

NITYA SEVANIYA MUDGA AS A WHOLESOME AYURVEDIC CUISINE**¹Vd. Sayali Laxman Tanpure, ²Vd. Roma Gangawane and ³Vd. Jyoti Gavali**

¹PG Scholar, ²Asst. Prof. Department of Swasthavritta and Yoga, ³Asso. Prof. Department of Rasashatra Avum
Bhaishajya Kalpana,
MAM's Sumatibhai Shah Ayurved Mahavidyalaya, Hadapsar, Pune-28.

***Corresponding Author: Vd. Sayali Laxman Tanpure**

PG Scholar, MAM's Sumatibhai Shah Ayurved Mahavidyalaya, Hadapsar, Pune-28.

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ABSTRACT

Introduction: *Mudga (Vigna radiata)* is commonly used staple food in Indian cuisine. A majority of *Ayurvedic* lexicons opine that it is the best among all pulses and advocate its use in everyday diet. Extract from *Ayurved* and recent research-based studies showcase it as a potential interventional diet in day-to-day life. In *Ayurvedic classics*, *Nitya Sevaniya Aahar Dravya* have been described in detail. Daily consumption of these is beneficial for body. *Mudga* is one of the *Nitya Sevaniya Aahar Dravya*. This review study sheds light on *Nitya Sevaniya Mudga*, its properties, *Krutanna Varga Kalpana* (various preparations) and its importance as an effective dietary intervention in daily life. **Material and Method:** References from various *Samhitas* and *Nighantus* of *Ayurved* are collected systematically with respect to *Mudga*, its *Krutanna Varga Kalpana* (various preparations), its properties and action. **Result:** The usage of *Mudga* as dietary supplement is not only for promotion of health, prevention of disease but also a control measure. While the fast food does harm the healthy body, consumption of *Mudga* can be beneficial for health promotion and curative aspects. **Discussion:** According to "*Sanskaro Hi Gunantaradhanam*" the individual properties of *Mudga* are emerged into new properties by using different techniques like roasting, drying, boiling and others, of preparation of the recipe. Also, the seed coat is as important as the pulses because it contains many phytoconstituents which is contribute to its nutritive value. *Mudga* is most compatible, very good absorbent, good dietary attribute, good clearing agent of all obstruction, nourishing and promoting growth. It contains bio-iron which helps to improves hemoglobin level, also contains polyphenols, flavonoids, and peptides. Above properties elaborate the health promotion action and justify its usage as a daily consumable food and as supportive diet in various diseases.

KEYWORDS: *Mudga (Vigna radiata)*, *Nitya Sevaniya Aahar Dravya* (Wholesome diet), *Krutanna Varga Kalpana*.

INTRODUCTION

Nitya Sevaniya Aahar Dravya (Wholesome diet) is explained in *Ayurved*. It means daily consumption of these wholesome diet does not harm the body.^[1] Wholesome food imparts the nourishment, strength and formation of the body tissues, enhances the life span, colour, and complexion, memory, immunity and enhance digestive activity.^[2] Healthy body and disease depend upon the intake of wholesome and unwholesome food. In the same way wholesome and unwholesome food are responsible for the happiness and misery respectively.^[3]

Wholesome food helps to enhance the physical, mental, social and even the spiritual facet of the body. *Aahar* (food) sustains the life of all beings. All living beings in this universe are in pursuit of food, because life mainly depends upon the food. In the same way individual indulging in *Matrvat* (quantity), *Kalavat* (time) and *Hita Bhojana* (healthy food) receive the spiritual benefits.^[4]

According to *Acharya Charak*, *Nitya Sevaniya Aahar Dravya* includes *Shashtika-shali* (rice grown in 60 days), *Godhuma* (wheat), *Yava* (barley), *Mudga* (green gram), *Saindhava* (rock salt), *Amalaki* (*Embllica officinalis*), *Antariksha-jala* or *Divyodaka* (rain water), *Ghrita* (ghee), *Godugdha* (cow milk), *Madhu* (honey), *Jangala-Mamsa* (meat of animals from arid land) can be correlated as balance diet in today's era.^[5]

***Mudga* (Green gram)**

Mudga (Green gram) is one of the *Nitya Sevaniya Aahar Dravya* and is the main source of protein. An *Ayurvedic* perspective sanskrit translation of the word *Mudga* "something which offers joy, happiness, and gladness".^[6] *Mudga* is most used component in daily diet. It is best in *Shimbidhanya Varga* (legumes) and green, black, yellow, red, white are varieties of *Mudga* as mentioned in all *Ayurved classics*. In which "*Green Mudga*"^[7] is best and it is mentioned in both dietary and treatment aspects of various disease condition.

Nutritive value of *Mudga* (values per 100 gm) contains energy-348 Kcal, protein-24.5 gm, fat-1.2gm, dietary fibre-16.3gm, sugar-6.6gm, calcium-75mg, iron-3.9mg, thiamine-0.47mg, riboflavin-0.21mg, niacin-2.4mg.^[8]

Krutanna Kalpnas (various preparations) of Mudga

Many Acharyas have discussed different classes of dietary substances, *Krutanna* varga is one of them, which deals with the cooked food its preparation, properties and uses. According to Ayurvedic principles the concept of *Krutanna* is to use different dietary substances so as to make them more palatable, favourable and beneficial to enhance digestion of healthy individuals as well as diseased ones.^[9]

MATERIAL AND METHODOLOGY

Here the various preparations of *Mudga* are elaborated as per Ayurved.

ASTAGUNA MANDA^[10-11]

Procedure: 1-part *Tandula* added with ½ part *Mudga* then *Kinchit Bhrushta* (fried for some time) and cooked to prepare *Manda*. Later *Hingu*, *Saindhava*, *Dhaanyaka* (*Coriandrum sativum* seeds), *Tilataila*, *Trikatu* (*Shunti* – *Zinziber officinalis*, *Maricha*- *Piper nigrum*, *Pippali*- *Piper longum*) are added and mixed well.

Indication: *Jwara* Doshagnata: *Tridosahar* Dhatu: *Raktavardhaka*

Karma: *Kshudhavardhaka*, *Jivaniya* and *Bastivishodhaka*.

MUDGA YUSHA^[12]

Definition: The whole *Mudga* are soaked in water and later de-husked and boiled with sufficient quantity of water. The boiled *Mudga* is then crushed well and later cooked with liquid part (water) and required amount of spices, *Saindhava/Tail/Ghrita* are added and *Yusha* (soup) is prepared.

Yusha is the subject of a separate chapter in the *Kashyap Samhita*, known as "*Yushaneerdeshiya*" in *Khilasthana*. *Krutanna Kalpanas* prepared with *Yushadi* ingredients are *Pathyakar* (good for body) and *Arogyakara*.

There are two types of *Yusha*, depending on the preparation method:^[12]

1] *Krutayusha* – *Yusha* prepared with *Sneha*, *Saindhav* and *Aushadhi* is called *Krutayusha*. 2] *Akrutayusha* - *Yusha* prepared without the above ingredients is called *Akrutayusha*.

Gunadharmas- *Yusha* preparation differs according to *Doshagnata*.

Prepared with	Doshagnata
<i>Snigdha</i> , <i>Ushna dravyas</i>	<i>Vata</i>
<i>Snigdha</i> , <i>Kashaya dravyas</i>	<i>Pitta</i>
<i>Atyushna</i> , <i>kaphahar dravyas</i>	<i>Kapha</i>

Method of preparation of *Kruta Mudga Yusha*:^[13]

Ingredients:

Shunthi - 12 grams (1 tola)

Pippali - 12 grams (1 tola) *Mudga Dal* - 96 grams (8

times) *Jal* (Water) -1536 ml (16 times)

Tila taila, *Saindhav Lavana* -as per required

Procedure: It is necessary to carefully clean, wash, and dry every ingredient. Cook *Mudga dal* in water and heat till *Mudga Dal* is cooked or remains half. After that it needs to be filtered. Above filtered material should be made *Kruta* by tempering (frying) with *Dravyas* viz. *Sunthi*, *Pippali* and *Saindhava Lavana* in *Tila Tail*.

Dose: twice a day as meals.

Indication: *Raktapitta*, *Trishna*, *Daha*, *Jwar*, *Urdwajatrugatroga*, *Sanshudyavyakti*.

Doshagnata: *Pittashamak*

Karma: *Agnideepana*, *Hrudya*

Veerya: *Sheeta*

Sanskrit Mudga Yusha:^[13] Ingredients and Procedure is same above only add *Dadim* (pomegranate seeds) in *Mudga Yusha*.

MUDGA TANDULA KRUSHARA^[14]

Ingredients:

Mudga and *Tandula*-equal quantity *Jal*, *Hingu*, *Saindhava*, *Ardraka*, *Ghrita*

Method of preparation:

Krushara (khichadi) prepared from *Mudga* (green gram) and *Tandula* (rice) in equal quantity and cooked in sufficient quantity of water after adding *Hingu* (asafoetida), *Saindhava Lavana* (salt), and *Ardraka* (ginger). *Krushara* thus prepared is added with *Ghrita* and consumed.

Indication: *Raktapitta*, *Aruchi*, *Kaphaj Jawar*, *Netraroga*, *Karnaroga*

Doshagnata: *Pittashamak*

Ras: *Kashay Madhura*

Veerya: *Sheeta*

Karma: *Durjara* (Difficult for digestion), *Balya*, *Pushtikrut*, *Tarpani*, *Malamutrakari*

MUDGASIDDHA PARPATA^[15]

Definition: Thin papery circular pieces and dried well in sunlight is called *Parpata* (papad).

Ingredients:

Fine flour of *Mudga*

Saindhava Lavana (salt), *Jeeraka* (cumin seeds), *Hingu* (asafoetida), *Swarjika/ Sarjakshara* (soda ash) *Maricha* (black pepper) and *Jal*.

Method of preparation- Ingredients added to fine flour of *Mudga* and mixed well with water and thin cake is made out of it which is rolled out into *Parpata* (papad) which are dried in sunlight. They should always be baked on smokeless coal which promote taste.

Karma: *Parpata* which is prepared with *Mudga* is easy/light in digestion and stimulating relishness /taste for food. *Parpata* which is fried in the oil is not of quality.

Mukta or Mudga Modaka (ladduka)^[16]

Ingredients:

Fine flour of *Mudga*, *Ghee*, *sugar*, *Jal*

Method of preparation:

fine flour of *Mudga* is mixed with water in a deep pan filled with ghee, a sieve is placed and liquified flour is slowly poured onto the sieve. Drops like pearls fall into the ghee. When fried well, they are taken out and added with sugar syrup and made into ladduka.

Indication: fever

Doshagnata: pacify *Tridosha*

Karma: These balls are light to digest, absorbent, palatable, cooling effect, promote taste, good for vision and cure fever. They are cordial and nutritious.

MUDGA VATAKA^[17]

Definition: *Lavana*, *Maricha*, *Hingu* and *Ardraka* are added to *Mudga* Pistika (dough) and mixed well. Later it is fried in *Taila/ Ghrita*. It is also known as *Bhataka*, *Vataka* or *Vada*.

Method of preparation:

Mudga Pistika (green gram dough) added with salt, ginger and asafoetida, made into thick cakes and slowly fried in oil are *Sushka Vataka* (dry vada). Also, these *Vataka* are soaked in butter milk in which powder of cumin seeds and asafoetida are added with salt.

Doshagnata: pacify *Tridosha*

Karma: Increases taste, promote strength of body, light to digest, cooling property.

If these *Vataka* are eaten along with curd chutneys, they are very much palatable, promote taste and digestive process.

MUDGA PISHTA BHAKSYA^[18]

Bhakshya (eatables) is prepared using *Mudga* flour added with *Lavana*, *Hingu*, *Jeeraka*, and *Ardraka*. This is mixed well and made into dough and rolled into small balls of *Mushti* (fist) size. It is then steamed in *Trunambugarbhita Patra*.^[18] This preparation is known as *Pishtabhakshya* as it is prepared from *Pishta* (dough).

It can be prepared using flour of various *Dhanya* such as *Masha*, *Mudga*, *Shaali*, *Godhuma* etc.

Snehapaachita Bhakshya:

Bhakshya (eatables) prepared using *Sneha* either Oil/*Ghrita* that is they are prepared by frying it in *Taila/Ghrita*.

Karma: *Ghritapachita Bhakshya*: *Balya*, *Pittavatahar*

Tailpachita Bhakshya: *Ushna*, *Pittaraktooshaka*, *Achakshushya* and *Vatahara*.

Mudgendari^[19]

The special regimen of *Mudga* known as *Mudgendari*, prepared by employing *Mudga* and selected spices. The pulse of fresh/new green gram duly soaked in water is kneaded after moistening for preparing the dough which is converted in the shape of a compact *Pinda* (bolus). In this the combination of condiments and other spicy articles viz. *Hingu*, *Jiraka* and fresh ginger of new lot should be filled internally. Then, *Mudga* pinda is subjected for processing i.e., cooking externally. Afterwards, the fine powder of asafoetida, other

aromatic, spicy ingredients should be sprinkled over this *Pinda* for making it fragrant suitably.

Karma-This food regimen stimulates the impaired digestion enhances the taste by increasing relishness for food by the pharmaco-effect of consuming this food item i.e., *Mudgendari*.

DISCUSSION

Mudga is known to have the unique property of inducing physiological effects in the human. It belongs to a class of substances with a special property known as "*Vichitra Pratyarabdha*". In Sanskrit this term means "a unity of paradoxes" (a drug or a substance is known to act at various levels based on its attributes). *Mudga* being a *Madhura Rasa* (sweet taste) drug possesses *Laghu Guna* i.e., takes lesser time for digestion. *Katu vipaka* (Catabolic post digestive effect) yet is bulk promoting. These paradoxes make *Mudga* a multi- faceted drug. *Mudga* is known to be an effective tissue builder and nourisher. It has been described as the most compatible food substance and this property is an attribute of *Madhura Rasa*.^[20] The *Kashaya Rasa* (astringent) is useful in wound healing and a very good absorbent (especially to dry up impaired *Doshas* in diseased states). The *Laghu Guna* (which gets digested easily in less time) of *Mudga* makes it a good dietary ingredient. The *Vishad Guna* of *Mudga* makes it a good purifier (especially for removing blockage in the digestive and metabolic tract).^[21] Thus, these properties elaborate the health promoting action of *Mudga* and also justify its usage as a supportive diet in various diseased conditions. *Mudga* is known to possess the *Rasayana* property (antioxidant, anti-ageing and prolonging life). This property makes it highly beneficial for daily diet.

Class of compounds present in *Mudga* (*Vigna radiata*)^[22]

- 1) Polyphenols-** Phenolic constituents are phenolic acids, flavonoids, catechin. Phenolic acids can be divided into five hydroxycinnamic acids and three hydroxybenzoic acids have been identified in the mung bean. Caffeic, p-coumaric, and t-ferulic acids are the most common hydroxycinnamic acids in the mung bean. Phenolic acids are present in free or bond state. In bound state they have more healthier effects as they escape from upper gastrointestinal digestion, along with cell wall materials, and are absorbed into blood plasma through microflora digestion activity.
- 2) Flavonoids-** They are the most abundant secondary metabolites in the mung bean. Five subclasses of flavonoids, i.e., flavones, flavonols, isoflavonoids, flavanols, and anthocyanins, were found in the mung bean. Vitexin and isovitexin were proved to be the two major flavonoids in the mung bean seed coat. Flavonoids are antioxidant/tissue oxidant. After ingestion in the gut flavonoids have a maximum concentration at around 1.5 hrs, half-life being 4 hrs, indicating that they don't have a trend of long-term

accumulation.

- 3) **Peptide-** Peptides are proteins of pulses. Additional bioactive properties, functioning as angiotensin I-converting enzyme (ACE) inhibitors, antioxidants, and an anticancer Asiatic Acid Carrier, can be provided by these peptides, obtained from the mung bean protein hydrolysate. Peptide derived from mung beans hydrolysate shows maximum ACE inhibition action.

The rich nutrients of the mung bean, such as minerals, iron, dietary fibre, and significant amounts of bioactive phytochemicals also make it a good alternative function food. Furthermore, the polyphenols, polysaccharides, and polypeptides contained in the mung bean all exert

antioxidant activity, which can contribute to disease prevention.

The mung bean and its extracts have shown excellent health implications, such as hypoglycaemic and hypolipidemic effects and antihypertensive, anticancer, anti-melanogenesis, hepatoprotective, and immunomodulatory activities.

In the present era regular consumption of *Mudga* which regulate flora of the enterobacteria and decreases absorption of toxic substances which reduces the recurrent illness related to digestive system, life style disorders e.g., diabetics mellitus, hypertension, obesity, PCOD etc.^[23]

Properties of *Mudga* according to different Acharyas

<i>Gunakarma</i>	<i>Su.Su 46</i> ^[24]	<i>C.Su 2</i> ^[25]	<i>A.S. Su 7</i> ^[26]	<i>A.H. Su6</i> ^[27]	<i>B.P 6</i> ^[28]	<i>MP. Ni</i> ^[29]
<i>Guna</i>	-	<i>Laghu Ruksha Vishada</i>	<i>Laghu</i>	<i>Alpa- chala</i>	<i>Laghu Ruksha</i>	<i>Laghu Ruksha</i>
<i>Rasa</i>	<i>Kashaya Madhura</i>	<i>Kashaya Madhura</i>	<i>Kashaya Madhura</i>	-	<i>Madhura</i>	<i>Madhura</i>
<i>Veerya</i>	<i>Sheeta</i>	<i>Sheeta</i>	<i>Sheeta</i>	-	<i>Sheeta</i>	<i>Sheeta</i>
<i>Vipak</i>	<i>Katu</i>	<i>Katu</i>	<i>Katu</i>	-	-	
<i>Doshagnata</i>	<i>Kapha- pittahar Alpavatakara</i>	<i>Kapha- pittahar</i>	<i>Kapha- pittahar Alpavatakara</i>	-	<i>Kapha- Pittahar Alpa- Vatakara</i>	<i>Kapha- pittahar Alpa- vatakara</i>
<i>Karma</i>	<i>Drushti- prasadak Grahi</i>	-	<i>Pathyakar in Raktapitta and Kaphamedaj-vikar</i>	-	<i>Netrya Jwaragna</i>	<i>Vrushya Deepana Dahagna Jwaragna Netrya</i>

CONCLUSION

It is important to introduce healthy diet in today's changing lifestyle in order to promote health. Ayurveda cuisine in form of *Pathya Krutanna Kalpana* can be introduced for encouraging Ayurveda and positive benefits on human body leading to a healthy community.

Fast food is easily available and people are attracted towards wrong marketing, but these are not so beneficial for body. Instead of this, various preparations of *Mudga* can be introduced in daily diet like mung dosa, mung sambar, idli/appam, curd mung vada, etc.

Ayurveda discourages consumption of paryushit anna i.e., stale food, as it does not have expected health benefits hence freshly prepared food is ideal for consumption. Shelf life of various mung recipe can be considered for the same. *Mand, Yusha, Krushara* should be consumed immediately. Likewise, *Vatak, Pishti Bhakshya, Mudgagendri* can be consumed within 12 hrs. Laddu having shelf life nearly about 15 days and *Parpata* is about 2 to 3 months. When we eat freshly made preparations, it is easily digested, good taste and has more nutritive value.

As the dose of any *Krutanna Kalpana* is not fixed and varies with individual hunger and digestive capacity, food is recommended to consume as per individual requirement.

According to modern science *Mudga* is most compatible, absorbent with good dietary attribute, cleansing agent, nourishing and promoting growth. It also contains bio-irons which helps to improve hemoglobin level thus, these properties emphasize the health promotion action and justify its usage as a daily consumable food and as supportive diet in various diseases. Hence concept of *Krutanna Kalpana* can be beneficial for today's scenario.

Thus, different recipes have significant importance as they possess different properties. Also, the seed coat is as important as the pulses because it contains many phytoconstituents which is significantly proven.

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