12 Complete Proteins Vegetarians Need to Know About



There are plenty of reasons to eat more meat-free meals: They're nearly always cheaper, lower in calories, and better for the environment. It's easy to get enough protein without eating animals, but the doubters often have another concern: Are these meat-free protein sources *complete*?

The term "complete protein" refers to amino acids, the building blocks of protein. There are 20 different amino acids that can form a protein, and nine that the body can't produce on its own. These are called *essential* amino acids—we need to eat them because we can't make them ourselves. In order to be considered "complete," a protein must contain all nine of these essential amino acids in roughly equal amounts.

Yes, meat and eggs are complete proteins, and beans and nuts aren't. But humans don't need every essential amino acid in every bite of food in every meal they eat; we only need a sufficient amount of each amino acid every *day*. Most dieticians believe that plant-based diets contain such a wide variety of amino acid profiles that vegans are virtually guaranteed to get all of their amino acids with very little effort.

Still, some people want complete proteins in all of their meals. No problem—meat's not the only contender. Eggs and dairy also fit the

bill, which is an easy get for the vegetarians, but there are plenty of other ways to get complete proteins on your next meatless Monday. Here are some of the easiest:



Photo: Tattooed Martha

1. Quinoa

Protein: 8 grams per 1 cup serving, cooked

A food so healthy that NASA hopes we'll grow it on interplanetary space flights, quinoa looks a lot like couscous, but it's way more nutritious. Full of fiber, iron, magnesium, and manganese, quinoa is a terrific substitute for rice *and* it's versatile enough to make muffins, fritters, cookies, and breakfast casseroles .

Go-to recipes:

- Black Bean and Cilantro Quinoa-Stuffed Peppers
- Roasted Strawberry Quinoa Parfait
- Crispy Quinoa Fritters with Dill and Garlic Yogurt
- Chocolate Quinoa Cookie Cake
- 2. Buckwheat

Protein: 6 grams per 1 cup serving, cooked

Buckwheat is, in fact, not a type of wheat at all, but a relative of rhubarb. While the Japanese have turned the plant into funky noodles

called soba, most cultures eat the seeds by either grinding them into flour (making a great base for gluten-free pancakes!) or cooking the hulled kernels, or "groats," similarly to oatmeal. Buckwheat is crazy healthy: Some studies have shown that it may improve circulation, lower blood cholesterol and control blood glucose levels . Go-to recipes:

- Buckwheat Chili
- Mushroom Buckwheat Risotto with Goat's Curd
- Roasted Spiced Pumpkin with Toasted Buckwheat
- Soba Noodles with Peanut Dressing
- 3. Hempseed

Protein: 10 grams per 2 tablespoon serving

Chillax, bro, this hemp won't get anyone stoned. This relative of the popular narcotic contains significant amounts of all nine essential amino acids, as well as plenty of magnesium, zinc, iron, and calcium. They're also a rare vegan source of essential fatty acids, like omega-3s, which can help fight depression *without* the need to get high! Go-to recipes:

- Raw Pumpkin Hemp Seed Protein Bars
- Lemon Hemp Seed Cookies
- Gluten-Free Pizza with Hemp Seed Pesto
- Strawberry Blueberry Smoothie with Hemp Seeds



Photo: Carrie Vitt

4. Chia

Protein: 4 grams per 2 tablespoon serving

No longer used to grow fur on boring clay animals, chia seeds are the highest plant source of omega-3 fatty acids, and they contain more fiber than flax seeds or nuts. Chia is also a powerhouse of iron, calcium, zinc, and antioxidants, but the best thing about these little seeds is that they form a goopy gel when combined with milk or water. This makes them fantastic for making healthy puddings, thickening smoothies, or replacing eggs in vegan baking. Go-to recipes:

- Coconut Chia Pudding
- Pear and Chia Whole Wheat Pancakes
- Chia Vegan Protein Muffins
- Spicy Roasted Cauliflower with Chia Seeds
- 5. Soy

Protein: 10 grams per ½ cup serving (firm tofu), 15 grams per ½ cup serving (tempeh), 15 grams per ½ cup serving (natto)

While beans are normally low in the amino acid methionine, soy is a complete protein and thoroughly deserves its status as the go-to

substitute for the meat-free (but go easy on the processed varieties).

Tempeh and natto are made by fermenting the beans, but tofu is probably the best known soy product. If protein's a concern, it's important to choose the firmest tofu available—the harder the tofu, the higher the protein content.

Go-to recipes:

- Beer-Marinated Tofu
- Orange Pan-Glazed Tempeh
- Noodles and Natto

• Soy Bean and Napa Cabbage Salad

6. Mycoprotein (Quorn)

Protein: 13 grams per 1/2 cup serving

Originally developed to combat global food shortages, mycoprotein is sold under the name "Quorn" and is made by growing a certain kind of fungus in vats and turning it into meat substitutes that are packed with complete protein. Admittedly, it's a little weirdsounding, but mycoprotein is sometimes considered part of the mushroom family, and while there are some allergen concerns, only one in 146,000 people experience adverse reactions. To the rest, it's pretty darn tasty. Since it's usually bound together with free range egg whites, Quorn is not technically vegan-friendly, but the company does have some vegan products.

Go-to recipes:

- Quorn-Stuffed Roasted Peppers
- Mediterranean Vegetable and Quorn Puff Pie
- Quorn Samosas
- Quorn Lasagna



Photo: Holly Warah

7. Rice and Beans

Protein: 7 grams per 1 cup serving

One of the simplest, cheapest, and vegan-est meals in existence is also one of the best sources of protein around. Most beans are low in methionine and high in lysine, while rice is low in lysine and high in methionine. Put 'em together, and whaddaya got? Protein content on par with that of meat. Subbing lentils or chickpeas for beans produces the same effect. These meals are a great way to load up on protein and carbohydrates after an intense workout. Go-to Recipes:

- Mango Salsa Black Beans and Coconut Rice
- Hot and Smoky New Orleans Red Beans and Rice
- Palestinian Lentils and Rice
- Indian Chickpea Stew with Brown Rice

8. Ezekiel Bread

Protein: 8 grams per 2 slice serving

"Take wheat, barley, beans, lentils, millet, and spelt, put them in one vessel and make them into bread for yourself." This fragment of Ezekiel 4:9, while initially intended to help a besieged Jerusalem make bread when supplies were low, turned out to be a recipe for an extraordinarily nutritious loaf that contains all of the essential amino acids. It's also usually made from sprouted grains, a process which significantly increases the bread's fiber and vitamin content, as well as its digestibility .

Go-to recipes:

- Ezekiel Bread from Scratch (Note: Requires a flour grinder)
- Ezekiel Bread Pizzas
- Ezekiel Flour Pumpkin Muffins
- Ezekiel Pasta with Lemon, White Wine, and Caper Sauce
- 9. Seitan

Protein: 21 grams per 1/3 cup serving

Wheat gluten gets demonized by a lot of people these days, but with the obvious exceptions of celiac-sufferers and the gluten intolerant, it's nothing to be afraid of. First created more than a thousand years ago as a meat substitute for Chinese Buddhist monks, seitan is made by mixing gluten (the protein in wheat) with herbs and spices, hydrating it with water or stock, and simmering it in broth. But this one's not complete on it's own—it needs to be cooked in a soy saucerich broth to add gluten's missing amino acid (lysine) to the chewy, very meat-like final product.

Go-to recipes:

- Seitan Faijitas
- Seitan Stir-Fry with Black Bean Sauce
- Beer-Simmered Seitan Carnitas
- Barbecue Seitan Sliders



Photo: Dori Grasska

10. Hummus and Pita

Protein: 7 grams per 1 whole-wheat pita and 2 tablespoons of hummus

The protein in wheat is pretty similar to that of rice, in that it's only

deficient in lysine. But chickpeas have plenty of lysine, giving us all the more reason to tuck into that Middle Eastern staple: hummus and pita. Chickpeas have a pretty similar amino acid profile to most legumes, so don't' be afraid to experiment with hummus made from cannellini, edamame, or other kinds of beans. Go-to Recipes:

- Roasted Red Pepper Hummus with Garlicky Pita Chips
- Greek Vegetables, Hummus, and Pita Pizza
- Avocado and White Bean Hummus and Pita Chips
- Sun-Dried Tomato Hummus and Pita

11. Spirulina with Grains or Nuts

Protein: 4 grams per 1 tablespoon

Contrary to popular belief, this member of the algae family is not a complete protein, since it's lacking in methionine and cysteine. All that's needed to remedy this is to add something with plenty of these amino acids, such as grains, oats, nuts, or seeds (Check out the recipes below for more suggestions.).

Go-to recipes:

- Raw Spirulina Energy Crunch Bars
- Mixed Nutty Spirulina Smoothie
- Spirulina Popcorn
- Spirulina and Hemp Truffles

12. Peanut Butter Sandwich

Protein: 15 grams per 2-slice sandwich with 2 tablespoons of peanut butter

See how easy this is? Every time legumes like beans, lentils, and peanuts are combined with grains like wheat, rice, and corn, a complete protein is born. Peanut butter on whole wheat is an easy snack that, while pretty high in calories, provides a heaping dose of

all the essential amino acids and plenty of healthy fats to boot. Go-to recipes:

- Grilled Pumpkin, Peanut Butter, and Apple Sandwich
- Roasted Tofu Sandwich with Peanut Sauce
- Peanut Butter, Green Tomato and Jalapeño Jam Sandwich
- Whole Wheat Peanut Butter Banana Bread



Got something to say? Let us know in the comments below, or tweet the author @ncjms.