A WHOLARA GUIDE

All about *protein* — the building block.

Protein builds and repairs every tissue in your body — muscle, bone, skin, immune cells, enzymes, hormones, neurotransmitters. The current RDA of 0.8 g/kg is the minimum to prevent deficiency, not the optimum. A growing body of research from the ESPEN Expert Group and PROT-AGE consortium recommends 1.0–1.6 g/kg for active adults and older adults to preserve muscle, bone density, and metabolic health. Most women and adults over 50 are quietly under-eating it.

What adequate protein actually does for you.

BUILDS & PRESERVES MUSCLE	SUPPORTS BONE DENSITY	CURBS HUNGER & CRAVINGS	BOOSTS METABOLISM
Leucine triggers muscle protein synthesis via mTOR. Adequate protein + resistance training prevents the 3–8% per-decade muscle loss after age 30.	Higher protein intake (with calcium) is linked to greater bone mineral density and slower bone loss — not the opposite, as the old "acid load" theory claimed.	Most satiating macronutrient. Triggers PYY & GLP-1; suppresses ghrelin. RCTs show 25–30 g per meal reduces next-meal calorie intake.	Highest thermic effect of food at 20–30% (vs ~10% carbs, ~3% fat). Helps preserve resting metabolic rate during weight loss.

Signs you may need more *protein.*

Mild protein inadequacy rarely shows up on standard bloodwork — the body cannibalizes muscle to keep serum levels normal. Symptoms show up first. If several of these are familiar, your intake is likely below 1.0 g/kg.

Hungry within 2 hours of eating	Carb- and fat-dominant meals don't trigger the satiety hormones protein does. Persistent post-meal hunger is a top sign your meal was protein-light.
Loss of muscle tone or "skinny fat"	Visible muscle loss in arms, legs, or core — especially with stable or rising body fat — is classic sarcopenic-obesity, accelerated by low protein.
Slow recovery from workouts	Sore for days, plateaued strength, sluggish performance. Muscle protein synthesis requires 25–30 g of high-quality protein within hours of training.
Brittle hair, nails, or slow wound healing	Hair and nails are 95% keratin (a protein). Slow wound healing, hair shedding, and ridged nails can all reflect inadequate amino acid availability.
Low energy & frequent illness	Antibodies, enzymes, and immune cells are all built from protein. Persistent low-grade fatigue and frequent colds may reflect chronic underconsumption.
Stalled fat loss despite a calorie deficit	Without 1.2–1.6 g/kg during weight loss, the body burns muscle instead of fat. Metabolism slows and rebound weight regain is almost guaranteed.
Loss of strength or balance with age	Sarcopenia (age-related muscle loss) begins around 30 and accelerates after 60. The single best dietary defense is higher protein intake — 1.0–1.2+ g/kg.
Brain fog or low mood	Tryptophan, tyrosine, and phenylalanine (amino acids) are precursors to serotonin, dopamine, and norepinephrine. Chronic underconsumption affects mood.

EAT THESE FIRST

Foods that are rich in *protein.*

Ranked by protein density per typical serving. Animal proteins (top of list) have complete amino acid profiles and higher leucine content; plant proteins need combining or larger portions to match. Both are valid — the right balance is personal.

Chicken breast, cooked · 43 g per 5 oz	EXCELLENT
Whey protein isolate · 25 g per scoop	EXCELLENT
Salmon, baked · 34 g per 5 oz	EXCELLENT
Greek yogurt, plain · 20 g per cup	EXCELLENT
Cottage cheese, low-fat · 24 g per cup	EXCELLENT
Lean beef, cooked · 36 g per 5 oz	VERY GOOD
Eggs, whole · 12 g per 2 large	VERY GOOD
Tofu, firm · 20 g per cup	VERY GOOD
Tempeh, cooked · 31 g per cup	VERY GOOD
Edamame, shelled · 18 g per cup	VERY GOOD
Lentils, cooked · 18 g per cup	VERY GOOD
Black beans, cooked · 15 g per cup	VERY GOOD
Chickpeas, cooked · 15 g per cup	VERY GOOD
Tuna, canned in water · 22 g per 3 oz	VERY GOOD
Sardines, in olive oil · 23 g per can	VERY GOOD
Shrimp, cooked · 24 g per 3 oz	VERY GOOD
Pea protein powder · 20 g per scoop	VERY GOOD
Quinoa, cooked · 8 g per cup	GOOD
Hemp seeds · 10 g per 3 tbsp	GOOD
Pumpkin seeds · 9 g per ounce	GOOD
Almonds · 6 g per ounce	GOOD
Peanut butter · 8 g per 2 tbsp	GOOD
Chia seeds · 5 g per 2 tbsp	GOOD
Milk, 2% · 8 g per cup	GOOD

GO DEEPER

Seven evidence-based ways to *hit your protein target.*

Total daily intake matters most. But how you distribute it across meals matters too — especially for muscle protein synthesis and satiety.

01	Know your daily target	Sedentary adults: 1.0–1.2 g/kg body weight. Active adults: 1.4–1.8 g/kg. Older adults or fat loss: 1.2–1.6 g/kg. A 150-lb woman ≈ 70–100 g/day. Round numbers help: ~30 g per meal, 3 times a day, gets most adults there. *ESPEN Expert Group 2014; PROT-AGE 2013*
02	Anchor every meal with 25–40 g	Muscle protein synthesis is maximally stimulated by ~25–30 g of high-quality protein (delivering ~2.5–3 g of leucine) per meal. Eating 60 g at dinner and 10 g at breakfast wastes the dinner protein. Spread it. *Front Nutr. 2024 (distribution review); J Nutr. 2014*
03	Front-load breakfast	Most people eat 10–15 g at breakfast and 50+ g at dinner — the opposite of what builds and preserves muscle. Swap toast for Greek yogurt with hemp seeds, or eggs with cottage cheese. Aim for 30 g before noon. *Am J Clin Nutr. 2014 (Mamerow); ESPEN 2014*
04	Use whey protein strategically	Whey has the highest leucine content and fastest absorption of any protein source — ideal post-workout or to plug a meal gap. 20–30 g in water or smoothie is the most studied dose. Plant-based? Pea + rice blends are next-best. *Am J Clin Nutr. 2018 (whey RCT); Nutrients 2021*
05	Eat fatty fish twice a week	Salmon, sardines, mackerel, and tuna deliver complete protein plus omega-3s, vitamin D, and selenium — a nutrient stack you can't get from any other single food. The American Heart Association recommends 2 servings per week minimum. *Circulation. 2018 (AHA Scientific Statement)*
06	For plant-based: combine + go bigger	Most plant proteins are low in one or more essential amino acids. Combining sources (rice + beans, hummus + pita, peanut butter + whole grain) creates complete profiles. Vegan protein targets often run 10–20% higher to match anabolic effect. *Amino Acids 2018 (plant isolate comparison)*
07	Pair protein with resistance training	Protein alone preserves some muscle; protein + resistance training builds it. Even 2–3 short sessions per week (bands, bodyweight, weights) dramatically improves how your body uses the protein you eat — especially after age 50. *J Gerontol A Biol Sci Med Sci. 2023*

EQUALLY IMPORTANT

Protein *myths* that keep you underfed.

A generation of fear-based nutrition advice has left most adults — especially women and older adults — chronically under-eating protein. The science has moved on.

"TOO MUCH PROTEIN DAMAGES KIDNEYS"

Only true for those with pre-existing kidney disease. In healthy adults, high-protein diets do not impair kidney function in any controlled trial.

"PROTEIN WEAKENS BONES"

The "acid load" theory has been disproven. Higher protein intake is associated with greater bone mineral density and slower bone loss — with calcium.

"YOU CAN ONLY ABSORB 30 G PER MEAL"

You absorb all of it. Muscle protein synthesis plateaus around 30–40 g, but the rest is used for repair, immune function, and other tissues.

"THE RDA IS ENOUGH"

The 0.8 g/kg RDA was set in 1968 to prevent deficiency, not optimize health. Modern research supports 1.0–1.6 g/kg for active and older adults.

"PLANT PROTEIN IS JUST AS GOOD"

Equivalent in total nitrogen, but lower in leucine and essential amino acids. Plant-based eaters often need 10–20% more total protein for the same effect.

"PROTEIN CAUSES WEIGHT GAIN"

The opposite. It's the most satiating macronutrient, has the highest thermic effect (20–30%), and preserves lean mass during weight loss.

Which *protein source* is best for what?

Whey protein (isolate)	**Post-workout, meal gaps**	Fastest absorbed, highest leucine. Gold standard for MPS.
Casein	**Overnight muscle recovery**	Slow-release; ideal before bed or long fasting periods.
Pea + rice blend	**Plant-based daily use**	Complete amino acid profile when combined; well tolerated.
Greek yogurt / cottage cheese	**Breakfast, snacks**	High in casein + leucine; built-in calcium and probiotics.
Eggs	**Breakfast staple**	Complete protein with the highest biological value (BV 100).
Wild-caught fish	**Twice weekly minimum**	Protein + omega-3s + vitamin D — a nutrient stack of its own.

The Wholara take.

The RDA is the floor, not the ceiling. Most women and most adults over 40 *should* be eating more protein — specifically 1.0–1.6 g/kg, evenly distributed across 3 meals, with at least one serving anchoring breakfast. Pair it with resistance training (any modality) and you have the most evidence-backed combination for preserving muscle, bone, metabolism, and independence as you age.

Talk to a clinician before substantially raising protein intake if you have chronic kidney disease, liver disease, or are pregnant. Otherwise, focus on whole food sources first and supplement only if hitting your target through food is genuinely hard.

EVIDENCE BASE

Where this came from.

Synthesizes 25+ peer-reviewed studies (2013–2026) — systematic reviews, meta-analyses, and RCTs from Clinical Nutrition (ESPEN), Frontiers in Nutrition, J Nutr, J Gerontol A, Am J Clin Nutr, BJN, Amino Acids, Circulation (AHA), and Nutrients. Per-meal distribution from Mamerow 2014 + Frontiers 2024; older-adult targets from ESPEN/PROT-AGE 2013–2014; plant-quality from Gorissen 2018.