



Protein, Protein, Protein

Educate Yourself:

*“Dr Ray Peat highlighted the critical importance of consuming at least 100 grams of **high-quality protein** daily, noting that insufficient protein intake can drastically impair your metabolic rate and overall health.”*

Benedicte Mai Lerche MSc PhD, How to Boost Metabolism with Food (2023, p. 157)

Protein = “of Prime Importance”

Daily Dietary Protein is CRITICAL and REQUIRED for:

- | | |
|--------------------------|------------------------------|
| 1. Building muscle | 6. Manufacturing hair & skin |
| 2. Decreasing body fat | 7. Reduced cravings |
| 3. Increased energy | 8. Hormone production |
| 4. Healthy immune system | 9. Balanced blood sugar |
| 5. Mental clarity | 10. Proper acid balance |

Adapted from Forever Strong: A New, Science-Based Strategy for Aging Well, Gabrielle Lyon MD, Atria Books, 2023.

“A lack of dietary protein can also result in estrogen dominance and **inflammation.**”
(RayPeat.com)

PROTEIN: A NECESSITY FOR EVERY BODY – by David Heber, MD PhD FACP FACN Chairman, Herbalife Nutrition Institute

Protein is an important component of every cell in the body. It is an organic compound, **composed of 22 amino acids**, otherwise known as the building blocks of life. Protein is stored in muscles and organs, and the body utilizes it to build and repair tissues, as well as for the production of enzymes and hormones. Protein also makes it possible for blood to carry oxygen throughout the body. Along with fat and carbohydrates, protein is a "macronutrient," meaning the body needs relatively large amounts of it. **A lack of protein can cause loss of muscle mass, decreased immunity**, as well as weakening of the heart and respiratory system.

Adapted from the HerbalifeWLC.com Weight Loss Challenge Week 1 Materials

Of the 22 amino acids available, 9 of them must be consumed, and are called Essential Amino Acids. The remaining can be manufactured by our bodies, provided there is a sufficient amount of the 9 essentials are consumed.

What is the Optimal Daily Protein Intake ??

The age-old question!

Log on to
calculator.net/protein-calculator.html

Male, 50 years old, 6 feet tall, 185 pounds, light exercise habits:

These are the recommendations from multiple authoritative institutions:

American Dietetic Association (ADA): **at least 84 - 151 grams/day.**

The Centers for Disease Control and Prevention (CDC): **58 - 204 grams/day** (10-35% of daily caloric intake).

World Health Organization **safe lower limit: 70 grams/day.**

Female, 50 years old, 5 feet 5 inches, 160 pounds, light exercise habits:

These are the recommendations from multiple authoritative institutions:

American Dietetic Association (ADA): **at least 73 - 131 grams/day.**

The Centers for Disease Control and Prevention (CDC): **45 - 158 grams/day** (10-35% of daily caloric intake).

World Health Organization **safe lower limit: 60 grams/day.**

Other things to consider:

- Lean body mass vs total body weight
- Level of activity
- Age – elderly need more
- Type of proteins being eaten:
 - Is it a complete or incomplete source?
 - What is the digestibility score?

How digestible are sources of protein?

Here are a few protein sources in each category, animal and plant, along with their Protein Digestibility Corrected Amino Acid Score (PDCAAS), which refers to how many essential amino acids a protein contains and how well they are digested. The scale is from 0 to 1.0, with 1.0 being the best source of absorbable protein and the easiest to digest.



Why I Gave Up My Vegan Diet by Kevin Gianni, What Doctors Don't Tell You, September, 2016

Protein Options

Meat – Complete Protein Source

Chicken, Turkey, Pork,
Beef, Bison, Elk, Goat, Lamb,
Venison, (ruminants) =
~ 20- 24 grams per 3 oz serving

Questions to ask: Is the animal
monogastric or multigastric?
What did the animal eat?



Fish & Other Seafood – Complete Protein



Anchovies, herring = 13 to 15 grams per 3 oz serving
Shrimp, crab, lobster = 18 – 20 grams per 3 oz serving.
Cod, Founder, Haddock, Salmon, Snapper, Trout =
~ 18 – 20 grams per 3 oz serving
Sardines = 23 grams per 3 oz serving
Tuna is 25 grams per 3 oz serving.

Questions to ask: How was the seafood harvested?
Wild-caught vs Farmed.
Tuna – how big was the fish?

Eggs – Complete Protein

6 grams of protein per egg.

Questions to ask: What were the animals fed?
Were the eggs washed?

Low PUFA, Mobile Pasture Raised		Organic, Pasture-Raised	Grocery Store Cage Free
			
0.59 g	Linoleic Acid per 4 eggs	2.5 g	2.4 g
6.4	n6:n3 ratio	12.5	12.9

Which is the same
amount of Linoleic
Acid (LA) in one
tablespoon of
Canola Oil.



1 Tbsp = 2.5 g LA



Graphics from Angel-AcresFarms.com

Insects – Complete Protein – Nutritional Profile: High Protein but Hidden Risks

Insects like crickets, mealworms, and grasshoppers are marketed as "superfoods" due to their high protein content (up to 70% by dry weight) and rich micronutrient profiles, including iron, calcium, and B vitamins. For example, cricket flour contains more iron than spinach and more calcium than milk per gram. However, these claims often overlook critical drawbacks:

- **Chitin and Digestibility:** Insect exoskeletons are composed of chitin, a fibrous polysaccharide that humans struggle to digest due to limited chitinase enzyme activity. This reduces bioavailability and may cause gastrointestinal distress.
- **Allergenic Potential:** Insect proteins share structural similarities with shellfish allergens (e.g., tropomyosin), posing risks for individuals with crustacean allergies.
- **Toxin Accumulation:** Insects bioaccumulate pesticides, heavy metals, and mycotoxins from their feed, raising contamination concerns. For example, crickets fed agricultural byproducts may retain glyphosate residues. *Per BrightAnswers.ai inquiry 1/11/2026*

Insect protein is exactly what it sounds like: protein derived from farmed insects. The most common species used in food products are the house cricket (*Acheta domesticus*), yellow mealworm (*Tenebrio molitor*), lesser mealworm (*Alphitobius diaperinus*), and migratory locust (*Locusta migratoria*). huhuly.com/cricket-flour-in-your-food-12-label-names-to-know accessed 9/2026

Soft & Hard Cheeses – Complete Protein

Cottage Cheese = ~ 12 – 14 grams per ½ cup srvg
American, Cheddar, Colby, Mozzarella (string),
Provolone, Swiss = ~ 6 – 8 gr per 1 oz
Cream Cheese, Feta, Parmesan =
~ 2 – 4 grams per 1 oz serving

Questions to ask: Is it real cheese?
Is it raw cheese? From A2 cows?

Hint: Velveeta is not real cheese.

INGREDIENTS: SKIM MILK, MILK, CANOLA OIL, MILK PROTEIN CONCENTRATE, SODIUM PHOSPHATE, CONTAINS LESS THAN 2% OF MODIFIED FOOD STARCH, WHEY PROTEIN CONCENTRATE, MALTODEXTRIN, WHEY, SALT, CALCIUM PHOSPHATE, LACTIC ACID, SORBIC ACID AS A PRESERVATIVE, MILKFAT, SODIUM ALGINATE, SODIUM CITRATE, ENZYMES, APOLCAROTENAL AND ANNATTO (COLOR), CHEESE CULTURE, VITAMIN A PALMITATE. CONTAINS MILK.



Ruminant Dairy Items - Complete Protein

Each is per 8 oz serving)
Yogurt, traditional = ~ 12 grams
Yogurt, Greek = ~ 20 grams
Cow's Milk = ~ 8 grams
Soy Milk = ~ 8 grams (non-dairy, but complete)

Questions to ask: A2 cows? Homogenized? Pasteurized?
For yogurt, when were the bacteria added?



Gelatin – Complete Protein - almost

6 grams of protein per tablespoon.

Gelatin is the cooked form of collagen and typically comes as a powder or sheet. It is a translucent, colorless, flavorless protein that usually comes from cows or pigs.



“Unlike muscle meat, gelatin provides an amino acid profile beneficial for thyroid health and longevity as it lacks tryptophan and contains only minimal cysteine and methionine. Instead, gelatin is abundant in glycine, known for its anti-inflammatory properties.” (Lerche, page 185.) An excellent source is bone broth.

And speaking of collagen, try our Beauty Booster!
2 grams of protein / 2.5 grams of collagen per serving



Non-Dairy Milk-like Items - INcomplete Protein

Almond, Rice, Oat, Coconut Milk = ~1 gram per 8 oz serving

Questions for the almond, rice, coconut and other milk drinks ... why??

Nuts & their Butters – INcomplete Protein

Macadamia = ~ 2 grams per 1 oz serving
Brazil, Cashew, Pecan, Walnut = ~ 4 grams oz
Almond, Pistachio, Peanut = ~ 6 grams oz
Hemp hearts = 10 grams per 3 tablespoons



Questions to ask: How are the nuts processed? Are they raw, or cooked in rancid fat and coated with sugar? Reminder: **All nuts except macadamia are high in PUFA fats.**

Breads, Cereals, Grains –Incomplete

Buckwheat = 6 grams per cup	Cheerios = 3 grams per cup
Corn meal = 11 grams per cup	Oatmeal, instant = 4 grams per packet
Rice = 4 grams per cup	Whole wheat bread = 3.6 grams per slice

Questions to ask: The biggest problem for grains is the issue of glyphosate, and yet, those levels typically are not tested. There are other grains that are “almost” complete. They have the nine amino acids, but one or two are in such low levels, it doesn’t count.

Are oxalates a problem for you? Many of these grains are very high in oxalate.

Seeds – Complete Protein

Per 1 oz serving:

Chia seeds – 4.7 grams

Pumpkin seeds (Pepitas) – 4 grams

Quinoa = 8 grams per cup



Seeds – Incomplete Protein

Per 1 oz serving:

Amaranth = 4 grams

Flax seeds = ~ 4.7 grams

Caution: raw flax contains cyanogenic glycosides

Hemp seeds = 8 grams

Sesame seeds = 5 grams

Sunflower seeds = 6 grams

Squash seeds = 4 grams

Watermelon = 8 grams



Questions to ask: Again, how are the seeds processed? Are they raw, or cooked in rancid fat and coated with sugar?

Vegetables such as Dry Beans – Incomplete except for Soy

Lentils = ~ 9 grams per ½ cup serving

Black beans = 8 grams per ½ cup

Navy, Pinto, Red = ~ 6 grams per ½ cup serving

Pea protein = 5 grams per ½ cup serving

Soybeans as Edamame = ~ 3 grams per 1 oz serving

Soybeans as Tofu = 10 grams per ½ cup

Soy flour, defatted = 49 grams per cup



Questions to ask: What is the protein to carb ratio? As with the grains, most beans are a poor choice to raise protein levels.

Are you oxalate sensitive? These are almost off the chart.

Soy “Impossible Burger” – Complete Protein Source – but also completely crazy

	4 ounce Beef Burger	4 ounce The Impossible Burger
Calories	240	240
Total fat	13 grams	14 grams
Carbs	0 grams	9 grams
Protein	19 grams	19 grams

Ingredients for Beef Burger: Beef

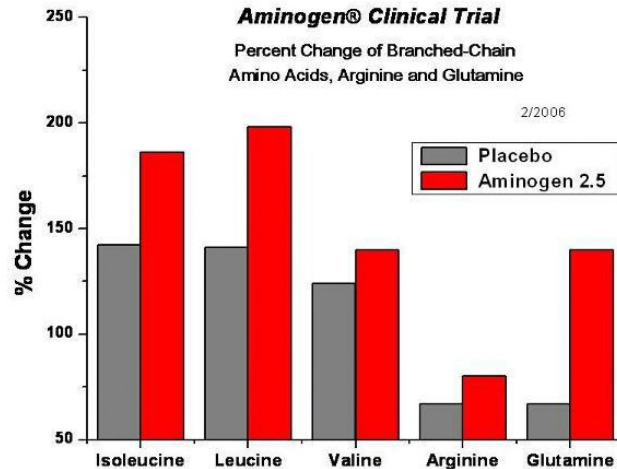
Ingredients for Impossible Burger: Water, Soy Protein Concentrate, Coconut Oil, Sunflower Oil, Natural Flavors, 2% or less of: Potato Protein, Methylcellulose, Yeast Extract, Cultured Dextrose, Food Starch Modified, Soy Leghemoglobin, Salt, Soy Protein Isolate, Mixed Tocopherols (Vitamin E), Zinc Gluconate, Thiamine Hydrochloride (Vitamin B1), Sodium Ascorbate (Vitamin C), Niacin, Pyridoxine Hydrochloride (Vitamin B6), Riboflavin (Vitamin B2), Vitamin B12.

And 263 patents globally!!

Herbalife Products – All Complete Protein Source except the Vegan Shake

Beverage Mix (Bev Mix) – gelatin/whey = 15 grams per serving
 Formula 1 Healthy Meal – soy isolate = 9 grams per serving
 F1 + PDM packs – soy isolate = 24 grams per pack
 HBL24 Achieve Protein Bar – whey/milk = 20 grams per bar
 HBL24 Enhanced Protein Powder (EPP) – whey/milk = 24 grams per serving
 HBL24 Formula 1 Sport – whey = 9 grams per serving
 HBL24 Rebuild Strength – whey/milk = 24 grams per serving
 Helio Super Shake – whey / pea / milk = 30 grams per serving
 Iced Coffee – whey = 15 grams per serving
 Protein Baked Goods Mix – soy isolate, milk = 15 grams per serving
 Protein Bite – soy protein nuggets / milk / collagen = 4 grams per bite
 Protein Drink Mix (PDM) – soy isolate = 15 grams per serving
 Personalized Protein Powder (PPP) – soy isolate /whey = 5 grams per tablespoon
 Protein Bar Deluxe – whey/casein = 10 grams per bar
 Select Formula 1 Shake – pea, quinoa, brown rice = 9 grams per serving
 Select Protein Drink Mix – pea, quinoa, brown rice = 15 grams per serving
 Vegan Shake – pea/pumpkin/chia = 20 grams per serving *incomplete*

A Supplement that can Facilitate Protein Assimilation: Aminogen



Take Action:

My Daily Protein Target is: _____

Make it a GOAL to hit your protein target EVERY DAY this week.

My Favorite Protein Snacks are:

_____ grams per _____

_____ grams per _____

_____ grams per _____

Use your FOOD JOURNAL. RECORD EVERYTHING!!

Highlight things you've noticed about your energy, health, hunger, sleep, aches & pains etc.

Resources for Further Study:

- AuthorityNutrition.com/how-much-protein-per-day* (accessed 4/8/2015) Protein Intake – How Much Protein Should You Eat Per Day?
- Bergeron, Stephen (updated August 20, 2013) *builtlean.com/2012/12/24/protein-build-muscle/* Are You Eating Enough Protein To Build Muscle?
- BrightAnswers.ai
- Chaney, Stephen (accessed 9/16/2014) *healthtipsfromtheprofessor.com/soy-and-breast-cancer-recurrence*. Soy and Breast Cancer Recurrence; The Truth About Soy and Breast Cancer.
- Eades, Michael and Eades, Mary Dan (2000, Grand Central) *The Protein Power LifePlan*.
- Gianni, Kevin (September, 2016) *What Doctors Don't Tell You*. Why I Gave Up My Vegan Diet.
- Isaacs, Tony (April 16, 2014) *NaturalNews.com*. Blockbuster New Study: Vegetarians Are Less Healthy Than Meat Eaters in Key Health Categories.
- Lerche, Benedict Mai (2024, BiochemNordic) *How to Boost Metabolism with Food*.
- Lyon, Gavrielle (October, 2023) *Forever Strong; A New, Science-Based Strategy for Aging Well*.
- Mercola.com* (September 3, 2014) The Very Real Risks of Consuming Too Much Protein.
- Mercola.com* (February 27, 2015) Protein and Strength Training – Two Important Components for Healthy Aging.
- Marrow, Nate (October 3, 2012) *BuiltLean.com/2012/10/03/complete-vs-incomplete-protein-sources*
- Rodgers, Diana <https://robbwolf.com/2016/11/07/how-much-protein-do-we-really-need/>
- Tabor, Aaron (accessed 4/8/2015) *cbn.com/health/nutrition/kidneyhealth.aspx*. Be More 'Kidney-Friendly' by Eating Soy.
- Taubes, Gary (2011, Knopf Press). *Why We Get Fat and What to Do About It*.
- Williams, David (2014, August) Alternatives newsletter. *Mercury In Fish: The Latest Findings*.