

# Get the Facts: Veggies & Protein

## **Myth:**

Vegetarians/Vegans do not get enough protein and are weak/cannot build muscle.

## **Fact:**

Vegetarian/vegan diets have been long debated as incomplete in nutritional value and have been looked down upon especially in the bodybuilding/fitness field. The thought is that without animal products, there is no way to get all of the proteins we need for proper muscle growth. There are 8 amino acids that humans must acquire through the diet for proper nutrition:

1. Histadine
2. Leucine
3. Methionine
4. Isoleucine
5. Valine
6. Phenylalanine
7. Lysine
8. Threonine
9. Tryptophan

Most if not all animal products contain all of these plus the amino acids we can synthesize. The fact that plants do not all contain these is the basis for our debate. When looking into each amino, you can find one or more of the essentials in plants such as soy, pea, chia, hemp, quinoa, and buckwheat. When looking at the ingredients in most vegetarian/vegan meat products, they will invariably contain one or more of these ingredients. Also, most vegetarians/vegans will have a variety of vegetable based foods in their diets (because of boredom of same foods or by seeking out non-meat products). One big exception is Leucine. This amino acid has recently been regarded as the ruler over the rest. This is because recent studies have shown convincing evidence of what is called the "Leucine threshold." Giron et. al, as well as many other researchers in the past few years have shown leucine's stimulatory effects on muscle growth. A certain level of leucine has been shown to stimulate the recovery process allowing other amino acids to be incorporated into the muscle fibers. The specific amount is still under review but 2-3g per meal has been about the average. Unfortunately, not many plant products contain this much leucine unless an uncomfortably large serving is consumed. Luckily for us, technology has solved this problem with purified Branched Chain Amino Acids (BCAA) usually containing a larger proportion of leucine than the others. With this in mind, there is absolutely no reason why a vegan or vegetarian would suffer malnutrition or lack appropriate nutrients for muscle growth. It is mainly about being cognizant of what you are eating and how much (not usually a problem for those who check the ingredient label for meat products anyway).

### Conclusion:

Veggies and vegans absolutely can get just as much if not more protein or amino acids as a strict carnivore.

As long as you stick to a good workout routine and nutrition plan, you should see the same results regardless of dietary restrictions. And if you still are having trouble, look at supplementation. We have the resources to supply almost any nutrient one may be deficient in so we really do not need to rely on meat products for a balanced diet.

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If you still aren't convinced, this is Jim Morris a vegan bodybuilder who competed until he was 70 years old.



References: Girón, M. D., Vílchez, J. D., Salto, R., Manzano, M., Sevillano, N., Campos, N., . . . López-Pedrosa, J. M. (2015). Conversion of leucine to  $\beta$ -hydroxy- $\beta$ -methylbutyrate by  $\alpha$ -keto isocaproate dioxygenase is required for a potent stimulation of protein synthesis in L6 rat myotubes. *Journal of Cachexia, Sarcopenia and Muscle*, 7(1), 68-78. doi:10.1002/jcsm.12032

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Dedicated to Audrey Brunell.