

## Ayurvedic Dhoopan Karma - A Classical to Contemporary Review with special emphasis on Karna Rogas

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Dhoopan Karma, an integral part of Ayurvedic therapeutics, involves the fumigation of herbs and medicated substances to purify the environment and treat various disorders. This ancient technique, documented extensively in classical texts such as Charaka Samhita, Sushruta Samhita, and Ashtanga Hridaya, was initially prescribed for Vishodhana, Rakshoghna, and disease management in surgical and infectious conditions. Over time, the therapeutic scope of Dhoopan Karma has expanded from ritualistic and preventive measures to clinical utility in managing Karna Rogas (ear disorders), particularly those involving infection, inflammation, or suppuration. This review explores the classical origins, selection of Dhoopan Dravyas (fumigation herbs), pharmacodynamics, and the method of administration. Emphasis is laid on the therapeutic utility in Karna Rogas, such as Karna Srava (otorrhea), Karna Shoola (earache), and Pūtikarna (foul-smelling ear discharge), where Dhoopan offers anti-microbial, anti-inflammatory, and deodorizing effects. Additionally, the review includes evidence-based findings from contemporary research, validating the bioactive potential of key Dhoopan ingredients like Guggulu, Haridra, Vacha, and Neem. By bridging traditional wisdom with modern clinical relevance, this article highlights the promising future of Ayurvedic fumigation therapy in ENT care, especially in low-resource settings or as an adjunct to modern otological treatments. Further clinical trials and standardization of protocols are suggested to validate and globalize this ancient yet effective modality.

**Keywords:** Dhoopan Karma, Karna Roga, Ayurvedic fumigation, Pūtikarna, Herbal fumigants, Guggulu Dhoopan

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## Introduction

In *Ayurveda*, *Shodhana Chikitsa* (purificatory therapy) forms the foundation of holistic disease management, emphasizing not only internal detoxification but also external environmental and topical therapies. One such unique method is *Dhoopan Karma* - the therapeutic use of medicated herbal smoke. It has been classically used for disinfection, purification, and treatment of both external and internal ailments. The therapeutic rationale behind *Dhoopan* lies in the delivery of volatile phytoconstituents through smoke, which acts via inhalation, topical contact, or indirect application to infected or vulnerable sites.[1]

*Shalakya Tantra*, one of the eight branches (*Ashtanga Ayurveda*), specifically deals with disorders above the clavicle - particularly those of Eyes (*Netra*), Ears (*Karna*), Nose (*Nasa*), Throat (*Kantha*), and Head (*Shira*). In this context, *Dhoopan Karma* is considered a supportive and effective therapy in various *Karna Rogas* such as *Pūtikarna* (foul-smelling ear discharge), *Karna Srava* (otorrhea), *Karna Shoola* (ear pain), and *Karna Daha* (burning sensation in ear), where antimicrobial and deodorizing actions are crucial.[2]

Classical texts like *Sushruta Samhita* - a primary reference for *Shalakya Tantra* - and *Ashtanga Hridaya* elaborate on various types of *Dhoopan*, such as *Rakshoghna*, *Krumighna*, and *Vranashodhaka Dhoopan*, suitable for both surgical and medical conditions of the head and neck.[3] These fumigations are especially valuable in conditions where direct topical application may be painful, contraindicated, or ineffective. In recent years, growing antibiotic resistance, frequent recurrence of ENT infections, and a demand for natural, side-effect-free alternatives have reignited interest in such classical therapies. *Ayurvedic Dhoopan*, with its multipronged properties like *Krimighna* (antimicrobial), *Shothahara* (anti-inflammatory), and *Sugandhikara* (deodorizing), stands out as a potential adjunct or primary therapy in the domain of *Shalakya Tantra*, particularly in otological conditions.[4] This review article aims to provide a comprehensive classical-to-contemporary analysis of *Dhoopan Karma*, with a special focus on its applications in *Karna Rogas*, blending scriptural insights with modern evidence to support its clinical utility in ENT care.[5]

## Classical References of Dhoopan Karma

*Dhoopan Karma* has been extensively mentioned in classical *Ayurvedic* texts as an essential therapeutic and preventive practice. The *Brihatrayi*, comprising *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya*, lays foundational guidelines for use of *Dhoopan* in variety of clinical and surgical contexts. Among these, *Sushruta Samhita*, cornerstone of *Shalya* and *Shalakya Tantra*, describes *Dhoopan Karma* primarily in context of wound management, post-surgical care, and protection from microbial infestations (*Krumi*).[6] *Charaka Samhita* introduces idea of using *Dhoopan* as part of *Vishodhana* (purificatory) regimen and classifies different types such as *Vranadhooan* (for wound sterilization), *Krumighna Dhoopan* (for parasite destruction), and *Rakshoghna Dhoopan* (to prevent spread of infection).[7] These fumigations were not limited to patient care but extended to fumigating surgical instruments, delivery rooms, and hospital wards, highlighting advanced preventive thinking of ancient seers. In *Ashtanga Hridaya*, *Vagbhata* offers detailed instructions on *Dhoopan Samagri* (ingredients), timing, and specific disease indications, especially in context of *Shalakya*-related disorders such as *Nasa Roga*, *Karna Roga*, and *Netra Roga*. Use of *Dhoopan* for ear conditions (*Karna Roga*) is emphasized to address symptoms like discharge, foul smell, and inflammation, where direct application of drugs may not be feasible.[8] Moreover, texts like *Kashyapa Samhita* and *Bhaishajya Ratnavali* also describe various formulations and combinations of herbs used for *Dhoopan Karma*, especially in pediatric, gynecological, and ENT care. The combination of *Guggulu*, *Vacha*, *Haridra*, and *Nimba* is repeatedly noted for its antiseptic and deodorizing properties, particularly relevant in *Pūtikarna* and *Karna Srava*. [9] The formulation and execution of *Dhoopan* reflect a holistic approach that not only targets disease but also maintains environmental purity and *Doshic* balance. In context of *Karna Rogas*, where *Kapha* and *Pitta* vitiation predominates, *Ushna* (hot), *Tikshna* (sharp), and *Krimighna* (anti-infective) nature of *Dhoopan Dravyas* makes them particularly effective.[10]

## Dravya Guna and Selection of Dhoopan Dravyas

The selection of appropriate *Dhoopan Dravyas* (fumigation substances) is guided by the principles of *Dravya Guna Shastra*,

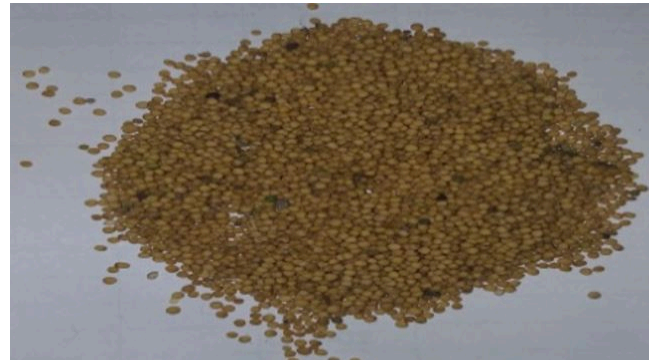
Where inherent *Rasa* (taste), *Guna* (quality), *Virya* (potency), and *Karma* (action) of herbs determine their therapeutic use. For *Dhoopan Karma*, herbs possessing *Tikshna* (penetrating), *Ushna* (hot), and *Krimighna* (anti-microbial) properties are primarily preferred to target *doshas* and eliminate pathogenic organisms.[11] Classical *Ayurvedic* texts recommend a wide range of substances for *Dhoopan*, including *Guggulu* (*Commiphora mukul*), *Haridra* (*Curcuma longa*), *Vacha* (*Acorus calamus*), *Nimba* (*Azadirachta indica*), *Shallaki* (*Boswellia serrata*), and *Agaru* (*Aquilaria agallocha*). These herbs are known for their anti-inflammatory, antimicrobial, antifungal, and deodorant properties, making them highly suitable for ENT infections including *Karna Rogas*. [12] *Guggulu*, most frequently used resin in *Dhoopan*, is praised for its ability to absorb toxins, reduce foul odors, and neutralize pathogens. It acts as a *Shothahara* (anti-inflammatory) and *Krimighna Dravya*, useful in managing suppurative ear conditions like *Karna Srava* and *Pūtikarna*. [13] Similarly, *Haridra* (turmeric), with its curcumin content, demonstrates powerful antibacterial, antiviral, & antioxidant actions, validated by modern pharmacology & widely used in both clinical & household fumigation practices. [14] The herb *Vacha*, described in *Ayurvedic Nighantus* as *Kaphahara* & *Kandughna*, provides benefit in controlling excessive ear discharge & irritation. It is also known for its central nervous system stimulating effect & its use in neuro-sensory conditions, making it valuable in ENT & *Shalaky Tantra*. [15] Additionally, *Dhoopan* formulations often include aromatic substances like *Kapur* (camphor) & *Ela* (cardamom), which not only enhance sensory quality of smoke but also contribute to its *Srotoshodhana* (channel-purifying) & *Manahshodhana* (mind-cleansing) effects -highlighting psycho-somatic depth of *Ayurvedic* therapeutics.



**Guggulu**



**Agaru**



**Gaur Sarshapa**



**Sarjarasa**



**Go-Ghrita**





**Saindhava Lavana**



**Nimba**



**Vacha**



**Karnadhoopana Varti**

### **Dhoopan Karma Procedure**

Execution of *Dhoopan Karma* requires systematic & well-defined proce. to ensure both safety & efficacy.

Classical process includes preparation of *Dhoopan Samagri* (fumigation materials), method of combustion, exposure technique, & post-fumigation care. These steps are designed to achieve optimal therapeutic benefit, particularly in conditions of *Shalakya Tantra* such as *Karna Rogas*, while minimizing smoke toxicity or mucosal irritation.[16]

### **A. Preparation of Dhoopan Samagri**

*Dhoopan Samagri* is generally composed of a combination of resins, barks, roots, powders, flowers, seeds, and aromatic agents. These are carefully selected based on the disease condition and desired pharmacological action. The ingredients are powdered, sieved, and mixed in prescribed proportions. Some classical formulations also include *Ghrita* (ghee), *Madhu* (honey), or *Tila Taila* (sesame oil) to aid combustion and volatilization of active constituents.[17]

### **B. Method of Combustion**

Traditionally, the prepared *Samagri* is placed on live coal or heated over a *Dhoop Yantra* or earthen pot. In clinical practice today, **electric *Dhoopan* devices or fumigation chambers** are also being utilized to allow controlled combustion and uniform smoke diffusion. Care is taken to avoid excessive heat that could degrade active compounds or produce toxic smoke.[18]

### **C. Method of Application**

In *Karna Rogas*, smoke is channeled specifically toward ear canal using funnel or cotton tube, allowing localized therapeutic action. Patient is usually made to lie down in lateral position to enable deep exposure. Procedure is typically done once or twice daily, for 5–10 minutes, depending on nature and chronicity of disease.[19]



**Karnadhoopana Procedure**

#### D. Precautions and Post-care

It is essential to monitor patient comfort, especially in ENT conditions, to avoid overexposure that could result in mucosal dryness, irritation, or burning sensation. Post-fumigation, the area may be cleaned with warm oil-soaked cotton or medicated ear drops can be instilled. The room should be well-ventilated to avoid secondary inhalation by others.[20] This systematic and localized use of *Dhoopan* offers a non-invasive, antimicrobial, and anti-inflammatory modality, especially useful in ENT pathologies like *Pūtikarna*, *Karna Srava*, and chronic otitis media, which are often resistant to conventional antibiotic therapy.

#### Contemporary Scientific Insights on *Dhoopan* in *Karna Rogas*

With the rise of antibiotic-resistant organisms, there has been a resurgence of interest in *Ayurvedic* bio-interventions such as *Dhoopan Karma*, particularly in the management of *Karna Rogas*. Modern research has explored the antimicrobial, anti-inflammatory, and analgesic properties of various *Dhoopan Dravyas*, validating their use in conditions like chronic suppurative otitis media (CSOM), *Pūtikarna*, and *Karna Srava*. [21] Studies on medicated smoke have demonstrated its broad-spectrum antibacterial effects against *Staphylococcus aureus*, *Pseudomonas aeruginosa*, and *E. coli*, which are commonly implicated in ENT infections. Herbal *Dhoopan* using *Haridra*, *Vacha*, and *Nimba* has shown significant zone of inhibition against these pathogens, comparable to standard antibiotics in in-vitro studies. [22] These findings support the classical view of *Dhoopan* as *Krimighna* and *Doshashamaka*. Moreover, clinical trials have reported reduced ear discharge, foul smell, and pain in patients suffering from *Pūtikarna* and *Karna Srava* after regular administration of *Dhoopan Karma*. A randomized controlled study comparing *Ayurvedic Dhoopan* with conventional antibiotic ear drops showed statistically significant improvements in symptom relief and recurrence rate in the *Dhoopan* group. [23] Additionally, the volatile oils present in *Dhoopan* herbs - such as terpenoids, eugenol, curcuminoids, and camphene - are known to penetrate mucosal linings and exert deep tissue antimicrobial effects. Modern gas chromatography and mass spectrometry (GC-MS) studies of *Dhoopan* smoke have confirmed the presence of these active components. [24]

Contemporary reviews also highlight the role of *Dhoopan* in maintaining air hygiene in clinical ENT settings, thereby reducing nosocomial infections and improving patient outcomes. Integrating *Dhoopan Karma* with modern ENT practices as a complementary therapy can significantly enhance therapeutic efficacy and reduce pharmacological load in chronic cases. [25]

## Discussion

In Otological infections discharge material is lodged deep inside the middle ear and has a great drawback in removing the entire infective material due to small opening and difficult approach. Hence infective material causes incomplete resolution of middle ear mucosa giving rise to recurrent infections. The medicated steam has potential to reach these tiny areas and dry secretions thoroughly and provide a sterile environment for complete healing and thereby preventing relapse *Dhoopan Karma*, as a therapeutic intervention, reflects wisdom of *Ayurveda* in offering a non-invasive and localized treatment for various *Karna Rogas*. It effectively combines principles of *dosha* pacification, *Srotoshodhana* (channel cleansing), and *Krimighna* (antimicrobial action) through use of medicated smoke, especially in cases involving *Kapha* and *Pitta* vitiation. In the domain of *Shalakya Tantra*, which deals with diseases of head and neck, *Dhoopan* is of particular value due to the anatomical complexity and sensitivity of organs like the ear. The practice not only addresses physical symptoms - such as foul discharge, infection, and pain - but also influences the mind and nervous system, as many of the herbs used have psychoactive and nervine properties. Despite its proven benefits, the modern clinical application of *Dhoopan* faces some limitations, including lack of standardization, absence of controlled trials, and variability in exposure techniques. However, with appropriate research and validation, it holds promise as a complementary therapy in ENT care. It also has strong potential in preventive health, particularly in rural or resource-constrained settings, due to its low cost, easy accessibility, and minimal side effects.

## Conclusion

*Dhoopan Karma*, an ancient *Ayurvedic* fumigation therapy, represents a time-tested and holistic intervention,

Especially significant in the management of *Karna Rogas* within the domain of *Shalakya Tantra*. By harnessing therapeutic potential of herbal smoke, it provides an effective and non-invasive approach to conditions involving infection, inflammation, and chronic discharge in ear. The therapy not only targets physical manifestations of ear diseases but also offers psychological relief, improved hygiene, and enhanced immunity. Its integration into contemporary clinical practice can support antibiotic stewardship, minimize emergence of resistance, and provide a sustainable healthcare solution, especially in primary and community settings. Looking ahead, there is immense scope for scientific validation, standardization of *Dhoopan Samagri*, and development of user-friendly devices to make this therapy widely acceptable. Collaborative efforts between *Ayurvedic* scholars, clinicians, and biomedical researchers can help in bridging traditional wisdom with modern evidence, opening new avenues in integrative ENT care. Thus, *Dhoopan Karma* holds promising potential not only as a therapeutic measure but also as a preventive & promotive health tool, aligning well with principles of both *Ayurveda* and global public health goals.

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