



Medicinal and nutritional importance of Greengram

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Introduction:

Greengram (*Vigna radiata* L.) is an important pulse consumed all over the world, especially in Asian countries, and has a long history of usage as traditional medicine. The greengram is also known as mung bean, is a plant species in the legume family. It is short duration legume crop grown mostly as a fallow crop in rotation with rice. It looks like a small, green seed and can be cooked in the same way as lentils. It's widely consumed in Southern Europe and in Asian countries, and can be purchased whole or as split seeds. Similar to the leguminous pulses, green gram, enriches soil nitrogen content. Many specialty stores sell mung bean bran and processed foods, such as noodles, pasta and flour made from mung beans. Mung beans are easy to digest.

Mung beans are a filling food. The high fibre and protein levels produce longer satiety times. Mung beans keep free radicals under control. These free radicals can be an outcome of anything like pollution, stress unhealthy snacking and toxicity in body. Green gram is also good for a detox diet. It contains silica which rebuilds the skins connective tissues. It also effectively removes toxins from your body that will seep inside your bloodstream leading to a lifeless and dull complexion.

Green gram has been known to be an excellent source of protein, dietary fiber, minerals, vitamins, nutritional values which includes Vitamins Folate, Niacin, Pantothenic acid, Riboflavin and significant amounts of bioactive compounds, including polyphenols, polysaccharides, and peptides, therefore, becoming a popular functional food in promoting good health. One cup of green gram contains 15 grams of fibre, it fills you up and keeps you satisfied for a longer period of time. When people add fibre to their diet, they automatically eat lesser calories. This increases your chances of losing weight. Moreover, the present paper aims to show the potential action mechanisms of the mung bean on its Medicinal and nutritional importance.

Medicinal importance of Greengram

1. Helps Prevent Diabetes

Moong dal has a low glycemic index. It helps bring down the insulin, blood glucose and fat levels in the body. In turn, this helps keep blood sugar levels under control, and diabetes in check.

2. Improves Digestive Health

The consumption of moong dal helps produce a fatty acid called butyrate in the gut. This helps maintain the health of the intestinal walls. The dal has anti-inflammatory properties that prevent and accumulation of gas. In addition to that, moong dal has also been proven to be easy to digest, making it good for digestion as well.

3. Boosts Blood Circulation



Iron helps in the proper production of red blood cells. This, in turn, prevents anaemia and improves the overall blood circulation in the body. The proper circulation of blood helps supply oxygen to various organs and cells in the body, and in the process, optimises their performance.

4. Lowers blood pressure

It is a proven fact that mung beans are fat controllers and regulators. Moreover, the presence of large amount of magnesium makes it a very potent BP regulator. It maintains the level of magnesium in the blood. Magnesium eases blood vessels and lowers hypertension. This, in turn, keeps the blood pressure of the body under control.

5. Controls cholesterol and heart disease risk

By preventing oxidation of LDL, mung beans keep the arteries clear and improve blood circulation. Not only does this reduce inflammation, it reverses damage to the blood vessels. By preventing deposition of plaque the risk of heart attack & stroke is reduced as well.

6. Help fight cancer

Mung beans keep free radicals under control. These free radicals can be an outcome of anything like pollution, stress, unhealthy snacking and toxicity in body. They have the ill-fate of interfering with normal cell growth. Abnormal cell growth can even lead to cancer. Mung bean, which is a natural suppressor of free radicals, is a good option to keep cancer at bay.

7. Improves skin health

Green gram adds shine and radiance to human skin. The presence of copper increases its use in various face packs and face creams. Using mung bean as a scrub is also a good option. It is very easy to make a natural exfoliating face pack using mung beans at home. To Make Mung Bean Natural Face Pack at home; Grind mung beans to form fine powder, then add lukewarm water to the powder to make a paste. Apply the paste on the face and leave to dry for 10 minutes. Then Scrub for next 10 minutes. This results in cleaner and reduced pores. This deep exfoliating face scrub is an ultimate killer of tan, blackheads, excessive oil and unnatural glare. Undoubtedly, it is one of the best natural scrubs one can use to make their skin radiant!

8. Anti-Toxic Benefits

Toxicity is a serious problem and can have long lasting side-effects including ulcers and cancer. Consumption of mung beans helps to keep your body free of toxins. It maintains the circulatory health of the body as well. It flushes out toxins from the body easily and keeps the formation of free radicals under check.

9. Decreases PMS Symptoms

The various B complex vitamins, especially folate & B6, and magnesium help regulate hormonal fluctuations which cause these PMS symptoms.

10. Helps Reduce Weight and Fights Obesity

Mung beans are a filling food. The high fibre and protein levels produce longer satiety times due to the double increase of the satiety hormone cholecystokinin as compared to meals that are devoid of these beans. Therefore consuming mung beans on a regular basis helps decrease food intake, thus lower weight and aid in fighting obesity.



11. Boosts Immunity & Protects Against Infections

The wide variety of phytonutrients in mung beans is not only anti-inflammatory but anti-microbial as well. These help fight harmful bacteria & viruses, maintain healthy gut bacteria and raise immunity levels. They ensure optimal digestive tract health and thus promote optimum nutrient absorption.

12. Keep Your Cholesterol Levels Low

Rich in fibre and antioxidants, mung beans protect your heart and reduce bad (LDL) cholesterol levels. Hypercholesterolemic mice fed with fermented mung beans experienced a greater reduction in triglycerides, total cholesterol and LDL cholesterol levels than those treated with medications.

13. Improves Heart Health

This yellow dal is rich in potassium and iron. The former helps lower blood pressure and protects against muscle cramping. It also helps protect the body against an irregular heartbeat. Its light and easy-to-digest nature make it a great food for those suffering from hypertension.

Nutritional importance of Greengram

Green beans consist of nutritional values which include Vitamins Folate, Niacin, Pantothenic acid, Riboflavin, Thiamine, Vitamin A, Carotene beta, Vitamin B12, Vitamin B6, Vitamin C, Vitamin D, Vitamin E, Vitamin K. It consists of minerals, which include Calcium, Copper, Iron, Magnesium, Manganese, Phosphorus, Potassium, Selenium, Sodium, and Zinc.

Moong dal is a nutrient-rich food. They're packed with minerals like potassium, magnesium, iron, and copper. In addition to this, they also contain folate, fibre, fibre, and vitamin B6, apart from loads of high-quality protein. Rich in B-complex vitamins, moong dal helps your body break carbohydrates down to glucose, and produce usable energy for your body. The folic acid present in it also helps maintain healthy brain function and in the production of DNA. Moong dal also contains some amounts of vitamin E, C and K.

Moong dal is particularly rich in dietary fibre. A single cup serving can provide between 40.5 and 71 percent of the recommended daily intake of the nutrient. This dietary fibre content helps reduce blood cholesterol levels, while also preventing dietary complications. A high fibre intake also reduces the risk of overeating thanks to its ability to make one feel full. The body requires relatively large amounts of protein, making it a macronutrient. The high protein content in moong dal makes it a great source of the nutrient for vegetarians. Moong Dal sprouts contain Globulin and Albumin as the main storage proteins. They make up over 85% of the total amino acids found in these sprouts. Make them complete protein by eating moong dal with a cereal like rice, roti, or millet.

The high protein content contributes to building and repairing tissues, while also being a building block of muscles, bones, cartilage, blood, and skin. As you see, the green gram isn't just healthy and nutritious, but diet-friendly too. When consumed regularly, it can boost your vitamin and mineral intake, prevent deficiencies and ward off chronic diseases. A cup of cooked mung beans has only 212 calories, 23.3 grams of net carbs and less than 1 gram of fat. It also delivers 14.2 grams of protein and large doses of micronutrients, including:

- 80 percent of the DV (daily value) of folate
- 22 percent of the DV of thiamin



- 3 percent of the DV of vitamin C
- 7 percent of the DV of vitamin K
- 30 percent of the DV of manganese
- 24 percent of the DV of magnesium
- 15 percent of the DV of potassium
- 11 percent of the DV of zinc
- 20 percent of the DV of phosphorus
- 16 percent of the DV of iron
- 18.2 milligrams of omega-3

Mung Beans Support Female Health

- These legumes are packed with thiamin, riboflavin, folate and other B vitamins that are particularly good for women. *Folate*, for example, may reduce the risk of neural tube defects, autism, stroke and heart disease. *Thiamin* plays a vital role in growth and development. This water-soluble vitamin also protects against metabolic problems that may affect the placenta and fetus during pregnancy.
- ***Riboflavin***, one of the abundant B vitamins in mung beans, is essential for moms-to-be. According to the National Institutes of Health, preeclampsia (high blood pressure) and birth defects are more common in women with riboflavin deficiency.
- Green gram is also a good source of *calcium*. This mineral support blood clotting, muscle contraction and bone growth. It also keeps your bones strong, which in turn, may help prevent osteoporosis, a disease that affects one in three women over 50 years old.

Conclusion

Green gram contains protein in abundance. The high protein content contributes to building and repairing tissues, while also being a building block of muscles, bones, cartilage, blood, and skin. This not only helps you lose more weight but also helps you build leaner muscles. As you see, the green gram isn't just healthy and nutritious, but diet-friendly too. Mung bean, which is a natural suppressor of free radicals, is a good option to keep cancer at bay. However, there are still important gaps in our knowledge regarding the bioactive compounds and biological activities of the mung bean. Given their health and nutritional benefits, the consumption of mung bean-based functional products, as well as nutraceuticals, could be considered an alternative food, not just in Asian countries but also in other countries.