

## Alternative Source of Protein for Vegans

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**Abstract** - Eating protein-rich foods daily not only helps in growing and repairing body cells but also keeps health problems at bay. Protein helps you stay energetic throughout the day. It reduces your craving to eat junk food, which also helps you to control weight. Proteins are made of amino acids. Vegetarians have cheese, soy products, legumes and other dairy products to get the required dose of protein. Everyone knows how important protein is for the body. Protein works to build muscles in the body. Protein makes us feel satiated due to which our weight also remains under control. People who do bodybuilding need more protein. Our body is made of proteins. In order to build strength, heal diseases rapidly, and repair the daily damage done to muscles, our bodies require a protein-rich diet. Ideally, we should have a nutrient-rich pre and post-workout meal so that our body gets fresh and energized as soon as possible. A nutrient is required for better development of the body. For this reason, doctors also recommend taking a balanced diet to keep the body healthy and fit, But do you know that each nutrient has a different importance among all the nutrients, protein is considered more important for the growth and strength of our body. Protein is present in every cell of our body. Proteins are mainly considered necessary for building bones, muscles, and skin and maintaining them healthy. In such a situation, every person is advised to take protein-rich foods. At the same time, according to age and body weight, the required amount of protein can be different for each person. In this case, adults need 0.8 grams of protein per kg, teenagers need 1.0 grams of protein per kg and children need 1.5 grams of protein per kg according to body weight. On this basis, we can be assumed that high protein is beneficial for the body as well as very essential.

**Keywords:** Protein, Vegan, Nutrient.

### Introduction

Our body is made of proteins. A protein-rich food is needed in our body to repair muscle breakdown get rid of diseases quickly and gain strength [1]. Ideally, we should have a nutrient-richer post-workout meal so that our body gets fresh and energized as soon as possible. It is well known that meat and eggs contain high amounts of protein and over the centuries, it has become a common belief that protein is found in lesser amounts in vegetarian diets [2]. However, this is a myth, as even a vegetarian diet can be rich in protein. Many vegetarians have turned to protein powder as their source of nutrients, but not everyone needs to. We have compiled a list of vegetarian protein-rich foods that will help you fulfil your daily protein needs without consuming any meat. Vegetarian Indian food is rich in protein. Dal rice, roti, sabzi, fried gram in batter, idli chutney sambar, porridge, milk, curd, and paneer are all rich in proteins, minerals, etc. So traditional home-cooked food has all the essential ingredients present.

### Vegetarian food rich in protein

#### 1. Grams

There are only 730 calories in a cup (250 grams) of boiled chickpeas, and only 102 calories in a 28-gram portion [3]. Carbohydrates account for about 67% of their total weight, while the rest is protein and fat. Worth knowing is that one cup of chickpeas provides 40% of your daily requirement of fiber, 70% of folate and 22% of iron [4]. Apart from this, its glycemic index is also low. It is digested slowly by your body, which makes you feel full for a longer period. It also prevents sudden jumps in blood sugar levels. Protein in chickpeas: 7.4 grams of protein in half a cup of chickpeas [5].

#### 2. Rajma

Kidney beans are rich in proteins, carbohydrates and fiber. One of India's favourite dishes is rajma-rice. In addition to being delightful, it is a wholesome cuisine that may be eaten as a curry, as a salad topping, or as a component of several Mexican dishes. Kidney beans provide protein: 7.5 grams of protein in half a cup of kidney beans [6].

### 3. Milk

Do you consume milk regularly? If you do this, you get enough protein. In addition to providing protein, milk also contains calcium, which supports bone health, tooth, an immune system, and radiant skin. 100% fat milk should not be consumed, low fat milk should be consumed which is rich in Vitamin D [7].

Protein in milk: About 8 grams of protein per cup [8].

### 4. Cheese

Just as cheese is popular in the rest of the world, so is paneer in India. It is a dairy protein that digests slowly. Moreover, paneer gives you a healthy dose of calcium and aids in the body's ability to burn excess fat. You can eat it raw by adding it to vegetables or just like that.

Protein in cottage cheese: 14 grams of protein in half a cup of cottage cheese [9].

### 5. Lentils

A balanced Indian diet is incomplete without pulses. A balanced Indian diet is incomplete without pulses. Eating lentils is a simple method to get the protein, fibre, and other minerals your body needs. Eat the dal by serving it with rice or roti.

Protein in Lentils: 8 grams of protein is present in 1/2 cup [10].

### 6. Peas

Peas available in winter are rich in protein. In summer, you can also consume protein and fiber from green peas. Before consuming frozen peas, make sure how the peas were frozen. Only use it if you can feel individual peas. You can also enjoy Matar Paneer to increase the amount of protein.

Protein content in peas: 7 grams of protein per cup [11].

### 7. Mixture of different types of seeds

You can get a lot of protein from Seeds in your diet. Sunflower, poppy, squash, or sesame seeds can all be used because they are high in protein. You can combine them with raita and cereals in addition to salads. In addition, Protein in seeds: About 6–7.4 grams of protein per 1/3 cup [11].

## **Protein Rich Fruits**

Arbeits amounts of fiber, vitamins and minerals. That is why all people must include fruits in their diet to stay fit and healthy. Many people think that fruits contain many vitamins, but protein is not. Protein is also found in fruits. Fruits also contain proteins and antioxidants, which are very important for staying healthy.

#### 1. Guava

Fiber found in guava in very high quantity, apart from this, guava also contains protein. Let us tell you that one cup of guava contains 4.2 grams of protein [12]. Vitamin C is also found in guava. You should always eat guava without peeling it.

#### 2. Kiwi

Kiwi is rich in nutrients. Vitamin C is found in Kiwi. Apart from this, Kiwi also contains protein as compared to other fruits. About 2 grams of protein is found in one avocado [12]. To get protein, you must eat one kiwi daily.

#### 3. Apricot

Many types of vitamins and minerals are found in apricots. Let us tell you that apricot also contains protein. About 2.3 grams of protein is also found in one cup of apricots [13]. You can eat apricots directly. Alternatively, you can also eat it as a salad.

#### 4. Berries

Berries are delicious as well as nutritious. Many types of vitamins and minerals are found in berries. Apart from this, berries are also a good source of protein. Blackberries and raspberries contain the most protein. 1.5 grams of protein is found in one cup of berries [14]. You can have berries in breakfast.

## 5. Avocado

Antioxidant properties are found in avocados also contain fiber, fats and potassium. Apart from this, avocado also contains protein. One avocado contains about 3 grams of protein. You can drink avocado by making a smoothie. Alternatively, you can also eat directly.

## 6. Bananas

Banana is a super food. You must include bananas in your diet. A good amount of potassium, fiber and calibrant vitamins is found in bananas. Apart from this, protein is also found in bananas. A banana contains about 1.3 grams of protein [14]. Therefore, to stay fit and healthy, you must include banana in bananas.

## 7. Grapefruit

Grapefruit is a citric fruit. Vitamin C is found in abundance in it. Let us tell you that grapefruit contains about 1.6 grams of protein [14]. To increase your immunity in winter, you must include grapefruit in your diet. Apart from this, orange also contains protein along with vitamin C. Let us tell you that a cup of oranges contains half a gram protein.

Antioxidants, fiber and vitamins are found in guava, orange, grapefruit, kiwi and avocado [15]. Apart from this, protein is also found in high quantity in these fruits, to stay fit and healthy in winter, you must include these fruits in your diet. Including these fruits in the diet will also increase your immunity.

### Ten advantages of foods high in protein:

Protein is regarded as a crucial food since it is high in the building blocks that the body needs to heal more quickly from illnesses. Here are listed a number of additional advantages of protein.

#### 1. Protein reduces appetite:

Protein is considered the most satiating substance in the body. The protein increases the levels of peptide YY and lowers the levels of hunger hormones in the body, helping a person satisfied [16]. If you want to lose weight, try cutting back on the amount of carbohydrates and fats you consume while upping your protein intake [17]. For example, you can reduce the amount of rice in your daily diet and increase the amount of protein-rich foods like paneer or chickpea curry [18].

#### 2. Protein keeps your heart healthy

Those who eat more protein maintain low blood pressure levels. Moreover, it lowers the risk of heart attack and stroke [19]. A larger consumption of protein was observed to lower systolic blood pressure by 1.76 mm Hg and diastolic blood pressure, respectively, by 1.15 mm Hg after 40 controlled trials. It has been discovered that a diet high in protein helps lower blood pressure as well as the body's amount of LDL (harmful cholesterol).

#### 3. Protein improves immunological function

Antibodies aid in the body's defence against a variety of diseases. In the body, it can find foreign compounds or antigens. To counteract the antigen, the body produces antibodies. As diverse types of proteins make up these antibodies, proteins are crucial for boosting the immune system [20].

#### 4. Increases Protein Metabolism

Following a diet, the body's metabolism can temporarily rise as it makes use of the nutrients in the meal. Protein intake greatly boosts the body's metabolism since it has a far stronger thermic effect (20-35% compared to 5-15%) than fat or carbohydrates [21]. According to some research, eating additional protein can increase daily calorie expenditure by 80–100 [22]. According to one study, persons who ingested more protein daily burnt 260 more calories than those who took lesser protein [23].

#### 5. Protein helps build strong bones

The majority of studies have indicated that protein may be vital for strong bones. Increased protein intake increases bone mass and lowers the incidence of fractures and osteoporosis [24]. This is particularly valid for women who are more likely to experience osteoporosis after menopause. Eating a lot of protein-rich foods and being active are the greatest ways to stop this from happening [25].

#### 6. Protein strengthens muscles by increasing muscle mass.

Protein is regarded as a nutrient that helps develop muscle. Besides providing energy, it can aid in maintaining muscle mass and encouraging muscle growth. Make sure you're getting enough protein if you're attempting to gain muscle. Moreover, a high protein diet may help stop muscle loss throughout losing weight [26].

7. Protein helps maintain weight after losing it

A diet high in protein can aid in weight loss, but the challenge is keeping it off. A slight increase in protein intake has been demonstrated in studies to help people maintain their weight [27].

### **8. Energy Levels Are Increased by Protein**

Moreover, protein is a natural energy source. When participating in weight loss or fasting programmes, eating a meal that is sufficient in energy encourages the body to use its own functional proteins to make up the energy deficit [28]. As the body does not have an overabundance of protein, enzymes and muscles break down proteins to create amino acids that can be used to create glucose or generate energy. This ensures that the cells receive glucose continuously.

### **9. Protein Keeps Skin Healthy**

Protein gives tissues that are constantly deteriorating strength. Skin is a prime illustration of this. Fibrous protein collagen gives these skin cells the essential strength. The amount of collagen in the body has a significant impact on the skin's youthful appearance, health, and lack of wrinkles [29].

### **10. Protein helps in keeping cells and tissues healthy**

To keep the body healthy, cells and tissues must continually regenerate and heal. Protein synthesis requires an ongoing supply of amino acids [30]. This protein creates new skin, hair, and nail cells as well as other tissues. In a few weeks, the skin, blood, and digestive system cells begin to die. Thus, protein is required to repair and replace these dead cells as well as to create new, healthy ones [30].

#### **Protein deficiency diseases (losses):**

1. Kidney related diseases.
2. Disturbance of pH balance in urine [31].
3. Risk of kidney stones.
4. Consuming more than 30 percent of total calories is harmful [31].
5. The amount of ketones in the body increases which is a toxic substance.
6. Excess protein increases the cholesterol level of the body, which can lead to heart disease, stroke and cancer .
7. By increasing the amount of protein, the intake of carbohydrates decreases, due to which the body gets less fiber [32].
8. The body has difficulty in excreting waste products from the metabolism of proteins [33].

#### **Protein-rich diet plan**

An ideal diet plan emphasizes using all the nutrients in a balanced way. But we can time them to protein intake to improve their intake of a particular nutrient. The plan below will help increase the amount of protein in the body [34,35].

Time

Warm amla water at 6:00 a.m. (1 glass) drenched walnuts (3 pieces – half of one) 6:30 am, the banana (1 small size)

8:30 am -Non-sugared soy milk (200 ml)

10:00 am

-Steamed veggies and sprouts (1 bowl) Smoothie made with apples, almonds, and chia seeds and low-fat milk (1 glass)

12:00 pm

Water from coconut (1 coconut) Guava (with peel- 2) (with peel- 2)

2:15 pm -Salad with lettuce, tomato, cucumber, carrots, and beets (1 bowl)

3:30 pm

-One cup of green tea with cinnamon chunks, low-fat paneer (0.5 cups) Bhurjira

8:15pm -Salad with tomatoes, cucumbers, and carrots (1 bowl)

8:30 pm -An oil-free oatmeal chilla (2 pieces) 10:30 p.m.: Soya matarkiSabzi (1.5 katori). One cup of jasmine green tea no sweetener nuggets

10:30 p.m.: One cup of unsweetened green tea.

Breakfast should consist of steamed veggies and seedlings along with an apple, almond, and chia seed smoothie.

Lunch should consist of a bowl of tofu and spinach-topped quinoa casserole, 1.5 bowls of mixed veggies, and raita. Add two servings of oat cheela and 1.5 bowls of vegetarian soy peas without oil in your evening meal.

Have a cup of unsweetened jasmine green tea to cap off your day. Your protein consumption will significantly improve if you stick to this eating plan.

### Conclusion

Protein is needed to give energy to our body. To stay healthy, we should include protein-rich foods in our diet daily. About 15 to 35 percent of our diet should be of protein. The body gets plenty of amino acids from protein. Protein is very important for maintaining the growth and fitness of children. Talking in simple language, protein is needed to do all our daily tasks. Generally people consider non-veg, better for protein, but it does not mean that protein is not found in vegetarian food. If you are a vegetarian, milk, curd, paneer, pulses and some fruits and vegetables can meet the protein deficiency. Protein and vitamin B12 deficiency is very common in vegetarian individuals. However, with proper methods and dietary rules, you will not find it difficult to overcome these complications. A well-planned vegetarian diet contains the macro and micronutrients you need for optimal physiological functions. We hope this article gives you detailed information about the top vegetarian protein sources.

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