

Protein Bio-Availability Explained



Everyone knows about protein or at least you should if you are serious about getting results to gain muscle or even to lose fat. Nutrition plays a vital role in both goals and proteins are the building blocks and should be included in everyone's meal plan on a daily basis. No exception.

If there was one nutrient you should focus on getting, it is protein. Proteins are used to build and repair muscle tissue. When we workout and breakdown our muscles, protein is generally the foundation for repair.

Carbs and fat act as an energy source for our bodies when we train, kind of like the gasoline you put in your car. Carbs also act as a carrier to provide glycogen to your muscle cells as well.

That is just to give you a little background on each of these macro-nutrients, but now it's time to talk about protein more in depth and the different influential factors when choosing your sources.

Choosing Protein Sources

Many people, including myself when I first started, are under the impression that a protein is a protein, period. Some people think they are getting enough protein from foods such as nuts, oats, rice and potatoes.

However, even though there are protein's in these foods I mentioned above, they should not be considered a primary protein source. Let me explain.

For one, you would need to eat a massive intake of those food sources to obtain your daily protein requirements and even if you could, you would over-consume total calories which will inevitably lead to fat gain.

Second, proteins are made up of essential amino acids and non-essential amino acids. Most of the protein that can be found within those foods I listed above are non-essential proteins and do not contain one or more essential amino acids that your body requires. Essential amino acids are proteins that cannot be manufactured by our bodies and therefore creates a requirement for them in our diet, while non-essential amino acids can be manufactured by our bodies.

Our bodies require these essential amino acids to successfully attain their optimal potential for muscle gain. Failing to give our bodies the building blocks they need to create muscle is a waste of time and effort.

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NOTE: Some sentiments contained within "What We're Reading" articles may not strictly conform with PROJECT: PFC's nutritional outlook. We read articles containing opposing information all the time and derive our nutritional philosophies from the latest science, the opinions of experts worldwide and our anecdotal experiences in the field. We keep an open mind and a strong affinity for fact-based evidence to help make the world of nutrition "Simple Again" for you.

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Second, proteins are made up of essential aminos and non-essential amino acids but most of the protein that can be found within those foods I listed above are not 'complete' protein and are lacking one or more essential amino acids that your body requires. Essential amino acids are proteins that cannot be manufactured by our bodies and therefore creates a requirement for them in our diet, while non-essential amino acids can be manufactured by our bodies.

Our bodies require these essential amino acids to repair fully and have optimal potential for muscle gain. Failing to give our bodies the proper protein sources can lead to lack of results for our efforts in the gym. Another big factor to consider about protein sources is their bio-availability. I can hear some people now...bio availa-what?!?

Bio-availability: this represents the percentage or scale rating of just how much our bodies can make use of certain protein sources. You need to know that our bodies and digestive systems absorb some protein's better than others and also certain sources will provide a higher amino acid profile.

These are the protein sources we should be including in our diets. Here is a quick chart to give you an idea of the bio-availability index rating of some protein sources:

Protein Source	Bio-Availability Index
Whey Protein Isolate Blends	100-159
Whey Concentrate	104
Whole Egg	100
Cow's Milk	91
Egg White	88
Fish	83
Beef	80
Chicken	79
Casein	77
Rice	74
Soy	59
Wheat	54
Beans	49
Peanuts	43

Conclusion

Basically, as a rule of thumb, I don't even count the proteins from foods that I consider primarily part of another macronutrient such as my carbs and fats. I only count proteins found from sources that are highly bio-available to our bodies.

Focusing on getting your proteins from the sources listed high in the table will really go a long way when it comes to gaining muscle and fat loss.

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