

Natasha's Summary of 15 Years Protein Research: Optimal Intakes and Timing For Vegans, Children, Strength and Aging Well

While some diets load up on protein and others dictate protein sources, it can be hard to know what to consume while managing weight, maintaining strength or during fat loss. *The current recommended daily allowance for protein is 0.8 grams per kilogram of body weight, and this has not changed in over 70 years.* New research completed primarily in the past 15 years has shown the formula needs to be adjusted to accommodate for increased demands associated with aging, physical activity, hospitalization, surgery, arthritis, pregnancy, and more.

In general, I suggest you calculate your protein intake based on the following formulas (note: you can calculate your weight in kilograms by taking the number of pounds and dividing by 2.2):

- To maintain the muscle you have, you need to consume at least 1.6 grams of protein per kilogram of body weight daily.
- If you are over 60 years of age, or to increase your muscle mass, and on the days you complete muscle-building activities such as strength training, horseback riding, Nordic pole walking or yoga, you should consume 2.0 to 2.2 grams of protein per kilogram of body weight per day.
- Stick to the lower calculation of 1.6 if you have more than 30 pounds of fat to lose.
- Note from Natasha: Stop weighing yourself and start checking your strength via measuring your muscle mass. Everyone should do this, no matter how big or small as it is essential to maintain muscle – it is not at all about just staying thin. You can get one from Amazon for less than \$50. (I got one from Renpho that works with my iphone). As you consume the protein your body needs you will see your muscle increase. You will also be able to identify harmful periods of muscle loss, which will allow you to be more diligent with your protein intake and strength training exercises for body repair.

I have read about these reference ranges in several sources, but here is an example from just one—*Applied Physiology Nutrition Metabolism* (May 2016)—which states: “The National Academy of Sciences has for macro-nutrients proposed ‘Acceptable Macronutrient Distribution Ranges,’ which for protein is 10 percent to 35 percent of total energy. In practice, we suggest 1.5–2.2 [grams per kilogram per day] of a variety of high-quality proteins.”

It's important to mention again that our protein requirements do not decrease with age, as commonly believed. In fact, we need more. As we age, we can develop “anabolic resistance,” which implies we need more protein to reach maximal rates of muscle protein synthesis than when we were younger. What's more, inflammation and trauma also increase protein needs. Disease, physical inactivity and/or the aging process itself compromise dietary protein-induced stimulation of muscle protein synthesis and ultimately result in a greater need for protein to limit

gradual muscle loss, according to work from the Nestlé Nutrition Instruction Workshop Series (2015).

So, keep this in mind when calculating your protein intake. If you are solely vegan or vegetarian, you should add at least an extra 22 grams to your daily target to account for the difference in amino acid content and digestibility.

Here are the take-home points I've gathered from the studies I've reviewed:

1. Consume more protein when you are more active—at least 2.0–2.2 grams per kilogram per day to support strength-building workouts like Nordic pole walking, yoga, weight training, or horseback riding.
2. Consuming 30 grams of protein in the evening can be more beneficial for muscle mass and strength than taking in the same amount in the afternoon. This simple fact is why I have you total your daily protein on your tracker and encourage you to consume a dose at bedtime if you have fallen short of your optimal intake.
3. Consume at least 20 grams of protein during or up to 45 minutes after exercise to maximize post-exercise muscle protein synthesis. Whey protein seems to be most effective, likely because it is quickly digested and absorbed and because of its specific amino acid composition.
4. Your children need at least 7–10 grams of protein at breakfast to repair the effort spent on growing during the night before. This equates to a serving of Greek yogurt protein or one to two egg whites.
5. If you consume three 20-gram servings of whey protein daily, in addition to your normal diet, for 16 weeks, you will gain muscle, lose fat, reduce your blood sugar, and lose harmful visceral fat. These results are noted when whey protein is consumed in addition to strength training or a multi-activity style of workouts (resistance exercise, intervals, stretching/yoga, endurance exercise) for 16 weeks. Our Dream protein (whey protein) has been our second best-selling product for 15 years and you can take one scoop, two to three times a day, and keep your diet the same to potentially achieve this outcome.
6. Consume higher amounts of protein with aging, and make sure you obtain a potent source of leucine to support muscle growth and repair, whether from whey or a fermented soy protein fortified with vitamin D and leucine.
7. The best way to maximize muscle growth is to take in 25–30 grams of protein several times over a 24-hour period by increasing dietary protein at breakfast and lunch without reducing protein intake with dinner. Most people tend to consume smaller amounts of protein at breakfast and lunch than at dinner, which is metabolically harmful.
8. Ingesting a dose of 20–40 grams of a high-quality source every three to four hours appears to affect muscle protein synthesis most favorably when compared to other dietary patterns and is

associated with improved body composition and performance outcomes. Try this with a pea and rice protein, whey protein, or pea protein.

9. Consuming casein protein (approximately 30–40 grams) prior to sleep can acutely increase muscle growth and metabolic rate throughout the night without influencing your body's ability to burn fat.

10. Elevated protein consumption, as high as 1.8–2.0 grams per kilogram per day, may be advantageous in preventing muscle loss during periods of energy restriction to promote fat loss. This could be essential to prevent metabolic decline when dieting with aging.

11. Children should consider consuming a source of dietary protein after physical activity to enhance whole-body anabolism, preferably a 15-gram serving.

12. Long-term consumption of protein at 2 grams per kilogram of body weight per day is safe for healthy adults.

Now you can use these protein tips to stay strong, encourage the safe loss of body fat, and prevent the loss of muscle with aging, a condition called *sarcopenia*, which is linked to weakness, frailty, fatigue, falls, osteoporosis, diabetes, and heart disease. Also, you will most likely require a protein supplement to reach your protein intake goal. If you don't like powders, reduce the amount of water or fluid you add to the drink, so it is easier to consume. Make the commitment to not miss your mark!