

# High-protein diet

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A **high-protein diet** is often recommended by bodybuilders and nutritionists to help efforts to build muscle and lose fat. It should not be confused with low-carbohydrate diets, such as the Atkins Diet, which are not food-energy-controlled and which often contain large amounts of fat.

While adequate protein is required for building skeletal muscle and other tissues, there is ongoing debate regarding the use and necessity of high-protein diets in anaerobic exercise, in particular for weight training and bodybuilding.



Examples of high-protein foods are tofu (shown above), dairy products, fish, and meat.

## Contents

- 1 Health effects
- 2 High-protein foods
- 3 Protein and weight training
- 4 See also
- 5 Notes
- 6 References

## Health effects

Extreme protein intake (in excess of 200 g per day), coupled with inadequate intake of other calorie sources (fat or carbohydrates), can cause a form of metabolic disturbance and death commonly known as rabbit starvation.<sup>[1]</sup> Even when consuming other calorie sources, consuming more than 285 g of protein per day (for an 80 kg person) may be unsafe.<sup>[2]</sup>

Relatively little evidence has been gathered regarding the effect of more moderate long-term high intake of protein on the development of chronic diseases.<sup>[3]</sup> Increased load on the kidney is a result of an increase in reabsorption of NaCl. This causes a decrease in the sensitivity of tubuloglomerular feedback, which, in turn, results in an increased glomerular filtration rate. This increases pressure in glomerular capillaries.<sup>[4]</sup> When added to any additional renal disease, this may cause permanent glomerular damage.

As is apparent from the list below, many high-protein foods (indeed, most low-carb foods with protein) are fairly low in fiber. This can lead to discomfort if additional roughage is not added to the diet.

## High-protein foods

High-protein foods include:

<b>Food</b>	<b>Protein fraction by mass</b>
Soy protein isolate	88% <sup>[5]</sup>
Boiled green soybeans	12% <sup>[a][6]</sup>
Whey protein concentrate	up to 89%
Whey protein isolate	at least 90%
Peanuts	24% <sup>[b][6]</sup>
Steak	27 to 34% <sup>[c][6]</sup>
Chicken breast	31% <sup>[d][6]</sup>
Salmon fillet	25% <sup>[e][6]</sup>
Tuna (canned)	19% <sup>[f][6]</sup>

## Protein and weight training


Protein is described as essential by advocates of the high-protein diet, which includes a large proportion of the bodybuilding community; it is claimed to provide the muscle with amino acids required to repair the damage done by anaerobic exercise. High protein consumption leads to increased levels of IGF-1,<sup>[7]</sup> a hormone which, among other things, increases muscle protein synthesis. Some consume protein supplements after bodybuilding workouts, as they provide a quick and easily consumable protein source. Alternatively, meat, beans, or other high-protein foods are consumed.

It is possible to maintain a strict vegan high-protein diet, though due to the lower protein density of plant-based foods this requires a larger absolute volume of food compared to a non-vegan diet; simply put, vegans must consume a lot more food to get a lot of protein.<sup>[8]</sup> Legumes and soy foods are two vegan sources with high protein content per calorie. Vegans may engage in protein combining to obtain a complete mix of amino acids.<sup>[9]</sup>

Although some testing shows that the body will absorb and use a greater amount of protein after "bodybuilding" type exercises than under more sedentary circumstances,<sup>[10]</sup> and some studies on weight training show clinically significant gains in muscle with a very high protein diet when compared to more moderate intake, in some studies increased protein intake fails to translate into functional differences in strength or muscle size.<sup>[11]</sup> However, consistently consuming less protein than an individual's body requires (approximately 0.7g/kg/day for a sedentary individual)<sup>[12]</sup> causes loss of existing lean body mass, even with an excessively caloric diet.<sup>[13]</sup>

## See also

- Bodybuilding supplement
- Dietary supplement
- Dukan Diet
- Human nutrition
- Low-protein diet
- Nutrition



Wikibooks  
Cookbook has a  
recipe/module on  
***High  
Protein  
Diet***

## Notes

- a. Boiled and drained. 22.23 per 180 g
- b. Dry roasted. 6.71 per 28.35 g
- c. Separable lean. 22.92 to 29.19 per 85 g
- d. Meat only. 26.68 per 86 g
- e. Sockeye, cooked, dry heat. 21.59 per 85 g
- f. Light, canned in water, drained solids. 16.52 per 85 g

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