



Review Article

SHIMBIDHANYA VARGA: AN AYURVEDIC PERSPECTIVE ON NATURAL PROTEIN SOURCES FOR MODERN FITNESS AND MUSCLE HEALTH

Sakshi Sharma*, Anirudh Sharma

PG Scholar, PG Dept. of Ayurveda Samhita Evam Siddhant, Patanjali Bhartiya Ayurvedigyan Evam Anusandhan Sansthan, Haridwar, Uttarakhand, India.

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ABSTRACT

Protein supplementation has become increasingly popular among athletes, fitness enthusiasts, and gym-goers to support muscle growth and physical performance. Ayurveda describes a group of legumes known as *Shimbidhanya Varga*, which are traditionally regarded as nourishing and strength-promoting foods. **Objective:** To explore the nutritional and therapeutic significance of *Shimbidhanya Varga* described in Ayurvedic classics and evaluate its relevance as a natural protein source in modern fitness and sports nutrition. **Materials and Methods:** A narrative review was conducted using classical Ayurvedic texts, primarily *Charaka Samhita* and *Ashtanga Hridaya*, along with contemporary scientific literature on protein composition, amino acid profiles, storage proteins, and sports nutrition. Relevant information was compiled and comparatively analysed. **Results:** Classical texts describe several *Shimbidhanya* such as *Mudga*, *Masha*, *Masura*, *Chanaka*, *Kulattha*, and *Rajamasha* as *Balya*, *Brimhana*, and *Vrishya*. Modern nutritional evidence indicates that these legumes contain approximately 20–26% protein along with important protein fractions such as legumin, vicilin, albumins, and globulins. Several of these protein fractions are comparable to those utilized in modern plant-based protein supplements. **Conclusion:** *Shimbidhanya Varga* represents a nutritionally valuable group of legumes that can significantly contribute to daily protein intake while providing additional dietary fibre, micronutrients, and bioactive compounds. These traditional Ayurvedic foods may serve as sustainable and economical foundational protein sources for physically active individuals and fitness enthusiasts.

INTRODUCTION

Protein plays a fundamental role in muscle growth, tissue repair, immune function, and overall physical performance. In recent years, increasing awareness of fitness and bodybuilding has led to a substantial rise in the consumption of protein supplements, particularly among athletes, gym-goers, and health-conscious individuals. Commercially available protein powders such as whey protein, casein protein, soy protein isolate, and pea protein isolate are widely used to meet the increased protein

requirements associated with resistance training and muscle development. However, concerns regarding high cost, processing methods, artificial additives, long-term safety, and sustainability have prompted a search for natural and wholesome alternatives.

Ayurveda, the ancient science of life, has long emphasized the importance of diet (*Ahara*) as a primary determinant of health and strength. Among various dietary classifications described in the classical texts, *Shimbidhanya Varga* (leguminous grains and pulses) occupies a significant place. *Acharya Charaka* and *Acharya Vagbhata* have described numerous legumes such as *Mudga* (*Vigna radiata*), *Masha* (*Vigna mungo*), *Chanaka* (*Cicer arietinum*), *Masura* (*Lens culinaris*), *Kulattha* (*Macrotyloma uniflorum*), and *Rajamasha* (*Phaseolus vulgaris*), highlighting their nutritional and therapeutic attributes. These legumes are described as *Balya* (strength promoting),

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Brimhana (nourishing), *Vrishya* (rejuvenating and fertility enhancing), and *Pathya* (wholesome), indicating their potential role in promoting physical strength and vitality.

Modern nutritional science has identified pulses as rich sources of plant proteins, dietary fibre, essential minerals, vitamins, and bioactive compounds. Furthermore, many legumes contain storage proteins such as legumin, vicilin, globulins, and albumins, which contribute significantly to their nutritional value. Interestingly, some of these protein fractions are also the primary protein components of contemporary plant-based protein supplements. This raises an important question regarding whether traditionally consumed *Shimbidhanya* can serve as natural dietary alternatives or complements to modern protein powders.

The present review aims to explore the classical descriptions of *Shimbidhanya Varga* in Ayurvedic literature and correlate them with contemporary nutritional evidence. By comparing the protein content and major protein fractions of legumes with those found in modern protein supplements, an attempt is made to evaluate the relevance of *Shimbidhanya Varga* in present-day sports nutrition, muscle health, and fitness-oriented dietary practices.

MATERIALS AND METHODS

The present study was designed as a narrative review aimed at exploring the nutritional and therapeutic significance of *Shimbidhanya Varga* described in Ayurvedic classics and evaluating its relevance in contemporary sports nutrition. Data will be collected from classical Ayurvedic literature including *Charaka Samhita* and *Ashtanga Hridaya* was reviewed to collect information regarding the properties, actions, and therapeutic applications of various *Shimbidhanya*. Relevant Sanskrit verses from the *Shimbidhanya Varga* were critically analysed and interpreted with the help of available commentaries.

Modern scientific literature related to the nutritional composition of pulses, protein content, amino acid profile, storage proteins, and sports nutrition was collected from published books, review articles, research papers, and authentic online databases. Information was also obtained from recognized nutritional resources and scientific publications concerning plant-based protein sources and commercial protein supplements.

RESULT AND DISCUSSION

Shimbidhanya Varga in Ayurveda

Diet (*Ahara*) is regarded as one of the three sub-pillars (*Upastambha*) of life in Ayurveda and is considered essential for the maintenance of health, strength, complexion, vitality, and longevity. Among

the various dietary groups described in the classical texts, *Shimbidhanya Varga* comprises legumes and pulses characterized by seeds enclosed within pods (*Shimbi*). These food substances have been extensively described by *Acharya Charaka* and *Acharya Vagbhata* owing to their nutritional as well as therapeutic significance.

Description of *Shimbidhanya* in *Charaka Samhita*

In the *Shimbidhanya Varga*, *Acharya Charaka* describes *Mudga*, *Masha*, *Rajamasha*, *Kulattha*, *Makushthaka*, *Chanaka*, *Masura*, *Kalaya*, *Tila*, *Adhaki*, *Nishpava*, *Atmagupta*, and other legumes. According to *Acharya Charaka*, *Mudga* is considered *Supyottama* (best among pulses) due to its *Laghu* (lightness), ease of digestion, and *Kapha-Pitta* pacifying properties. It is described as *Kashaya-Madhura* in taste, *Sheeta* in potency, and beneficial for maintaining digestive balance^[1].

Masha is described as *Balya*, *Vrishya*, and *Vatahara*. It is nourishing, strength-promoting, and capable of enhancing physical vigour and reproductive capacity. Due to its *Snigdha* and *Guru* properties, it is considered highly nutritive and suitable for individuals requiring strength and tissue nourishment^[2].

Rajamasha is described as *Guru* and *Ruchya*, while *Kulattha* is characterized as *Ushna*, *Grahi*, and beneficial in conditions such as *Kasa*, *Hikka*, *Shwasa*, and *Arsha*. *Chanaka* and *Masura* are described as *Laghu*, *Sheeta*, *Madhura*, and *Kashaya* in nature. *Masura* is specifically mentioned as *Sangrahi*, indicating its role in promoting bowel stability and improving digestive function^[3].

Acharya Charaka further states that most *Shimbidhanya* possess *Balya* properties and can contribute to strength and nourishment when consumed appropriately. However, owing to their *Kashaya* and *Ruksha* nature, excessive intake may aggravate *Vata* in susceptible individuals.

Description of *Shimbidhanya* in *Ashtanga Hridaya*

Acharya Vagbhata provides a similar description of *Shimbidhanya Varga* in *Ashtanga Hridaya*. He describes *Mudga*, *Adhaki*, *Masura*, *Kulattha*, *Rajamasha*, *Nishpava*, and *Masha* as important legumes with distinct dietary and therapeutic properties^[4].

Mudga is regarded as the best among pulses due to its digestibility and minimal tendency to aggravate *Doshas*. *Rajamasha* is described as *Guru* and *Vata*-provoking, whereas *Kulattha* is considered *Ushna* and useful in alleviating *Kapha-Vata* disorders. *Nishpava* is described as *Guru*, *Sara*, and capable of increasing urine production. *Masha* is considered

Snigdha, *Balya*, and *Shukravardhaka*, while also promoting body strength and nourishment^[5].

The descriptions of *Charaka* and *Vagbhata* collectively indicate that *Shimbidhanya* were not merely dietary articles but functional foods possessing both nutritional and therapeutic importance.

Modern Nutritional Perspective

Legumes are among the richest plant-based sources of protein available in human nutrition. They contain substantial amounts of protein, complex carbohydrates, dietary fibre, vitamins, minerals, and numerous bioactive compounds. Due to their high protein content and affordability, legumes form an important component of diets worldwide.

Protein Content of Major *Shimbidhanya*

<i>Shimbidhanya</i>	Botanical Name	Approximate Protein Content (g/100 g)
<i>Mudga</i>	<i>Vigna radiata</i>	23–24
<i>Masha</i>	<i>Vigna mungo</i>	24–26
<i>Masura</i>	<i>Lens culinaris</i>	24–25
<i>Chanaka</i>	<i>Cicer arietinum</i>	19–21
<i>Kulattha</i>	<i>Macrotyloma uniflorum</i>	22–24
<i>Rajamasha</i>	<i>Phaseolus vulgaris</i>	21–24
Soybean*	<i>Glycine max</i>	36–40

*Included for comparison due to its extensive use in modern protein supplements^[6].

Protein Fractions Present in *Shimbidhanya*

The nutritional value of legumes is determined not only by their total protein content but also by the quality of protein fractions present within them. Modern biochemical studies have identified several major storage proteins in legumes.

<i>Shimbidhanya</i>	Major Protein Fractions
<i>Mudga</i>	Vicilin, legumin
<i>Masura</i>	Legumin, vicilin
<i>Chanaka</i>	Legumin, vicilin
<i>Masha</i>	Albumins, globulins
<i>Kulattha</i>	Globulins
<i>Rajamasha</i>	Phaseolin, globulins
Soybean	Glycinin, β -Conglycinin

These proteins serve as reservoirs of essential amino acids required for growth, repair, and maintenance of body tissues.

Modern Protein Supplements

Protein supplements commonly used in sports nutrition derive their protein fractions from milk or legumes^[7].

Supplement	Major Protein Component
Whey protein	β -Lactoglobulin, α -Lactalbumin
Casein protein	Casein
Soy protein isolate	Glycinin, β -Conglycinin
Pea protein isolate	Legumin, Vicilin

Interestingly, legumin and vicilin, which are major proteins present in pea protein supplements, are also naturally found in several *Shimbidhanya* such as *Mudga*, *Masura*, and *Chanaka*. This biochemical similarity suggests that these Ayurvedic legumes may provide protein fractions comparable to those used in

modern plant-based supplements, although in less concentrated forms.

Relevance in Modern Sports Nutrition

Sports nutrition focuses on adequate protein intake to support muscle growth, exercise recovery, and athletic performance. Commercial protein supplements are popular because they provide

convenient and concentrated protein. However, whole-food protein sources continue to be recommended for long-term dietary sustainability and overall health.

Among the *Shimbidhanya*, *Mudga* appears particularly suitable for regular consumption due to its digestibility and favourable Ayurvedic properties. *Masha*, being *Balya* and *Vrishya*, may be more relevant for individuals seeking muscle gain and strength enhancement. *Chanaka* and *Masura* provide moderate-to-high protein content along with dietary fibre and essential micronutrients, making them valuable components of fitness-oriented diets. *Kulattha* contributes protein while also offering additional metabolic and therapeutic benefits.

The Ayurvedic concepts of *Balya* and *Brimhana* can be interpreted in the modern context as support for muscle nourishment, tissue building, and physical performance. Thus, the classical descriptions of *Shimbidhanya* demonstrate a striking conceptual similarity to contemporary nutritional goals.

***Shimbidhanya* as Natural Alternatives to Protein Supplements**

The findings of this review suggest that *Shimbidhanya Varga* represents a rich source of plant-derived proteins with potential relevance in modern fitness practices. While legumes cannot provide the same protein density per serving as isolated protein powders, they offer a broader nutritional profile, including fibre, minerals, vitamins, antioxidants, and bioactive compounds.

Therefore, *Shimbidhanya* may not completely replace protein supplements in all circumstances, particularly among competitive athletes with very high protein requirements. However, they can serve as economical, sustainable, and nutritionally

comprehensive dietary alternatives or adjuncts to commercial protein supplements for the general population, recreational athletes, and fitness enthusiasts.

DISCUSSION

Relevance of *Shimbidhanya* in Sports Nutrition

Current sports nutrition emphasizes adequate protein intake for muscle protein synthesis, recovery following exercise, strength development, and maintenance of lean body mass. Many *Shimbidhanya* described in Ayurveda possess attributes such as *Balya*, *Brimhana*, and *Vrishya*, which conceptually correlate with modern objectives of muscle development and physical performance enhancement. *Mudga*, due to its digestibility and high-quality protein content, may be considered suitable for recovery diets. *Masha*, traditionally described as *Balya* and *Vrishya*, possesses a higher protein content and may support muscle nourishment and strength. *Chanaka* and *Masura* provide significant protein along with dietary fibre and micronutrients, making them valuable components of a balanced diet for physically active individuals.

Thus, both classical Ayurvedic descriptions and modern nutritional evidence indicate that *Shimbidhanya Varga* represents a group of nutrient-dense foods with potential relevance in contemporary fitness and sports nutrition practices.

Protein requirements for gym-goers generally range from 1.2 to 2.0gm per kilogram of body weight per day, depending on the intensity of physical activity, training goals, and individual factors. Therefore, a 70kg fitness enthusiast may require approximately 80–140gm of protein per day to support muscle protein synthesis, recovery, and maintenance of lean body mass.

Protein Contribution of *Shimbidhanya* (Dry Weight Basis)

<i>Shimbidhanya</i>	Protein (g/100gm)	Quantity Required to Obtain 25gm Protein	Quantity Required to Obtain 50gm Protein
<i>Mudga</i> (Green gram)	24 g	104 g	208 g
<i>Masha</i> (Black gram)	25 g	100 g	200 g
<i>Masura</i> (Lentil)	25 g	100 g	200 g
<i>Kulattha</i> (Horse gram)	22 g	114 g	227 g
<i>Rajamasha</i> (Kidney bean)	22 g	114 g	227 g
<i>Chanaka</i> (Chickpea)	20 g	125 g	250 g
Soybean	36 g	69 g	139 g

Practical Daily Intake for Gym Enthusiasts

Fitness Goal	Daily Protein Target	Suggested <i>Shimbidhanya</i> Intake*
General fitness (60–70kg)	70–90 g	250–350 g mixed pulses/day
Muscle gain (70kg)	100–120 g	400–500 g mixed pulses/day
Advanced bodybuilding (70–80kg)	120–150 g	500–650 g mixed pulses/day

*Dry weight before cooking

CONCLUSION

The comparative analysis suggests that several protein fractions naturally present in *Shimbidhanya* are similar to those utilized in modern plant-based protein supplements. In addition to protein, these legumes provide dietary fibre, vitamins, minerals, antioxidants, and other bioactive constituents that contribute to overall health and metabolic well-being.

Although commercial protein supplements offer concentrated protein and may be beneficial in specific athletic situations, the findings of this review indicate that a well-planned diet incorporating a variety of *Shimbidhanya* can make a substantial contribution toward meeting daily protein requirements. Thus, *Shimbidhanya Varga* may be regarded as a sustainable, economical, culturally acceptable, and nutritionally valuable foundation for protein intake in physically active individuals and fitness enthusiasts.

The wisdom of Ayurveda regarding *Shimbidhanya* appears highly relevant even in the contemporary era, suggesting that these traditional legumes can serve as important natural protein sources and may reduce excessive dependence on commercially processed protein supplements when included as part of a balanced diet.

Rather than viewing *Shimbidhanya* and protein supplements as mutually exclusive options, *Shimbidhanya Varga* may be considered a foundational dietary source of protein, while supplements may serve as supportive tools whenever additional protein requirements cannot be adequately fulfilled through diet alone."

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*Address for correspondence

Dr. Sakshi Sharma

PG Scholar,

PG Dept. of Ayurveda Samhita

Evam Siddhant, Patanjali Bhartiya

Ayurvigyan Evam Anusandhan

Sansthan, Haridwar, Uttarakhand

Email: drsakshi8755@gmail.com

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