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From Science to Application: Translating Protein Quality into Practical Guidance

PROTEIN ACROSS THE LIFESPAN: WHAT CLINICIANS NEED TO KNOW

By David Church, PhD

What you need to know:

- **Protein needs are higher than the Recommended Dietary Allowance (RDA) for many populations.** Evidence supports intakes above 0.8 g/kg/day, particularly for older adults and active individuals, with expert groups generally recommending ~1.0–1.6 g/kg/day. The current RDA set by the National Academies of Sciences, Engineering, and Medicine reflects a framework focused on a minimum intake to prevent *nitrogen* deficiency, not an optimal intake for health or function.
- **Total daily protein intake matters more than timing or distribution.** Achieving adequate total daily protein, alongside physical activity – especially resistance exercise – is the primary driver of muscle health.
- **Protein source is secondary to total intake and amino acid adequacy.** Both animal and plant proteins can support muscle mass and strength when total protein and essential amino acid needs are met. High-quality plant proteins, particularly soy, can be effective alternatives when diets are appropriately planned.

Protein is essential for the maintenance, repair, and growth of skeletal muscle, yet questions remain about optimal intake and whether the current Recommended Dietary Allowance (RDA) adequately serves all populations. This article examines protein needs across five domains: aging, exercise, the RDA framework, protein distribution, and the role of protein source in supporting muscle health.

Protein Needs in Older Adults

Aging is accompanied by a progressive loss of skeletal muscle mass and strength. Multiple lines of evidence converge on the conclusion that protein requirements for adults over 65 exceed the general RDA of 0.8 g/kg/day.[1] Research suggests higher protein intakes may better support muscle health and function across populations, and are associated with better lean mass, strength, and reduced frailty risk.[2] Acute tracer studies have demonstrated that older adults exhibit anabolic resistance.[3] This refers to a blunted muscle protein synthetic response to protein ingestion. To overcome this, Moore and colleagues indicate older men require approximately 0.40 g/kg per meal to maximally stimulate myofibrillar protein synthesis versus ~0.24 g/kg in younger adults.[4]

However, the framing of anabolic resistance as an inevitable consequence of chronological aging deserves scrutiny. A growing body of evidence suggests that physical inactivity, not aging per se, is the primary driver of anabolic resistance. For example, reducing daily step count for just one week in younger men blunts muscle protein synthesis by approximately 27% with concomitant increase in markers of muscle protein breakdown.[5] Thus, the phenotype of inactivity-induced anabolic resistance in young people is similar to that associated with aging.

Further, healthy older adults who underwent two weeks of step reduction displayed reduced muscle protein synthesis and insulin sensitivity with increases in insulin resistance and inflammatory markers.[6] Conversely, when older men performed resistance exercise prior to protein ingestion, the anabolic response approached levels seen in younger men.[7] As Paulussen et al. have argued, anabolic resistance exists on a dimmer switch wherein the response is modulated up or down by habitual physical activity, body composition, and inflammatory status.[8]

Reframing the role of anabolic resistance as something that can be corrected, rather than a consequence of age, has pragmatic implications. Maintaining or increasing physical activity while increasing protein intake is crucial for preserving muscle health in older adults; a notion supported by randomized controlled trials. Increased protein intake can produce beneficial effects on muscle strength and physical performance in older adults.[9,10] However, these effects are enhanced with resistance exercise. Both the PROT-AGE Study Group and ESPEN recommend 1.0–1.2 g/kg/day for healthy older adults, with exercise emphasized as a critical complement.[1,9] In short, that postprandial walk is a good idea.

Protein for Active Individuals

For individuals engaged in regular resistance training, the evidence for protein intakes above the RDA to support training adaptations is robust. Observational data confirm that habitual intakes of 1.2–2.0 g/kg/day are common, and acute metabolic studies demonstrate a dose-response relationship between post-exercise protein ingestion and muscle protein synthesis.[4,11] Previous work confirms that resistance exercise itself sensitizes muscle to dietary amino acids for up to 48 hours after the exercise bout.[12] While resistance exercise is often associated with increased protein intake, it is important to note that those engaged in forms of aerobic/endurance exercise often have similar protein requirements.[13,14]

The strongest evidence comes from a meta-analysis which pooled 49 studies encompassing 1,863 participants and identified 1.6 g/kg/day as the intake beyond which additional protein conferred no further benefit for lean mass gains.[11] These results were reaffirmed by Nunes and colleagues.[15] It's also worth noting that the 1.6 g/kg/day ceiling should not be treated as a hard rule. It represents the point of diminishing returns for one outcome. In this case, fat-free mass increases during resistance training in mostly young, healthy populations. For individuals in energy deficit, requirements may be considerably higher. In that regard, previous evidence both acutely and chronically supports the notion that lean body mass and therefore body composition improvements are enhanced when protein intake is 2.4 g/kg/day during a 40% energy restriction in conjunction with resistance training.[16]

Is the Protein RDA Too Low?

The general RDA for protein (0.8 g/kg/day) is derived from nitrogen balance studies.[17] This methodology has well-documented technical limitations: it tends to overestimate nitrogen intake and underestimate losses. This results in biased findings for lower intakes.[17,18]

Deeper conceptual limitations also exist. The Adaptive Metabolic Demand model shows the body adjusts amino acid oxidation rates to match habitual protein intake, and this adaptation occurs slowly over days to weeks.[19] When subjects are fed less protein, they gradually reduce amino acid oxidation, become more "efficient," and eventually achieve nitrogen equilibrium at that lower intake. This adapted equilibrium point can be confused for a "requirement." But nitrogen balance achieved through metabolic accommodation is not the same as the intake needed for optimal function or health. Rather, it tells us the body can survive on less by downregulating its own protein turnover. In that regard, the wide range of reported minimum requirements (0.39–1.09 g/kg/day) is best explained by this adaptive phenomenon.[19]

Interestingly, positive nitrogen balance observed at higher intakes have historically been dismissed as technical artifacts.[17] This dismissal assumes adults cannot accrue body protein – an assumption that clearly does not hold for individuals engaged in exercise, going through pregnancy, or recovering from catabolic episodes. The RDA thus defines a minimum to prevent a negative nitrogen balance, not an intake to optimize a functional or disease outcome.[18,20]

Alternative methodologies have challenged the RDA. The indicator amino acid oxidation (IAAO) technique has consistently estimated requirements 30–50% higher than nitrogen balance-derived values.[21] Humayun et al. reported a population-safe intake of 1.2 g/kg/day in healthy young men: 50% above the nitrogen balance-based RDA.[22] The IAAO methodology uses a breakpoint to discern the requirements, whereas the RDA was derived from linear regression. When using this technique on the same nitrogen balance data used to derive 0.8 g/kg/d value, requirements increase by 25%.[21] Subsequent IAAO studies across several populations have also suggested higher requirements.[23]

Two Agency for Healthcare Research and Quality (AHRQ) systematic reviews highlight major evidence gaps in protein research.[24,25] Of 11,408 studies screened in each review, only 68 met inclusion criteria, with 45 being low to moderate risk of bias. Of these, two studies were available for adults 19-50 and four for 51->70. The second review focused on protein and risk of bone disease, kidney disease, and sarcopenia. It screened 11,015 studies; only five for bone disease, one for kidney disease, and nine for sarcopenia were included. Both concluded "insufficient and inconclusive" evidence.[24,25] These findings expose a structural problem in protein nutrition research. The field has been dominated by epidemiology, which is hypothesis-generating research but limited in establishing causal relationships. There is a lack of well-powered, longer-duration randomized trials with clinically meaningful endpoints. Emerging methods, such as deuterated water to track biomarkers over time, represent an ideal way to advance research under this framework.

Protein Distribution

In many Western dietary patterns, protein intake is skewed toward the evening, with minimal intake at breakfast.[26] Classically, muscle protein synthesis was thought to exhibit a saturable dose-response ("muscle full" effect), becoming refractory after ~two to three hours, regardless of dose. This led to the hypothesis that evenly distributing protein across meals optimizes synthesis.[27]

Early support came from Mamerow et al., who found ~25% higher 24-hour muscle protein synthesis with evenly distributed protein (~30 g/meal) versus a skewed pattern (~10/16/63 g) at the same total intake.[28] Interestingly, all follow-up studies have found no difference in the pattern of intake between even and skewed distribution.[26,29-32]

Recent evidence challenges the idea of a fixed "per-meal ceiling." Post-exercise, larger doses (e.g., 100 g vs 25 g of milk protein concentrate) can sustain greater muscle protein synthesis over time, suggesting no practical upper limit for the acute stimulation.[33] While this does not mean we should advise 100 g/meal, these findings indicate that lower-protein meals can be offset later in the day. Overall, total daily protein intake remains the primary priority for practitioners.

Protein and Muscle Health

Animal proteins have been long considered superior for muscle health due to higher digestibility and more complete essential amino acid profiles.[34] Acute metabolic studies support this, showing greater postprandial muscle protein synthesis rates following an omnivorous versus a vegan meal in older adults.[35,36]

Hevia-Larraín et al. compared vegan and omnivorous men consuming 1.6 g/kg/day (soy vs whey) during 12 weeks of supervised resistance training and found no significant differences in outcomes, although strength gains were approximately 20 kg higher in the omnivorous group. It is important to note that a recent meta-analysis indicates exercise trials display larger effect size for animal versus plant as opposed to non-exercise trials.[37,38] The reasons for this are not clear but could simply be that there is a greater demand for essential amino acids when exercising. If true, increasing the amount of plant protein ingested to make up the 15 grams of essential amino acids is feasible.

Meta-analyses generally show no statistically significant differences between protein sources for lean mass or strength.[39,40] However, a recent meta-analysis performed by Reid-McCann and colleagues displays more nuanced data.[38] In a subgroup analysis of whole-diet interventions and non-soy plant protein supplements, animal proteins produced small but significant advantages in muscle mass outcomes.

However, in a subgroup analysis focused on milk versus soy proteins, there were no significant differences in indices of muscle mass.[37] This is in line with the meta-analysis by Messina et al. that found no difference between soy and animal protein supplements for hypertrophy and strength gains. These pooled analyses are encouraging but most relied on isolated supplements under expert supervision. In the real world, individuals who adopt plant-based diets tend to consume less total protein than omnivorous counterparts.[40] This reduction is not inevitable; many intervention studies demonstrate adequate protein intakes can be achieved with plant-based diets. Emphasizing total protein, EAA content, and complementary sources is essential. Notably, factors beyond source, such as food form and fat content, can also influence anabolic response.[41-43] Regardless, the simple fact that soy is consistently used as the comparator in "animal versus plant" studies is indicative of its gold-standard status as the plant protein of choice.

Soy is a high-quality, well-studied plant protein and consistent evidence supporting cardiovascular benefits.[44,45] This, along with its ability to stimulate positive effects on protein status, positions soy as one of the few protein sources that can reliably support multiple body functions in individuals who want to increase their plant protein intake. Concerns about hormonal effects have been refuted, with meta-analyses showing no impact on testosterone or estrogen levels in men.[46,47] For practitioners seeking a high-quality plant protein, soy remains the strongest option.

Conclusion

Protein needs likely exceed the RDA for older adults and physically active individuals, with recommendations generally falling between 1.0–1.6 g/kg/day depending on the population. Protein distribution and source can play a role; total daily intake remains the most important factor. Ultimately, focusing on protein in isolation, with particular emphasis on structured exercise and physical activity, risks overlooking the broader lifestyle that supports overall health.

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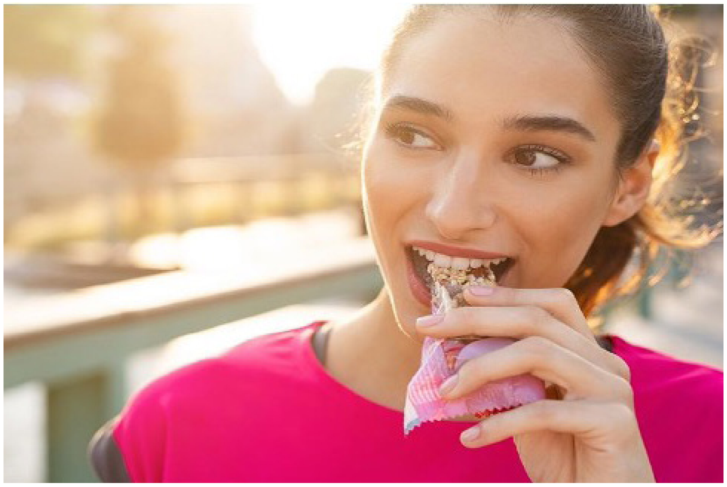

PROTEIN BEYOND THE NUMBERS: HOW QUALITY IMPACTS NUTRITION

By Guy H. Johnson, PhD

What you need to know:

- **Protein needs and focus are increasing.** Updated dietary guidance emphasizes the importance of including protein foods in a balanced diet, making both quantity and quality critical for supporting muscle health, satiety, and overall metabolic function.
- **Multiple methods assess protein quality: PDCAAS (current U.S. standard), DIAAS (more precise but not widely implemented), and IAAO (used to determine requirements).** Each offers unique insights, with ongoing discussion about improving evaluation approaches.
- **Soy is a high-quality plant protein.** Across PDCAAS and DIAAS measures, most soy foods provide high-quality, complete protein, supporting their role in meeting protein needs within plant-forward dietary patterns.

The importance of protein for providing energy and meeting basic physiological needs for growth and other metabolic activity is well recognized.[1] Protein has also been shown to support increased muscle mass and function in healthy adults[2] and to provide satiety and suppress appetite.[3] The 2025-2030 *Dietary Guidelines for Americans* [4] underscores the importance of protein in a healthy diet, highlighting that many individuals may benefit from intakes above the longstanding 0.8 g/kg/day, with emerging guidance suggesting a range of 1.2–1.6 g/kg/day, adjusting as needed based on your individual caloric requirements.

Both the quantity and the quality of protein in the diet are important for the maintenance of optimal health. Protein quality is determined by two major considerations: the extent to which the indispensable (essential) amino acid content of the protein matches human physiological need, and its digestibility. The three methods commonly used to determine protein quality are summarized below:

The Protein Digestibility-Corrected Amino Acid Score (PDCAAS)

The Protein Digestibility-Corrected Amino Acid Score (PDCAAS) was adopted in 1991 by a joint FAO/WHO expert consultation5 as the preferred method for evaluating protein quality for human nutrition. It remains the regulatory basis for protein claims in the U.S. under FDA regulations.

PDCAAS combines:

1. The amino acid composition of a protein.
2. A comparison to a reference amino acid requirement pattern.
3. True fecal digestibility of the protein.

The score is calculated by identifying the first limiting indispensable amino acid (IAA) relative to human requirements and adjusting that ratio by overall protein digestibility. Scores are truncated at 1.00 (100%). The percent Daily Value (%DV) of protein per serving is calculated by multiplying the uncorrected %DV/serving by the PDCAAS value.

Despite its widespread use, PDCAAS has several recognized limitations:

- Fecal digestibility is used rather than ileal digestibility, which potentially overestimates amino acid availability.
- Truncation at 1.00 masks differences among high-quality proteins.
- It does not assess digestibility of individual amino acids.

Hughes et al. noted that soy protein is the only widely available source of plant protein that has been shown to be a complete protein based on numerous nitrogen balance studies using isolated soy protein or soy protein concentrate.[6] Nevertheless, PDCAAS scores are subject to analytical variation. These researchers reported that three samples of isolated soy protein and one sample of soy protein concentrate had truncated scores of 1.00 when analyzed by one laboratory, but the same samples of isolated soy protein received scores of 0.95 to 0.98 when analyzed by a second laboratory. The authors noted that the application of amino acid nitrogen recovery factors was able to explain the differences. It was concluded that soy protein is a high-quality protein, comparable to meat, eggs, and dairy products.

Digestible Indispensable Amino Acid Score (DIAAS)

The Digestible Indispensable Amino Acid Score (DIAAS) was introduced by FAO in 20137 to propose an alternative to PDCAAS. Unlike PDCAAS, DIAAS:

1. Uses ileal digestibility (amino acids measured at the end of the small intestine), which more precisely reflects the availability of amino acids for absorption.
2. Does not truncate higher scores, so that scores above 100 can be differentiated. This approach allows a protein that provides more digestible essential amino acids than the reference requirement to be identified.

DIAAS is calculated by comparing the digestible amount of each indispensable amino acid in a test protein to a reference amino acid requirement pattern. The lowest ratio (the limiting amino acid) determines the DIAAS value. If a protein delivers digestible amino acids in amounts that exceed requirements across the board, the DIAAS can exceed 100.

DIAAS values for soy protein ingredients and soy foods tend to be somewhat lower than PDCAAS values but still high relative to many plant proteins.8 A recent comprehensive review[9] found that mean DIAAS across various soy products was ~84.5, with variability across product forms (tofu, soymilk, isolate, etc.). The mean PDCAAS score for these soy forms was only slightly higher at 85.6. The authors concluded that the majority of soy products have high protein quality scores, and that processing and post-processing conditions can increase or decrease protein quality.

Given limitations of the PDCAAS system, the DIAAS approach may more accurately reflect how well a protein meets human indispensable amino acid needs. Nevertheless, while DIAAS is influential in scientific and policy discussions globally, it is not currently used for regulatory purposes in the U.S. due to a variety of factors including limited human ileal digestibility data, reliance on growing pig models as proxies, as well as cost and feasibility of testing. Optimal application of this method may be in foods for special dietary uses, such as infant formula, and in contexts where a high level of rigor is necessary, including nutrition research. Broad application within regulatory frameworks for general foods intended for the overall population may not be warranted.

Indicator Amino Acid Oxidation (IAAO)

As noted above, PDCAAS and DIAAS assess protein quality relative to established reference amino acid requirement patterns. The Indicator Amino Acid Oxidation (IAAO) method helps establish human protein requirements, which can then be used alongside score metrics like PDCAAS or DIAAS to judge whether protein intakes from soy and other sources truly meet metabolic needs.[10]

The IAAO method measures oxidation of a labeled “indicator” amino acid (often L-[1-^{13}C] phenylalanine) while varying intake of another indispensable test amino acid. Typically, subjects of interest (e.g., children, elderly) are provided with multiple test diets across separate study days that contain sufficient amounts of energy and all amino acids except the one being tested (e.g., methionine). The experimental diets differ in the amount of the test amino acid (i.e., low, medium, and high). The labeled indicator amino acid is administered to the subjects after each test diet has been consumed, and its oxidation rate is measured (e.g., by determining the amount of 13C in breath). When the test amino acid is insufficient, oxidation of the indicator amino acid increases. When the requirement is met, oxidation plateaus.[11]

The IAAO method is based on the following conditions as described by Matsumoto et al.[12]

- The oxidation of all amino acids will be substantial when amino acids other than the indicator amino acid are limited in the diet.

- The oxidation of the indicator amino acid will decrease with increased dietary amino acid intake.
- Upon meeting dietary requirements, the oxidation of the indicator amino acid will not change, and the resulting "breakpoint" will become the daily dietary protein requirement.

Humayun et al.[13] concluded the metabolic activity of total sulfur-containing amino acids from casein (87%) was slightly greater than that from soy protein isolate (72%) using the IAAO method in adult men. The differences in the metabolic availability of the total sulfur amino acids (TSAA) in casein and soy protein isolate are probably related to two important factors: 1) lower digestibility of methionine and cysteine in soy protein isolate than casein, and 2) greater first-pass splanchnic uptake and oxidation of sulfur amino acids from soy protein isolate. Nevertheless, van den Berg et al.[9] reported that the majority of soy protein sources have high protein quality based on PDCAAS and DIAAS and that the effect of processing on such quality can be positive or negative. Furthermore, Humayun et al.13 concluded that more information on the optimal period of dietary adaptation to the intact test proteins and the influence of free versus protein-bound amino acids is needed before the IAAO technique can be widely applied to determine metabolic availability within a dietary protein.

Nutrition Labeling and Claims

The importance of protein quality is reflected in the U.S. nutrition labeling regulations. Protein is the only nutrient that must be adjusted for nutritional quality when calculating its %DV per serving. The Nutrition Labeling and Education Act specifies that essentially all products must declare grams of protein per serving, but declaration of the %DV is voluntary unless the product is intended for children under 4 years of age or a claim (e.g., "good/ excellent source") is made. As noted above, such values must be adjusted using the PDCAAS system.

At the same time, the International Food Information Council (IFIC) April 2026 survey on Americans' Perceptions of Protein & Protein Labeling[14] suggests that key components of protein quality, such as essential amino acid composition and digestibility, are not actively used in shopper decision making. Instead, consumers tend to rely on more visible and accessible cues, including grams of protein, front-of-pack claims, and ingredient familiarity. While these can be helpful signals, they do not fully capture differences in protein quality, highlighting a disconnect between how protein is evaluated scientifically and how it is interpreted in practice.

Conclusion

PDCAAS, DIAAS, and IAAO each contribute to the scientific understanding of protein nutrition. PDCAAS remains the regulatory standard in the U.S. and supports soy's classification as a high-quality protein. DIAAS provides a more refined scientific framework, though implementation challenges persist. IAAO advances knowledge of human amino acid requirements and may influence future scoring systems.

However, a clear disconnect remains between how protein quality is defined in the scientific community and how consumers evaluate the healthfulness of foods. While these methods assess factors such as amino acid composition and digestibility, there is an opportunity to more effectively translate the science so that evidence-based measures of protein quality are communicated in ways that align with how consumers choose, purchase, and consume food.

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THE PROTEIN SURGE: GUIDING PATIENTS AND CLIENTS THROUGH CLAIMS AND NUTRITION CHOICES

By Brittany Raftis, MScFN, RD

What you need to know:

- **Protein is increasingly ever-present in the food supply.** Thus, it is more important than ever to help clients and patients interpret protein claims and distinguish marketing from meaningful nutrition.
- **Front-of-pack protein claims may lack context.** Labels with "added protein" claims may provide only modest amounts of protein or be of lower overall nutritional quality despite creating a health halo effect. While these claims can serve as a useful starting point, a meaningful protein contribution should also reflect protein quality to support overall nutritional value.
- **Evaluating protein quality and dietary role is essential,** including understanding PDCAAS-adjusted %DV and distinguishing functional protein foods from "protein-washed" products that add limited nutritional value.

If you've been to a grocery store recently, or even just scrolled social media, you've probably noticed that protein is everywhere. From protein cereal and bread to protein milk, chips, ice cream, and even candy, the category has expanded far beyond traditional sources. This shift reflects how protein is increasingly emphasized in the diet and can make interpreting labels and selecting appropriate protein sources more challenging in practice.

Why Protein Matters Now

Protein is an essential nutrient and a key structural component of many tissues. While its importance has long been established, recent shifts in dietary guidance and increased attention on social media have helped elevate protein from simply essential to a primary focus in how people think about nutrition.

The 2025–2030 Dietary Guidelines for Americans highlight the importance of including protein foods in a balanced diet, with suggested intakes of 1.2–1.6 g/kg/day for adults.[1] At the same time, messaging around protein's role in satiety, weight management, and physical performance has become more prominent. Together, these shifts have contributed to increased consumer demand for higher-protein foods.

This increased emphasis on protein is also evident in consumer label reading behaviors. According to the International Food Information Council (IFIC) April 2026 survey on Americans' Perceptions of Protein & Protein Labeling, 37% of Americans look for protein content on the Nutrition Facts table when selecting foods. Many consumers report that protein quality is important when selecting products, and view protein as supportive of overall health.[2]

Protein Claims

Nearly 50% of IFIC survey respondents seeking protein information on the package report looking for it on the front of food packaging when selecting products.[2] Given this, it's not surprising that protein claims have become increasingly prominent as a marketing tool.

For example:

- Nutrient content claims are frequently featured, such as “high in protein” (≥20% Daily Value (DV)) or “plus protein” (≥10% more protein than a reference product).[3]
- Protein is also emphasized more generally on the front of packaging. Products may display grams of protein prominently (e.g., 15 g protein) or incorporate “protein” into the product name (e.g., protein soda).[3]

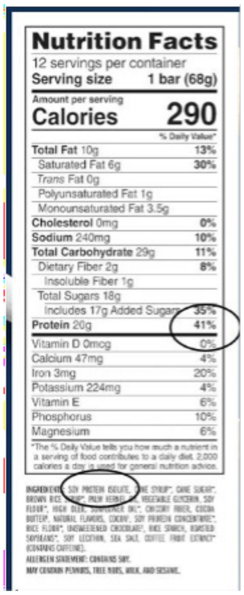
While these claims can help identify higher-protein options, they provide limited context about overall nutritional quality. In some cases, the absolute amount of protein remains modest. Under FDA regulations, products can use claims such as “more protein” or “plus protein” when they contain at least 10% more of the Daily Value for protein than an appropriate food.[4] As a result, cereals marketed as “protein” cereals may still provide relatively modest amounts of protein per serving compared with consumer expectations. For example, some cereals marketed as “protein plus” provide about 10 – 12 g protein per serving, which may still fall short of what consumers perceive as a high-protein food.[5]

Protein Quality: PDCAAS and the Daily Value (DV)

Percent DV for protein must be included on a food label only when a protein claim has been made or if the product is intended for children under 4 years old.[3] In the IFIC consumer study, about half (47%) of respondents say it would be helpful to see how much food contributes toward their daily protein needs,[2] making this an important teaching point for consumers.

The %DV for protein is based on a reference intake of 50 g/day and is adjusted for protein quality using the Protein Digestibility-Corrected Amino Acid Score (PDCAAS), which accounts for amino acid composition and digestibility.[5,6]

As shown below, products with similar amounts of protein in grams can display very different %DV values depending on the protein source. A product made with a high-quality protein (e.g., soy or whey protein) may reflect the full protein content, while a product containing an incomplete protein, such as collagen, may show a lower %DV than the total grams of protein would suggest. Importantly, reporting %DV for protein is only required on food labels when a front-of-pack protein claim has been made or if the product is intended for children under 4 years old, so its absence could be an early indicator that a product is “protein washed.” Among consumers who seek out protein information on food packaging, the most helpful details are protein sources (in the ingredient list) and amounts (on the Nutrition Facts label of front of the package).[2]



Nutrition Facts

12 servings per container

Serving size 1 bar (68g)

Amount per serving

Calories 290

	% Daily Value*
Total Fat 10g	13%
Saturated Fat 6g	30%
Trans Fat 0g	
Polyunsaturated Fat 1g	
Monounsaturated Fat 3.5g	
Cholesterol 0mg	0%
Sodium 240mg	10%
Total Carbohydrate 29g	11%
Dietary Fiber 2g	8%
Insoluble Fiber 1g	
Total Sugars 18g	
Includes 17g Added Sugars	35%
Protein 20g	41%
Vitamin D 0mcg	0%
Calcium 47mg	4%
Iron 3mg	20%
Potassium 224mg	4%
Vitamin E	6%
Phosphorus	10%
Magnesium	6%

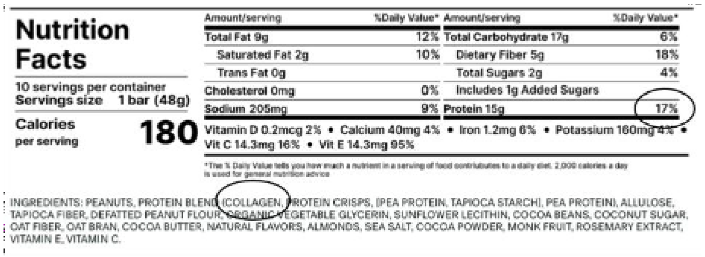
*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

INGREDIENTS: SOY PROTEIN ISOLATE, CANE SYRUP*, CANE SUGAR*, BROWN RICE SYRUP*, PALM KERNEL OIL, VEGETABLE GLYCERIN, SOY FLOUR*, HIGH OLEIC SUNFLOWER OIL*, CHICORY FIBER, COCOA BUTTER*, NATURAL FLAVORS, COCOA*, SOY PROTEIN CONCENTRATE*, RICE FLOUR*, UNSWEETENED CHOCOLATE*, RICE STARCH, ROASTED SOYBEANS*, SOY LECITHIN, SEA SALT, COFFEE FRUIT EXTRACT* (CONTAINS CAFFEINE).

ALLERGEN STATEMENT: CONTAINS SOY.

MAY CONTAIN PEANUTS, TREE NUTS, MILK, AND SESAME.

Figure 1: Main protein source is soy protein isolate, a high-quality protein with a PDCAAS score of 1.0.



Nutrition Facts

10 servings per container

Servings size 1 bar (48g)

Calories per serving **180**

Amount/serving	%Daily Value*	Amount/serving	%Daily Value*
Total Fat 9g	12%	**Total Carbohydrate 17g**	6%
Saturated Fat 2g	10%	Dietary Fiber 5g	18%
Trans Fat 0g		Total Sugars 2g	4%
Cholesterol 0mg	0%	Includes 1g Added Sugars	
Sodium 205mg	9%	**Protein 15g**	17%

Vitamin D 0.2mcg 2% • Calcium 40mg 4% • Iron 1.2mg 6% • Potassium 160mg 4% • Vit C 14.3mg 16% • Vit E 14.3mg 95%

*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice

INGREDIENTS: PEANUTS, PROTEIN BLEND (COLLAGEN, PROTEIN CRISPS, [PEA PROTEIN, TAPIOCA STARCH], PEA PROTEIN), ALLULOSE, TAPIOCA FIBER, DEFATTED PEANUT FLOUR, ORGANIC VEGETABLE GLYCERIN, SUNFLOWER LECITHIN, COCOA BEANS, COCONUT SUGAR, OAT FIBER, OAT BRAN, COCOA BUTTER, NATURAL FLAVORS, ALMONDS, SEA SALT, COCOA POWDER, MONK FRUIT, ROSEMARY EXTRACT, VITAMIN E, VITAMIN C.

Figure 2: Main protein sources are peanuts and collagen, with PDCAAS scores of 0.5 and 0.0, respectively

How to Identify Functional from Protein-Washed Foods

In today's protein-focused food environment, the market has become increasingly saturated. Not all protein-containing foods provide meaningful nutritional value. There is an important distinction between functional protein sources, which contribute positively to overall dietary intake, and protein-washed foods, where protein is added primarily for marketing purposes. Use the following criteria to assess the quality of a packaged high protein food.

Criteria	Functional protein product	Protein-washed product
Beneficial nutrients	Often contains additional nutrients that support overall diet quality (e.g., high-protein yogurt with calcium or a high-protein and fiber cereal)	Provides little additional nutritional value beyond protein (e.g., protein pastry)
High-risk nutrients *(e.g., saturated fat, added sugar, sodium)*	Typically low to moderate in nutrients of concern	May be high in nutrients of concern (e.g., protein chips that are high in sodium)
Role in meeting protein needs	Helps address gaps in intake (e.g., a protein bread helping to boost the protein content of an otherwise low protein breakfast, or a protein drink helping to hit a protein target between meals)	Adds protein in contexts where it may not be needed (e.g., protein ice cream used as dessert)
Contribution to dietary pattern	Supports overall diet quality when used strategically	May displace more nutrient-dense options (e.g., protein cookie replacing a balanced snack)
Protein content	Provides a meaningful amount of protein relative to needs	May provide only modest amounts despite claims (e.g., a protein cereal that is only a few grams higher in protein compared to the original, or a protein frozen dinner that does not provide enough protein for a meal target)

Putting it Into Practice

Packaged, protein-rich foods can play a useful role in helping clients meet their protein needs, particularly when time, access, or preparation are barriers to using whole food sources. However, these products are not all created equal.

In practice, evaluating both protein content and overall nutritional quality is essential when interpreting food labels. Considering how a product fits within an individual's dietary pattern, and whether it meaningfully helps address a gap in intake, can guide more effective and practical recommendations.

Ultimately, the opportunity is not to change the science, but to better translate it. Educating clients to look beyond protein claims and assess the product as a whole can help align nutrition guidance with how people actually choose, purchase, and eat food – supporting decisions that reflect both their goals and real-world needs.

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