*(*Azadirachta indica*)<sup>[5]</sup>**

*Paraya*(synonym)-*pichumard*, *pichumand*, *tiktka*, *arishta*, *paribhadra*, *hinguniryasa*.

**Generally all parts of *neem* have following health benefits**

*Sheeta*- *Nimba* gives the body cooling properties.

*Laghu* - helps to digest and absorbs quite rapidly and easily.

*Grahi* -facilitates moisture absorption from intestinal tract. Eliminates moisture from wounds and ulcers and dries and cleans them.

*Katu* - pungent flavour, which is converted to a pungent flavour after digestion.

*Agnikrut* -enhances the digestive process.

*Vatakrut*-elevates *Vata*.

*Ahrudya* – not feel like eating because the taste is not good.

*Shramahara* - reduces fatigue.

*Tikta* -has bitter taste

*Trishnara*-relieves excessive thirst, Since it decreases *Pitta*, it is useful in fever and associated thirst.

*Kasahara* - Helps to relieve cough, It is very useful in infective respiratory problems. It has anti-microbial properties.

*Jwarahara* Useful in fever, due to its potent anti microbial phyto-chemicals.

*Aruchihara* - Helps to relieve anorexia.

*Krumihara* - Actual translation is relieves worms. *Nimba* is useful in intestinal worms, infested wounds, and as an anti-microbial agent.

*Vranahara* - Helps to cleanse and heal wounds quickly.

*Pitta* - *Kaphahara* - Balances *Pitta* and *Kapha*. Be aware that *neem*, despite having a cold nature, balances the *Kapha* (which also has cold quality). This is because of its other characteristics, like *Katu vipaka*(which transforms its *katu* flavour after digestion).

*Chardi* - *hrillasa hara* - Helps to relieve nausea and vomiting.

*Kushtahara* - Useful in numerous skin diseases.

*Mehanut* - Useful in diabetes and disorders related to urinary tract.

**Neem fruit is**

*Bhedana* - helps to pass bowels easily.

*Snidgha* - Unctuous, oily.

*Laghu*- light to digest.

*Ushna* - hot in potency.

*Gulmanut* - Relieves bloating.

*Arshanut* - relieves piles (hemorrhoids)

*Kriminut* - relieves worms and infection

*Mehanut* - Helps in diabetes.

**MATERIAL AND METHOD**

To study the therapeutic benefits of neem in various disorders, Science Direct, Google Scholar, Web of Science Research Gate, Scopus, Cochran Library, and Embase Web Database PubMed were consulted.

**MEDICINAL PROPERTIES OF NIMB**

**Antimalarial**<sup>[3]</sup>- *Neem* products have been demonstrated to have a variety of effects, including antifeedancy, ovicidal activity, fecundity suppression, insect development regulation, and repellency. These properties are typically attributed to the products' azadirachtin contents.

**Dental care**<sup>[4]</sup>-for millennia, humans have used neem twigs as tooth brushes. Neem twigs have antiseptic properties that are essential for dental care and stop gum disease, tooth decay, and bleeding gums.

**Cancer**<sup>[4]</sup>-neem's efficacy in killing cancer cells or boosting the body's immune system to protect it from damage. neem or its isolated compounds have shown impressive action against a wide variety of human cancer cell that include colon, stomach, lung, liver, skin, oral, prostate and breast.

**Wound healing**<sup>[6]</sup>-wound and skin infections represents the invasion of tissues by one or more species of micro-organism. these infections disturb the body immune system and causes inflammation, tissue damage and thus resulting in delayed wound healing process. Leaves of neem are used for various medicinal purposes.

Present study was undertaken on evaluation of neem leaves ethanolic extract for wound healing activity through topical route on excision wound model. The activity was compared with standard drug povidone iodine ointment (5%w/w). Neem leaves ethanolic extract was found to have better and faster wound healing effect than standard drug povidone iodine ointment on excision wound model.

**Arthritis**-Neem oil works miraculously to relieve muscular aches and joint pains and helps soothe rheumatism, osteoarthritis, and lower back pain. Neem oil has medicinal characteristics that naturally cure arthritis, reduce pain and swelling in the joints, and encourage joint mobility.

**Eye problems**-if you want to get rid of any irritation, tiredness or redness, then you should consider washing your eyes with *Neem* leaves water.

## DISCUSSION

However, knowledge of medicines made from natural products is growing significantly, and their use has more advantages. This review article demonstrates some general health promoting effects of Neem and its active compound through anti-oxidant, anti-inflammatory, anti-microbial, and anticancerous activities. The use of allopathic drugs is common, but such types of treatment may be quick, but cause disease side effects on health.

## CONCLUSION

Neem has no documented negative side effects, and the only people who experience them are those who are hypersensitive to it. Because it is stomach friendly under all circumstances, neem can be utilised to treat a variety of health ailments. Further studies on its many constituent kinds are necessary to determine the best mode of action for health management.

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