



## Review article

## Update and review on *Elaeocarpus*: its botanical, medicinal, pharmacological and therapeutic profile

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### ABSTRACT

*Elaeocarpus* is a genus of evergreen broad-leaved trees and shrubs widely distributed in warm regions belonging to family Elaeocarpaceae. In traditional system of medicine, different parts (beads, bark, leaves and outer shell of beads) of rudraksha are taken for the alleviation of various health problems such as mental disorders, headache, fever, skin diseases, and for healing the wounds. Ayurvedic texts categorise rudraksha fruits as thermogenic, sedative, cough alleviator and are useful for the treatment of bronchitis, neuralgia, cephalgia, anorexia, migraine, manic conditions and other brain disorders. Present review has been attempting to make to collect the botanical, ethnomedicinal, pharmacological information and therapeutic utility of *Elaeocarpus* species on the basis of current science.

**Keywords:** *Elaeocarpus*, *Elaeocarpus* species, Elaeocarpaceae, Rudraksha, Ayurvedic.

### INTRODUCTION

The seed of the medicinal plant *Elaeocarpus*, commonly known as Rudraksha, belongs to the Elaeocarpaceae family and grows in the Himalayan region of India. The word Rudraksha, literally derived from two Sanskrit words – ‘rudra’, a synonym for Lord Shiva and ‘aksha’ meaning eyes. It is also called blueberry beads as the beads are covered by an outer shell of blue color on fully ripening. According to Hindu mythology, Rudraksha beads bear a great religious, spiritual, and materialistic significance and used in Indian Folk Remedies & ayurvedic medicines for a wide range of diseases. The Hindu mythology considers Rudraksha as symbol of link between earth and heaven. It is believed that it contains the secrets of the evolution of entire cosmos within itself.

In the present review, an attempt has been made to congregate the botanical, phytochemical, ethno medicinal, pharmacological information on *Elaeocarpus* belongs to family Elaeocarpaceae.

Figure 1: *Elaeocarpus* seed and plant



Botanical classification (plant taxonomy)

Table 1: Botanical classification of *Elaeocarpus*

<b>Kingdom</b>	Plantae
<b>Sub-Kingdom</b>	Viridiplantae
<b>Infra Kingdom</b>	Streptophyta (Land Plants)
<b>Super Division</b>	Embryophyta

### *Elaeocarpus* species

*Elaeocarpus* is a genus belonging to family Elaeocarpaceae contains tropical and subtropical evergreen trees and shrubs. Nearly 360 species of *Elaeocarpus* trees are found in different parts of the world. It is widely distributed from Madagascar in the west through

India, Southeast Asia, Malaysia, Southern China and Japan, through Australia to New Zealand, Fiji, and Hawaii in the east with its approximately 350 species. Some common species with their occurrence are as follows:

**Table 2:** Elaeocarpus plant species and its distribution

Species of Elaeocarpus	Occurrence
<i>Elaeocarpus aberrans</i>	New Guinea
<i>Elaeocarpus acuminatus</i>	India
<i>Elaeocarpus amoenus</i>	Sri Lanka
<i>Elaeocarpus angustifolius</i>	Queensl and Australia
<i>Elaeocarpus apiculatus</i>	China, Indonesia, Malaysia, Philippines
<i>Elaeocarpus blascoi</i>	India. Endangered
<i>Elaeocarpus coorangooloo</i>	Queensland (Australia)
<i>Elaeocarpus coriaceus</i>	Sri Lanka
<i>Elaeocarpus crassus</i>	New Guinea
<i>Elaeocarpus dentatus</i>	New Guinea
<i>Elaeocarpus eumundii</i>	Australia
<i>Elaeocarpus ganitrus</i>	India, South-East Asia, Indonesia, New Guinea
<i>Elaeocarpus rudraksha</i>	

Rudraksha health care by 4-fold method

For Health maintenance

Preventive (Resistance against diseases)

Curative and

Yoga Sadhana.

Rudraksha Therapy Treatment Methods Darshan: (By looking like Thrataka in Yoga) Sparshan: (By touch and inhalation)

By wearing Rudraksha Mala

By doing Japam with Rudraksha mala

By Rudraksha Dhoopam

Rubbing on Rudraksha Plates (Acupressure) having magnets inside.

Sevana: Rudraksha Churan; Rudraksha Hima (Cold infusion), Rudraksha decoction for Gargling; Rudraksha Milk; Rudraksha Bhasma; Rudraksha Vibhuti;

Rudraksha Oil; Rudraksha Lehyam, Rudraksha eye drops and Rudraksha Paste.

Yoga Sadhana: Rudraksha Mandap; Rudraksha Kireetam; Rudraksha wearing below waist (in Yantra – Manthra – Thantra – Kshudra Prayogas)

Rudraksha medicines are most effective as preventive and curative but one must use them for not less than 40 days or a mandalam. As any other Ayurvedic herbs this also works from the root levels of the diseases to eradicate the diseases.

#### Types of Rud Raksha

There are many types of Rudraksha beads are listed depending on the number of “mukhi’s” – the clefts and furrows – they have on the surface. The scriptures state of 1 to 38 mukhi’s, but Rudraksha of 1 to 14 mukhis are usually bring to light. Five faceted or

Punch mukhi Rudraksha bead is most commonly found. The higher mukhi’s or faces are very rare. The traditional scriptures sort out and mark the value and importance to different mukhi seeds according to the number or type of mukha (faces) the seed has.

#### Methods for identification

It is very simple to identify a real Elaeocarpus. It is made falsely and the artificial Elaeocarpus are also being sold in market. There are many methods of testing a actual (or fake) Elaeocarpus:

#### Properties test

This test gives information that whether the beads show properties like inductance, capacitance, conduction of electric current etc.

#### Cut test

It is most reliable methods and for this cut the Elaeocarpus sphaericus bead horizontally. When it will be cut one can find the same number of section as the number of lines. If it is not then drawback of this method is that the bead gets damaged.

#### Eye test

Sometimes the fake or the artificial Elaeocarpus sphaericus may seem same as real one but these fake Elaeocarpus sphaericus facets cannot be made as real as those present on the real Elaeocarpus sphaericus. This is a natural partition on Elaeocarpus sphaericus which just like the closed lips with deep natural. See these deep linings (facets) with the help of a magnifying glass (Lenses) and thus can be easily distinguish a real Elaeocarpus sphaericus.

#### Copper coin test

Generally it is believed that when an Elaeocarpus sphaericus bead is placed between two copper coins it will slightly rotate either clockwise or the anticlockwise direction. This phenomenon occurs due to physical and magnetic properties of the Elaeocarpus sphaericus beads.

#### X- Ray

One way is to follow the X-ray technique one can see the internal structure without damaging the beads. This digital X-ray test is done without complication for Elaeocarpus sphaericus up to nine Mukhi but higher Mukhi beads may not give 100% accurate results due to overlapping of the internal seeds.






#### Water test

Some of the rare Elaeocarpus sphaericus beads, like Gauri Shankar Elaeocarpus sphaericus or a trijuti can be made by synthetically joining two or three Elaeocarpus sphaericus with help of paste etc. if here is any of hesitation this Elaeocarpus sphaericus bead, kept in boiling water for some minutes. A sharp streak will take place at the joint in case of synthetic Elaeocarpus Sphaericus.

#### CT scanning

CT scanning is another method for identification of Elaeocarpus sphaericus but it is more expensive than X-ray. It gives much clear results for any Elaeocarpus sphaericus than X-ray [1-7].

Table 4: Different Type of Rudraksha with their Major benefits & Astrological Uses <sup>[1,15-18]</sup>

Type of Rudraksha		Major benefits	Astrological uses
One Mukhi (1 Face)		Chronic asthma heart Problems, T.B, mental anxiety, paralysis, eye problem stroke, bone pain and head ache	Enlightens the super consciousness, provides improved concentration and mental structure changes specific to renunciation form Worldly affairs. The wearer enjoys all comforts at his command but still remains unattached
Two Mukhi (2 Face)		Impotency, renal failure, stress, anxiety, lack of concentration, mental chaos, depression, eye problems, negative thinking, hysteria and intestinal disorder	Blesses the wearer with 'UNITY'. It could be related to guru-shishya, parents-children, husband-wife or friends. Maintaining oneness is its Peculiarity
Three Mukhi (3 Face)		Depression, directive of menstrual cycle/ menstrual stress, blood pressure, schizophrenia, weakness multifarious, fixation/guilt induced complexes, mood swings, fever/weakness, jaundice and mental disability.	The wearer gets free from sins or wrongs from his life and returns to Purity. Ideal for those who suffer from inferior complexes, subjective fear, guilt and depression
Four Mukhi (4 Face)		Blood circulation, cough and brain linked illness, asthma, hesitate, memory lapse and respiratory strip problems.	The wearer gains power of creativity when blessed. Increases memory power and intelligence
Five Mukhi (5 Face)		Blood pressure, heart problems, stress, mental disability, fatness, anger management, diabetics, piles, neurotic and mal adjustment problems.	Wearer gains health and peace. It increases memory also

## CONCLUSION

After studying all properties and specification it is concluded that different species of *Elaeocarpus* are very important in the field of medical science due to the presence of their phytochemicals with their high medicinal values. Mainly these chemicals are alkaloids & flavonoids. *Elaeocarpus ganitrus* has been used lucratively in ayurvedic medicine for centuries many investigations are called for to be attempted towards more clinical trials to support its therapeutic use. Various *Elaeocarpus* species have also been widely studied for their various pharmacological activities like antiasthmatic, antidepressant, antianxiety, antidiabetic, antioxidative, antiviral, antitumor and antihypertensive activities. It is also important to recognize that *Elaeocarpus* species may be effective not only in isolation, but may actually have a potentiating effect when given in combination with other herbs or drugs.

There is no doubt about the effects of ignoring occupational health on mental health and extensive researches show this matter. Orangi et al in a study to investigate the relationship between job stress and mental health of 397 personnel in Shiraz University of Medical Sciences show that the rate of job stress is effected by mental health and the hospital medical staff have less mental health relative to the administrative staff. Burnout is considered as occupational hazards that in recent years is taken into consideration and is used to describe the experienced human response to stress. The most common definition of burnout is provided by Jackson: According to him, burnout is a psychological syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion is very similar to variable stress and is the feeling of under pressure and the loss of individual emotional resources. Depersonalization is negative and callous response to individuals whom are recipients that usually served by the staff and referred to the negative impression of the nurses. Reduced sense of personal accomplishment defines as loss of competence sense of personal duty and is considered a negative assessment of his work. Burnout can cause a drop in the quality of services, factor to knock out a job, absence or low spirit and related to perturbations such as physical exhaustion, insomnia, turning to alcohol and drug and marital and family problems. Burnout Syndrome is not a mental disorder but slowly spreads over time and may become a psychiatric disability. The burnout factors in nurses are numerous among which may be mentioned stressors in nursing. Nowadays, the subject of dementia or staff burnout is a

common problem in all health care systems. Since the burnout among health care workers, including nurses, reduce efficiency, increase absenteeism, increased health costs and the movement of personnel, behavioral changes and physical and in some cases drug use, reducing the quality of services provided to patients, followed by dissatisfaction Services physician and most importantly the patients of nurses are affected, therefore, identification and prevention of burnout has an important role in the promotion of mental health and improve the quality of services. With regard to the importance of mental health nurses and the role of burnout on the quality of nursing care, this study aimed to determine the relationship between mental health and burnout of the nurses. In addition, the role of demographic variables was studied in burnout and mental health [8].

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