

Lifestyle & Culture

Myrrh – the gift from the wise men



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Myrrh is a gum-resin obtained from several small, thorny tree species belonging to the *Commiphora* genus. Myrrh resin has been used and valued since ancient times for its medicinal, cosmetic, aromatic and spiritual applications. In Christianity it was one of the precious gifts given to baby Jesus by the three wise men.

Myrrh gum is usually collected from *Commiphora myrrha* (also referred as *Commiphora molmol*) species. *Commiphora myrrha* finds its origin in Somalia, Yemen, Oman, Eritrea, Somali region of Ethiopia as well as parts of the Saudi Arabia.

The chemistry of myrrh

Myrrh gum resin is made up both inorganic and organic chemicals. The inorganic elements in substantial amounts are calcium, magnesium, aluminium, phosphorus, chlorine, chromium, bromine and scandium. The major organic constituents found within myrrh ethanolic extract are Limonene, Curzerene, Germacrene, Isocericenine, beta Selenene, Myrcenol and Spathulenol.

A number of different studies shows that Limonene is anti-inflammatory, antioxidant, antinociceptive (decrease pain without negative effects on consciousness or without producing anesthesia), anticancer, antidiabetic, antihyperalgesic (against extreme sensitivity to pain), antiviral and gastroprotective effects, among other beneficial effects in health. Curzerene, the primary sesquiterpene ethers in Myrrh oil is commonly added to skin care products because it improves the appearance of skin. Germacrene has been shown to have an antiproliferative effect against melanoma and leukemia human cancer cells.

Benefits and uses

Kills harmful bacteria

Myrrh and other essential oils were applied by ancient Egyptians in order to embalm mummified bodies. The oils were used to provide a pleasant smell as well as slow down the decay process. Nowadays, researchers are aware that this phenomenon happens due to oils being able to kill bacteria together with other microbes.

Moreover, during Biblical times, a mixture of myrrh incense and frankincense used to be burnt around areas of worship in order to aid air decontamination and prevent the spread of disease involving those caused by bacteria.

A recent study showed that combustion of myrrh together



with frankincense leads to reduction of the airborne bacterial counts by 68%.

Preliminary search conducted on animals showed that myrrh can directly eliminate the bacteria together with stimulation of the immune system leading to an increased white blood count, which also kills the bacteria.

Test-tube studies presented that myrrh oil has a powerful effect against multiple infectious bacteria involving the drug-resistant ones. Moreover, it was shown that myrrh oil at a low dilution (0.1%) removed all dormant Lyme disease bacteria, which can survive even after the course of antibiotics. However, more studies need to be conducted in order to support the hypothesis whether myrrh oil can be used for treatment of persistent Lyme infections.

Supports oral hygiene

Due to its antimicrobial properties, myrrh has been applied for treatment of oral infections as well as inflammation. Some of the natural toothpastes and mouthwashes contain myrrh oil, which is approved by the FDA (Food and Drug Administration).

Additionally, test-tube studies showed that mouthwashes, which contains myrrh oil, could aid gingivitis, which is an inflammation of the gums, usually due to a plaque collection.

It should be kept in mind that one should never swallow myrrh oral-care products, as large amounts could lead to toxication.

Skin health and sore treatment

Traditional application of myrrh involves treatment of skin wounds and infections. One of the test-tube studies conducted on human skin cells showed that an essential oil containing myrrh

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greatly helped with the wound-healing process. Another study showed that myrrh, together with different essential oils, applied through baths aided mothers with treatment of skin lesions caused by vaginal deliveries.

Moreover, it was proven that myrrh oil on its own leads to inhibition of 43-61% of growth of five various fungi species, which lead to skin conditions including ringworm as well as athletes' foot.

Reduction of pain and swelling

Common pains like headaches, joint or back pains can all be controlled with myrrh oil, which includes substances which when they come in direct contact with the opioid receptors stop the pain. Moreover, myrrh also leads to decreased production of inflammatory chemicals which contribute to both swelling and pain sensation, therefore it can treat inflammation related to rheumatoid arthritis.

A six-month study showed that individuals prone to headaches who ingested a multi-ingredient

supplement containing myrrh's relieving substances experienced a pain reduction by approximately two-thirds.

Powerful antioxidant

Myrrh shows properties of a powerful antioxidant – it contributes to resistance against oxidative damage. Oxidative damage creates free radicals which contribute to the aging process as well as various medical conditions.

It was showed by a test-tube study that myrrh oil presented more effective properties from vitamin E (a powerful antioxidant) at fighting against free radicals.

In addition, myrrh oil protects the liver against lead-induced oxidative damage in direct proportion to the amount of myrrh consumed prior lead exposure.

Parasites

One can obtain a parasitic infection from multiple sources involving pets, sexual activity as well as contaminated food products or water.

Two of the most common parasitic infections within the USA are trichomoniasis, which is a sexually transmitted disease and giardiasis, an intestinal infection.

Human research presents that myrrh is effective against the *Fasciola gigantica* parasite, which leads to liver and bile ducts diseases.

Cosmetics and perfumes

Myrrh is a classic and ancient fragrance, which together with frankincense was one of the three gifts the Three Kings offered to Baby Jesus. It is warm, spicy, radial and very sensual. Myrrh resinoid and oil have a spicy, amber and earthy aroma, which highly adds a warm and

descent note to perfumes. With regards to the cosmetic industry, myrrh is greatly appreciated for its antiseptic, protective and soothing properties. It is thought to be a perfect way in helping the restoration of the skin's elasticity.

Other benefits

Respiratory problems – myrrh found its use in the treatment of respiratory infections in particular asthma, diphtheria, chronic cough, pharyngitis, tonsillitis, common cold, loss of voice and bronchitis.

Cancer – studies show that myrrh oil was able to reduce or slow the growth of cancer cells in prostate, breast as well as skin. Yet, no test involving people has been performed.

Gut health – an animal study suggested that myrrh compounds could facilitate treatment of intestinal spasms which are linked to IBS (irritable bowel syndrome). A different study showed contribution of myrrh in treatment of stomach ulcers.

Mould – Test-tube study presented that myrrh oil aids in reduction of mould involving *Aspergillus niger*, which is common and appears as mildew on damp walls together with *A. flavus* which leads to spoilage and contamination of food products.

About the authors

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