

Rabbit meat for bodybuilders and fitness athletes: protein–fat trade off and comparative value

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Abstract. This mini-review evaluates the nutritional and functional value of rabbit meat as a protein source for bodybuilders and fitness athletes, with a particular focus on the protein–fat trade-off and its implications for muscle hypertrophy and dietary optimization. Rabbit meat is characterized by high-quality, biologically complete protein, low fat content, and a favorable fatty acid profile, including relatively high levels of polyunsaturated fatty acids and an advantageous n-6/n-3 ratio. Comparative analyses indicate that, relative to commonly consumed meats such as chicken, beef, and pork, rabbit meat offers a leaner alternative with lower cholesterol and improved lipid health indices. Its amino acid composition, including all essential amino acids in sufficient quantities, aligns well with current sports nutrition recommendations for stimulating muscle protein synthesis, provided adequate portion sizes are consumed to meet leucine thresholds. Within the broader dietary patterns of bodybuilders, rabbit meat represents a viable, though underutilized, option that can contribute to achieving high protein intake while minimizing fat consumption. However, practical factors such as availability, sensory attributes, and cultural preferences may influence its adoption. Overall, rabbit meat can be considered a functional and nutritionally advantageous component of athlete diets, particularly during phases requiring strict fat control.

Keywords: rabbit meat, bodybuilding nutrition, protein quality, essential amino acids, leucine threshold, muscle hypertrophy, dietary protein, fat intake, polyunsaturated fatty acids, athlete diet.

Introduction. Rabbit meat is often described as a “dietetic” white meat: high in protein of good quality, relatively low in fat, and with a favorable fatty acid pattern (Petrescu & Petrescu-Mag, 2018). For a bodybuilder or fitness athlete focused on maximizing protein and minimizing fat, its value depends on both its macronutrient profile and how it compares with more common meats within the context of modern sports protein recommendations (Cenan & Perşa, 2026; Petrescu-Mag & Arévalo-Sierra, 2026; Nicula & Arévalo-Sierra, 2026; Perşa & Cenan, 2026).

The aim of this mini-review is to critically assess the nutritional composition and functional relevance of rabbit meat in the context of bodybuilding and fitness nutrition, with particular emphasis on its protein quality, amino acid profile, and fat content in comparison to other commonly consumed meats. Additionally, the review seeks to evaluate the extent to which rabbit meat aligns with current evidence-based recommendations for muscle hypertrophy and to determine its potential role as a strategic dietary component for athletes aiming to optimize protein intake while limiting fat and cholesterol consumption.

Nutritional Profile and Fat–Protein Balance. Rabbit meat provides high biological value protein and is described as lean, easily digestible, and rich in essential amino acids (Nistor et al., 2013; Siudak & Kowalska, 2023; Gál et al., 2022). Chemical analysis shows rabbit meat with about 9.2 g fat/100 g, clearly lower than pork (28.2 g/100 g) and lower in cholesterol (56.4 mg/100 g) than beef (114.5 mg/100 g) (Nistor et al., 2013). It is also relatively rich in minerals such as calcium (21.4 mg/100 g) and phosphorus (347 mg/100 g) (Nistor et al., 2013). Reviews emphasize its low fat and high long chain polyunsaturated fatty acid (PUFA) content, particularly linoleic and linolenic acids, and classify it among “healthier” white meats (Siudak & Kowalska, 2023; Nutautaité et al.,

2023; Frunză et al., 2023). Experimental feeding strategies can further lower fat and enrich essential amino acids and PUFA in rabbit muscle (Nutautaitė et al., 2023), which increases its attractiveness as a “clean” protein source for athletes in cutting phases.

Table 1
Comparison of rabbit meat with other common meats for bodybuilding-focused nutrition

<i>Meat type</i>	<i>Protein density / quality</i>	<i>Fat & cholesterol</i>	<i>Other notable traits</i>	<i>References</i>
Rabbit	High-quality, all essential AA; good total EAA in prime cuts	Low fat (≈ 9.2 g/100 g); relatively low cholesterol; high PUFA, especially n-3	Higher Ca and P; lean, “dietetic” white meat	Nistor et al., 2013; Siudak & Kowalska, 2023; Gál et al., 2022; Lee et al., 2022; Nutautaitė et al., 2023; Frunză et al., 2023
Chicken (breast)	Very high protein; benchmark white meat for athletes	Generally low fat; somewhat lower PUFA (especially n-3) than rabbit in some comparisons	Lighter color, softer texture than rabbit; widely available	Nistor et al., 2013; Lee et al., 2022
Beef	High-quality protein	High cholesterol (\approx double rabbit); moderate to higher fat depending on cut	Red meat, more saturated fat	Nistor et al., 2013; Bohrer, 2017
Pork	High protein but often higher fat	Very high fat (28.2 g/100 g) in studied samples	Less suitable when strict fat limitation is desired	Nistor et al., 2013; Bohrer, 2017.

In direct compositional comparisons, rabbit loin had slightly lower protein but higher ash and collagen than chicken breast; it also showed a clearly higher total PUFA and linolenic acid content and a more favorable n 6/n 3 ratio, although with a firmer texture and darker color (Lee et al., 2022). From a lipid health perspective, rabbit and hare meats presented better lipid indices (low atherogenic and thrombogenic indices; high hypocholesterolemic/hypercholesterolemic ratio) than many farmed meats, confirming their suitability for health oriented, low-fat diets (Frunză et al., 2023) (Table 1, Figure 1).

Amino Acid Profile, Biological Value, and Relevance to Hypertrophy. Rabbit meat contains all essential amino acids in substantial amounts, with studies noting higher total and essential amino acid contents in certain muscles and variation with genotype and sex (Gál et al., 2022). By products (intestines, heads, paws, tails) also contain all essential amino acids including leucine, valine, lysine, methionine, and others, underlining the completeness of rabbit proteins (Antipova & Boldyreva, 2024). Overall, reviews describe rabbit muscle proteins as “biologically valuable,” i.e., complete and suitable for human requirements (Siudak & Kowalska, 2023).

For hypertrophy, current sports nutrition literature emphasizes total protein intake (≈ 1.3 – 1.8 g/kg/day, up to ≈ 2 g/kg/day in energy deficit), high essential amino acid and especially leucine content per meal (roughly ≥ 2.5 – 3 g leucine, often achieved with ~ 30 g of high quality animal protein), and distribution of protein across 3–4 meals (Phillips & Van Loon, 2011; Stokes et al., 2018; Jäger et al., 2017; Paoli et al., 2024). Animal proteins generally provide complete amino acid profiles and high digestibility, and are regarded as high quality sources for stimulating muscle protein synthesis (Hoffman & Falvo, 2004; Jäger et al., 2017; Paoli et al., 2024). While these works do not single out rabbit meat specifically, rabbit’s complete essential amino acid profile and classification as a lean animal protein fit well within these criteria (Nistor et al., 2013; Siudak & Kowalska, 2023; Gál et al., 2022; Antipova & Boldyreva, 2024). As long as portion sizes are sufficient to deliver the target leucine and essential amino acids per meal, rabbit meat can serve as a functional alternative to more common meats in a bodybuilding diet.

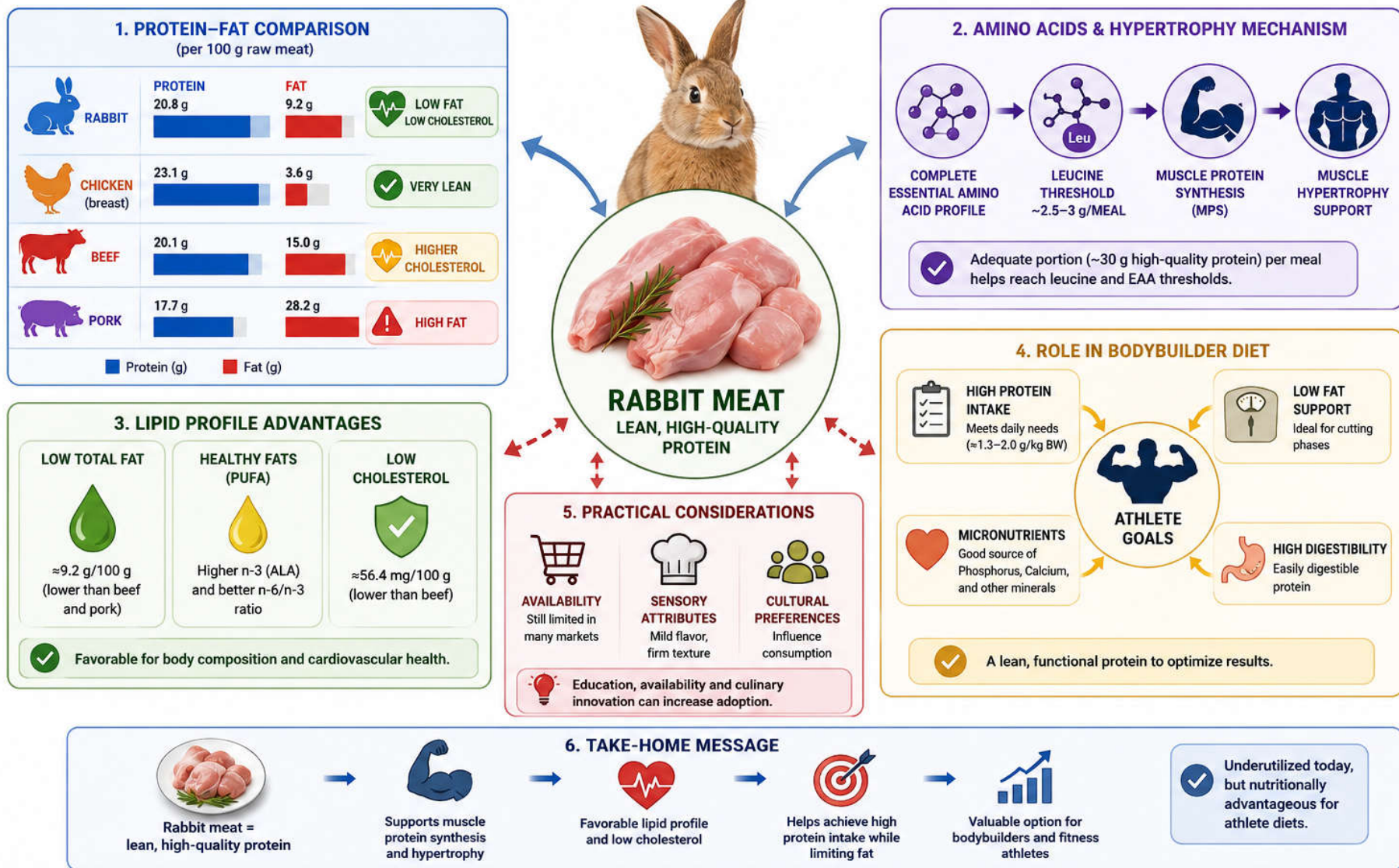


Figure 1. Rabbit meat for bodybuilders and fitness athletes: Protein-fat trade-off and comparative value.

Rabbit Meat in the Dietary Pattern of Bodybuilders and High Meat Consumers. A recent review of meat consumption in bodybuilders and high-level meat consumers notes that such athletes typically combine multiple animal proteins (beef, chicken, turkey, lamb, and rabbit) and supplements to meet their high protein needs (Siddiqui et al., 2023). Nutritional factors—protein content, amino acid profile, and fat levels—are identified as major drivers of meat choice, alongside taste and cultural attitudes (Siddiqui et al., 2023). Rabbit meat is framed within this context as one of the “white meats” perceived as healthier and leaner, potentially attractive to those seeking high protein with limited fat (Siudak & Kowalska, 2023; Siddiqui et al., 2023; Frunză et al., 2023). However, personal preference, availability, and habit still strongly influence whether bodybuilders actually include rabbit meat regularly (Siddiqui et al., 2023). Studies on various diet patterns in athletes (omnivorous, flexitarian, vegetarian, pescatarian) show that strength athletes can achieve high body protein content across a range of dietary models, provided total protein intake is adequate (Lombardo et al., 2024; Goldman et al., 2024; Baranauskas et al., 2023). Within an omnivorous or high meat pattern, rabbit meat can therefore be integrated as a strategic lean option to help hit protein targets while reducing overall fat and cholesterol intake.

Conclusions. Rabbit meat represents a nutritionally dense and physiologically relevant protein source for bodybuilders and fitness athletes, particularly in dietary contexts where high protein intake must be balanced with strict control of fat and cholesterol. Its complete essential amino acid profile and high biological value support its capacity to contribute effectively to muscle protein synthesis, provided that intake is quantitatively sufficient to meet established leucine and protein thresholds. Compared to other meats, rabbit meat offers clear advantages in terms of lipid profile, including lower total fat and more favorable fatty acid composition, which may be beneficial not only for body composition but also for long-term cardiovascular health.

Despite these advantages, rabbit meat remains relatively underrepresented in athlete diets, largely due to extrinsic factors such as availability, culinary familiarity, and consumer preferences. From a nutritional standpoint, however, it can be integrated seamlessly into omnivorous dietary patterns as a lean alternative to more conventional protein sources. Future research should focus on its practical implementation in athlete meal planning, as well as on optimizing production and processing methods to further enhance its nutritional profile and consumer acceptance.

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