The Medicinal Properties of Neem


By Marlene Adelmann

Is the world’s number one herb a sleeper? Well, if you have never heard of the benefits of neem (Azadirachta indica) then the answer is yes. However, very few people in India will not be familiar with this herb since its use in ayurvedic healing dates back some 5000 years. Described by some as a panacea, neem is an evergreen tree found growing throughout the Indian subcontinent, Pakistan, Nepal, Iran, and in the tropics. Every part of this tree has medicinal value and all parts of this tree can be used, from the sap, twigs, flowers, and bark to the seeds, gum, fruit, and roots. To describe anything as a panacea might seem outmoded and unbelievable since rarely does the reality meet the expectation but, as you will see, that lofty pinnacle is achieved by neem.

So many uses in herbal medicine! Neem is used to combat tiredness, cough, fever, loss of appetite, and worm infestations. It is used in vomiting, skin diseases, and excessive thirst. It heals wounds, reverses gum disease, reduces high blood pressure, and is used to treat arthritis, malaria, diabetes, liver disease, and cancer. Neem leaves reportedly remove toxins, purify blood, and prevent damage caused by free radicals in the body by neutralizing them. Neem seeds and leaves are purported to be spermicidal.

Healing properties of Neem

The root, bark, resin, gum, twigs, leaves, seeds, flowers and fruit of the neem tree contain chemical compounds with extensive therapeutic qualities, including: analgesic, alterative, anti-inflammatory, antithelmintic, antipyretic, antiinflammatory, antifungal, antimicrobial, antiemetic, antibacterial, and antianxiety.

What does the neem tree look like? Neem is a large evergreen tree of elegant stature with an attractive leaf and an olive like fruit. It is fast growing and remarkably disease and insect free. The neem tree is known for its drought resistance and can grow in many types of soil.

Neem seed oil is probably the most significantly important derivative from the neem tree. It has a wide spectrum of uses as an antimicrobial, and can be applied topically to fungal and bacterial skin infections. Its composition is much like other vegetable seed oils, composed primarily of triglycerides of oleic, stearic, linoleic, and palmitic acids. The seeds are pressed in expellers and the oil yield can be as high as 50 percent of the seed kernel. Research suggests that the high fatty-acid content may be responsible for its effectiveness in treating skin disorders. Internal use of neem seed oil can be toxic and should not be used internally in large doses or for long periods of time. Certain people should never use neem oil, especially children and infants, some of whom have had fatal reactions to the ingestion of neem oil. Pregnant and
nursing women should also not use neem seed oil internally.

Oil can also be created by infusing neem leaves in a carrier oil, which is purportedly a more traditional preparation and yields gentler results according to traditional Ayurveda.

**Skin Disorders**

Neem has a curative effect on chronic skin conditions that have not been successfully helped through conventional medical treatments. Acne, dry skin, dandruff, psoriasis, eczema, herpes, shingles, and ringworm have all been shown to respond to natural creams salves or lotions made with neem. This is where learning about herbs and how to incorporate them into your daily life comes in very handy. (If you are looking for a self study program, check out the [Online Intermediate Herbal Course](http://www.motherearthnews.com/print.aspx?id={17642233-0CBD-40D0-8054-AB2ADBF9F7F0}). There are many wonderful sources for recipes and formulas for making your own body products. Becoming familiar with the healing properties of herbs and how they can be used in products that are tailored made for you can be a gigantic step towards better health.

**Cancer**

Remember that many of the conventional anticancer drugs are derived from plants. The benefits of neem have been extensively and scientifically studied. The components extracted from the seeds, leaves, flowers and fruits of the neem tree have been used in traditional medicine for the cure of multiple diseases including cancer for centuries. These extracts show chemo preventive and anti-tumor effects in different types of cancer. Two bioactive components in neem, azadirachtin and nimbolide, have been studied extensively. The key anticancer effects of neem include inhibition of cell proliferation, induction of cell death, suppression of cancer angiogenesis, restoration of cellular reduction/oxidation balance, and enhancement of the host immune responsive against tumor cells. These effects are tumor selective as the effects on normal cells are much less. Furthermore, neem extract sensitizes cancer cells to immunotherapy and radiotherapy, and enhances the efficacy of other chemotherapeutic agents.

**Neem in the Garden**

We are becoming ever more aware of the dangers to our health from organic pesticides applied to our food. For many of us this has lead to growing our own vegetables and fruit, at home, in our own backyards, and increasingly in our front yards too! Yet, most of us to our chagrin have learned just how difficult this is: beautiful squash ruined at the last moment by squash –borers. Or some of our crops end up pitted and scarred, which makes one strongly suspect of the beautiful, organically grown specimens of fruit and vegetables in expensive stores. We ask ourselves how we can get our produce to look like that without resorting to the use of chemicals.

Towards the end of the 20th century the pharmaceutical companies moved away from the highly effective, but highly toxic organo-chemical pesticides by developing allegedly less toxic and much more selective pesticides called neonicotinoids. Unfortunately the use of these new chemicals is strongly implicated in Colony Collapse Disorder in honey bees. Here in the USA and in Europe honey bee colonies are disappearing. This tragic phenomenon has a profound impact on our own survival because the pollination of many crops worldwide is dependent on the honey bee.

Neem won’t harm spiders, butterflies, ladybugs and other insects that pollinate plants because neem must be ingested to be effective. Pests that eat the treated leaves will eventually die while “good” insects are
spared. Scientists have looked especially at the effect of neem oil on honey bees since bees do eat pollen. What they found was reassuring. To see any harmful effects very high concentrations of neem must be used, much more than you would ever use for pest control. Weekly use of neem oil spray at a normal concentration (0.5% - 2%) does not hurt honey bees at all.

You still need to be careful when you spray neem oil in your garden because any oil spray can smother and suffocate insects. I suggest that you spray first thing in the morning or last thing in the evening when beneficial bugs are least active.

Using these techniques, you can raise a beautiful garden in a very conscious way.

**So why are we not all using neem if it’s so good?**

This can be debated, but the economics have to be considered. Neem contains 4 major and 20 or so minor pesticides. Most major commercially available pesticides contain one. It is presumably more expensive to manufacture 25 different chemicals rather than one. Furthermore, when in 1992 a patent was applied for neem oil in the US, it was not allowed after opposition by the Indian Government, because they said neem oil had been used for this purpose for 2000 years; not getting a patent may well effect the economic prospects of a pesticide preparation.

**Global significance of neem**

Neem is the “village pharmacy.” Every part of the plant has bioactive compounds that can be used in medicine and agriculture. It is a fast growing tree that can provide fire wood, shelter, food, medicine, and crop protection. The western world is just beginning to learn of the benefits that this tree offers. With the news spreading, trees are being planted here in the US in semi tropical regions such as southern California, Texas, Arizona, and Florida. We at the Herbal Academy of New England concur with the United Nations Declaration naming the neem tree to be the tree of the 21st century.

**References**


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