Protein

by Angela Poch, NC

BODY BUILDING
GROWTH & REPAIR
ENERGY & ENZYMES

Can you get enough on a vegan diet ???

You'll want to learn how it affects your health and happiness.

VEGANS?
SOURCES FOR?
HOW MUCH?

Protein Info Sheet

Powerful Protein

Introduction

Protein. Amino acids. The building blocks for the entire body. It is one of the 3 macronutritents (along with carbohydrates and fat) needed for life. About 65% of the protein found in the human body is in the muscles, thus protein is associated with strength. Interestingly enough though the body makes it's own protein, over 50,000 different ones, using the amino acids found in the foods we eat.

Muscles in the body do not happen just from eating muscles (meat). Abundant weight bearing exercise combined with a balanced diet is needed to make muscle tissue and to enhance it's strength. Proteins are used in the growth and repair of tissue in the body. Just about every cell needs protein in one way or another, and many of the hormones in our bodies are proteins, such as insulin.

In this modern society vegans and vegetarians are getting questioned about how are they getting enough protein?

How much do we need?

The RDA established by the National Research Council recommends 0.8 grams of protein for every kilogram (.36 gram per pound) of body weight or 50 to 65 grams per day for an average adult. If recovering from an injury or muscle loss the body may require more. Another measurement for appropriate protein amounts in the body is percent of calories, 8 to 10% of daily calories should be protein, the remaining 90% should be carbohydrates and fat.

Where does a vegan get their protein?

From grains, nuts, seeds, and legumes. Most plant foods have some protein in them. See the SOURCE CHART on the next page for a list of foods and their protein amounts. Want a quick menu? Half of a cantaloupe, a bowl of oatmeal, about 1.5 cups, with 4 Tbsp of chopped walnuts, 1 cup of soy milk, and you have over 30 grams just in breakfast. Eat a big bowl of chili (1.5 cups) and a thick slice of bread for lunch and you add 23 more grams. There you've covered it in just two meals!

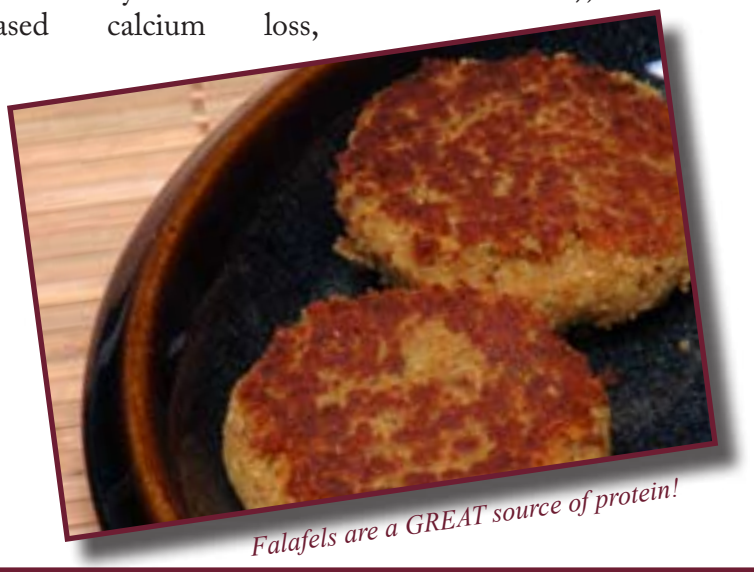
What about Animal Protein? Isn't it better?

For many years prior to extensive research on human physiology an old wives tale was developed and is still seen popping its head up, like a superstitious black cat. That wives tale is eating meat will make you strong. The idea was since most meat is muscle tissue it would convert into human muscle. There is another myth that animal protein is a better quality of protein. See Complete Protein Facts and Myths for more on this subject. Studies have shown the individual amino acids in the protein are the same whether from animal or plant and it is the amino acids the body needs to build its own proteins.

While there is truth to the fact animal protein is more easily absorbed (90 to 100%), that can actually be more of a problem than a benefit.

Most people in industrialized countries suffer from excess protein, animal protein in particular. In fact, most Americans consume 105 to 120 grams of protein per day, remember we only need 50 to 65 grams, that is twice the recommended amount.

All of the unneeded protein is stored as fat, which has implications of its own. Like heart disease, obesity, and so on, if the fat builds up too far. Obesity is fast becoming a major epidemic. But excess protein has direct implications as well. It causes stress on the kidneys, produces ammonia (toxic to the system and linked to colon cancer), increased calcium loss,



Falafels are a GREAT source of protein!

increased phenol levels (implicated in bowel cancer), linked to kidney stones, increased blood cholesterol levels, and B6 deprivation.

COMPLETE PROTEIN FACTS & MYTHS!

What is a complete protein and how do I get it in a vegan diet?

A complete protein is one that contains all 9 (some say 8) of the essential amino acids, called essential because we must ingest these amino acids. There are another 13 (this number keeps increasing as scientists learn more) amino acids needed to build proteins, but your body can manufacture them itself.

Most animal products, but NOT all (ie. ground beef is low in tryptophan), contain all these amino acids and are considered complete proteins, while most plant foods general miss one or more. Grains are low in lysine, but legumes are not. Legumes are low in methionine, but grains are not.

So, back in the 70's a lady named Frances Moore Lappe published a book "Diet for a Small Planet" she said vegetarians should combine foods to create a complete protein at each meal. Charts were developed and devotes made. But, in 1988 the American Dietetic Association said as long as all 9 of the amino acids are eaten in any given day (not meal) then the body is smart enough to combine them itself. And in the 10th Edition of "Diet for a Small Planet" Frances renounced the theory.

Unfortunately, the myth continues. (Much like Darwin.) Doctors, dieticians, nutritional websites by the droves confirm as long as you get all the amino acids in one day you're just fine. And unless your a fruitatarian, raw-foodist, or never eat grains, you don't even have to worry about it. You are naturally going to get a mix if you eat a variety of foods as has been stated again and again by vegan nutrition experts. But if you are still worried about it, just make sure you eat beans and rice in the same day OR bread and nuts in the same day. Grains + Nuts or Grains + Legumes. That's all there is to it!

Peanut butter sandwich anyone?

PROTEIN SOURCES

Food Item	Serving	Protein
Almond butter	2 Tbsp	5
Almonds	1/4 cup	8
Bagel	1 med.	9
Black beans, cooked	1 cup	15
Black-eyed peas, cooked	1 cup	11
Broccoli, cooked	1 cup	4
Brown rice, cooked	1 cup	5
Buckwheat flour	1 cup	15.14
Bulgur, cooked	1 cup	6
Bulgur, cooked	1 cup	5.61
Bulgur, dry	1 cup	11.7
Cashews	1/4 cup	5
Chickpeas, cooked	1 cup	12
Cornmeal, regular	1 cup	17.21
Cornmeal, whole-grain	1 cup	9.91
Gluten or Seitan	3 oz	31
Kidney beans, cooked	1 cup	13
Lentils, cooked	1 cup	18
Lima beans, cooked	1 cup	10
Mushrooms, canned	1 cup	2.92
Mushrooms, cooked	1 cup	3.39
Peanut butter	2 Tbsp	8
Peas, cooked	1 cup	9
Pinto beans, cooked	1 cup	12
Potato	1 med.	4
Quinoa, cooked	1 cup	10
Soy milk, commercial	1 cup	7
Soy yogurt, plain	6 oz	6
Soybeans, cooked	1 cup	29
Spaghetti, cooked	1 cup	8
Spinach, cooked	1 cup	5
Sunflower seeds	1/4 cup	6
Tofu, firm	4 oz	11
Tofu, regular	4 oz	9
TVP, cooked	1/2 cup	8
Veggie baked beans	1 cup	12
Wheat flour, whole-grain	1 cup	16.44
Whole wheat bread	2 slices	5

Protein amount is listed in grams.

DNA & Protein

DNA is the code which enables our bodies to build protein molecules from the amino acids. It is so complex that some scientists have become creationists after studying the DNA process.

For more information on the complexity of the human body's mechanisms that produce protein check out a couple resources:

www.leestrobel.com

www.AnswersinGenesis.org

REFERENCES

2005 Department of Biology, Davidson College

Robert M. Russell, M.D. and Carmen Castanada Sceppa, M.D., Ph.D., "How Much Protein Do You Need?", 2008 interMDnet Corporation.

Blackburn et at. (2001), Cleveland Clinic Journal of Medicine.

Reed Mangels, Ph.D., R.D., "Protein in the Vegan Diet", www.vrg.org

Fatfree: The Low Fat Vegetarian Archive

Charles R. Attwood, M.D., F.A.A.P, "'Complete' Proteins?", excerpt from: Dr. Attwood's Low-Fat Prescription for Kids.

Barbara J. Cohen & Dena L. Wood, "Memmler's The Human Body in Health and Disease", 9th edition.

Walter Veith, PhD, "Diet and Health Scientific perspectives". Medpharm. CRC Press.

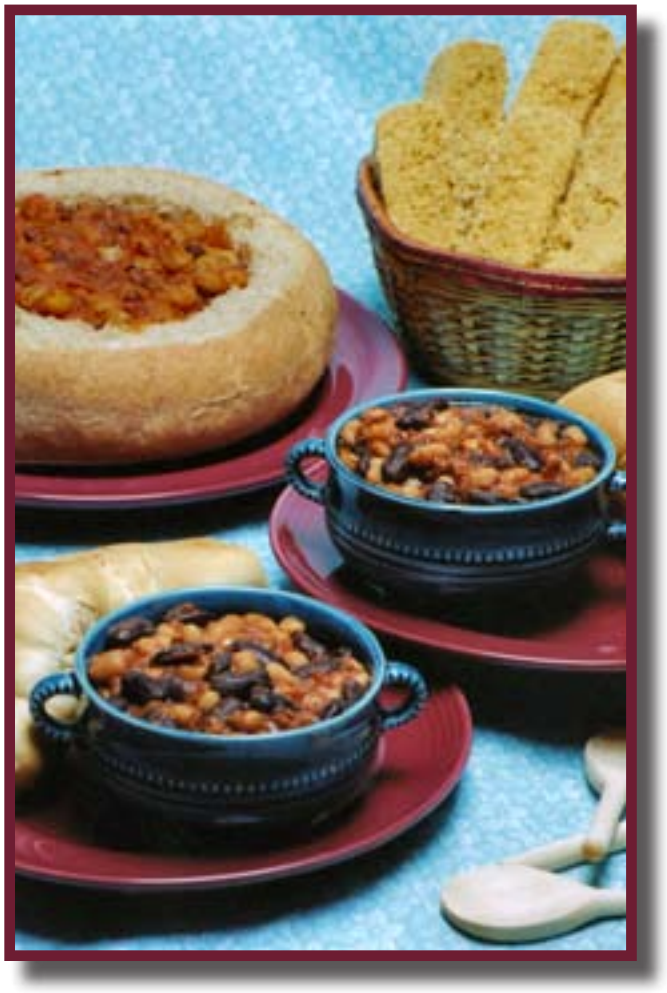
T. Colin Campbell, Ph.D., "The China Study", Benbella Books

Sources for nutrition include: BC Health Files, USDA Nutrient Guides, and more.

DISCLAIMER

This handout is intended to offer general information which is subject to change. We do not make any diagnosis or personal treatment suggestions. This information is not intended to diagnose, treat, or cure any disease. We urge you to learn about nutrition and health so that you can make informed decisions to preserve or regain the vibrant good health you deserve.

Natural sources of protein abound in even the "uncareful" vegan's diet.



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