



# TACTICAL ATHLETE NUTRITION GUIDANCE: PROTEIN NEEDS FOR ATHLETES

## SUMMARY



**Protein Needs:** Tactical athletes require 1.2–2.0 g/kg/day for general workload;  $\geq 2.0$  g/kg/day for days with intense training, high call volume, or injury;  $> 3.0$  g/kg/day (fat loss)



**Timing & Intake:** 0.25–0.3 g/kg (15–25g) post-exercise (0–2 hrs), 20–40g every 3–5 hrs, 30–40g pre-sleep for muscle protein synthesis; high doses ( $> 40$ g) for large athletes/energy deficit.



**Sources & Quality:** Prioritize high-quality proteins (whey, casein, milk, lean meats, eggs, soy; PDCAAS 1.0); whole foods preferred, supplements for convenience/recovery.

**Recommended daily amount (RDA) to meet basic nutritional requirements** (not for athletes): 0.8 grams of protein per kilogram of body weight, or 0.36 grams per pound.

**Tactical Athlete Recommendation:** 1.2-2.0 g/kg/day supports adaptation, recovery, and turnover.

Pounds (lbs)	Kilograms (kg)	Grams Per Day (g)		
170	77	93	to	154
180	82	98	to	163
190	86	103	to	172
200	91	109	to	181
220	100	120	to	200
230	104	125	to	209

## OPTIMAL PER-SERVING INTAKE

- Distribute moderate amounts across the day and post-training.
- 0.25 g/kg body weight *OR* 20-40 g high-quality protein per meal.
- **Frequency:** Every ~3 hours for sustained muscle protein synthesis.

## HIGHER INTAKES

### MAY BE NEEDED DURING:

- Intense training phases
- Energy restriction
- Injury or inactivity ( $\geq 2.0$  g/kg/day)
- **For Active Individuals & Athletes:** 1.4–2.0 g/kg body weight/day
- **Promote Loss of Fat Mass:**  $> 3.0$  g/kg body weight/day

## PROTEIN TIMING FOR MUSCLE PROTEIN SYNTHESIS (MPS)<sup>4</sup>

- **Post-Exercise Window:** 0-2 hours after exercise is critical
- **Recommended Dose:** 0.25 - 0.3 g/kg (≈15–25g protein)
- **Frequency:** Every 3–5 hours throughout the day
- **High doses (>40g):** May be useful only for large athletes or during energy deficit
- **Consistent Intake:** Supports ongoing MPS within 24 hours of training
- **Before Sleep:** 30-40 g pre-sleep enhances overnight muscle synthesis and next-day metabolism

## BEST PROTEIN SOURCES

- **High-Quality Proteins:**
  - Whey, casein, milk, lean meats, eggs, soy
- **Superior Options** (based on current research):
  - Dairy proteins (due to leucine & BCAA content)
- **Whole Foods Preferred:**
  - Supplements only when food is unavailable or impractical

### Protein Quality Rankings (PDCAAS Scale)<sup>2</sup>

Protein Source	PDCAAS Score
Whey, Egg, Casein, Milk, Soy	1.00 (Highest Quality)
Beef	0.92
Black Beans	0.75
Peanuts	0.52
Wheat Gluten	0.25

### Protein Content per 100g<sup>3</sup>

Food	Protein (g)
Chicken Breast	22.5
Salmon	22.3
Pork Loin	21.1
Almonds	21.4
Peanut Butter	24
Eggs (Large)	12.4
Greek Yogurt	8.06
Black Beans (Canned)	6.91
Soy Milk	2.78
Chia Seeds	17

## PROTEIN SUPPLEMENTATION

- Convenient for achieving adequate protein intake
- Helps maintain quality without excess calories

### PROTEIN SUPPLEMENTS GUIDELINES:

- Use third-party tested products if needed
- Prioritize for convenience, recovery, or increased needs
- Avoid reliance; aim to maintain a nutrient-rich whole food diet
- Should align with overall goals and dietary quality

### RESOURCES:

1. Jäger, R., Kerksick, C.M., Campbell, B.I. et al. International Society of Sports Nutrition Position Stand: protein and exercise. J Int Soc Sports Nutr 14, 20 (2017). <https://doi.org/10.1186/s12970-017-0177-8>

2. Adhikari S, Schop M, de Boer IJM, Huppertz T. Protein Quality in Perspective: A Review of Protein Quality Metrics and Their Applications. Nutrients. 2022 Feb 23;14(5):947. doi: 10.3390/nu14050947. PMID: 35267922; PMCID: PMC8912699.

3. U.S. Department of Agriculture. (n.d) FoodData Central Food Search. <https://fdc.nal.usda.gov/food-search>

4. Nutrition and Athletic Performance. Medicine & Science in Sports & Exercise 48(3):p 543-568, March 2016. | DOI: 10.1249/MSS.0000000000000852