

## Making Your Around-the-Workout Nutrition Worth It!

Peanut butter and jelly, salt and pepper—workout and protein shake? Chances are if you work out whatsoever you have a cabinet full of mismatched shaker bottles, or maybe I'm just more disorganized than most. Nevertheless, the shaker bottle and its protein-rich elixir have gone hand in hand with working out over the past several decades. Purported to be beneficial for recovery, performance, and muscle-building, consuming protein around, or most commonly immediately after, your workout has become a staple “to-do” if you want any sort of results. But is this truly beneficial? Let's dissect some of the research to date, along with some empirical pragmatism, to shake out what the best around-the-workout nutritional strategy (or better known as peri-workout nutrition) is for you.

Before we jump the gun on designing your ideal intra-workout concoction, we need to pay homage to a theoretical nutritional hierarchy, we don't want to miss the forest for the trees. Of chief importance for any aesthetic-based endeavor are your total calorie and protein intakes. If you're trying to lose weight (body fat) you need to be in a net caloric deficit, and for all intents and purposes to gain weight (muscle) you need to be in a net caloric surplus. Figuring that out is a dynamic science in and of itself and a topic for another discussion. As far as protein goes the current Recommended Daily Allowance (RDA) of .8g/kg/day (.36g/lb/day, so 72g of protein for a 200lb individual) is simply not enough for anyone who partakes in regular physical activity, let alone pumping iron. The International Society of Sports Nutrition detailed in their 2017 position stand on protein and exercise that “daily intakes of 1.4 to 2.0 g/kg/day operate as a minimum recommended amount,” and that “there is novel evidence that suggests higher protein intakes (>3.0 g/kg/d) may have positive effects on body composition in resistance-trained individuals.” So, for those more imperially inclined that is a range of .64 to 1.36g/lb/day or 128-272 grams of protein for the 200lb gymrat. I will go ahead and be so bold, and pragmatic, as to say that the standard “one gram per pound” recommendation suits most just fine. Additionally, one may temper that number to be a bit higher if dieting and lower if in a caloric surplus, especially if higher levels of carbohydrates are being consumed as they are protein-sparing.

If total protein is king then meal timing and the rate at which we consume that protein falls next in nobility. The concept of *protein pacing* illustrates that consuming an adequate amount (20-40g) of quality protein rich in essential amino acids (EAAs) every ~3hr will function to turn on muscle protein synthesis (MPS); the chemical machinery that builds muscle in your body (*Stevenson*). In other words, up-to-date research shows that there is a relative governor on the rate at which we can turn on our body's muscle-building machinery. The rational thinker would then surmise that adhering to this pacing strategy would optimize your muscle building capacity within a day, or at the least maintain the most amount of muscle possible if in a dieting phase.

And then there was one; Peri-workout nutrition. After you've dotted and crossed your respective dietary “I's and T's” the nutrition around your workout can be explored. Where your workout falls relative to your meal spacing (or pacing) would dictate what you would be best served to consume. Interindividual gastrointestinal function becomes a context in itself, but for the most part, the closer your pre- and post-workout meals fall (within ~60min) relative to your training window the more easily digestible your protein source should be. This is where the utility of the often-consumed Whey Protein Isolate comes in handy, and even the more seemingly in vogue

beef and vegan protein powders could prove to serve your tummy better than a whole-food protein. Your current dietary predisposition would dictate the amount and type of carbohydrate, and possibly fat, you consume with this meal as well, but this choice should still also consider digestibility. Common “bodybuilder” whole-food sources of carbohydrates such as white rice and white potato are satisfactory options, and as you near (and even during) your training carbohydrate powders become an even more suitable option.

What if your meal timing dictates stuffing your piehole smack dab in the middle workout? Well, this is a perfect indication for intra-workout nutrition. Because we know 10-12grams of EAA’s including 1-3grams of the amino acid Leucine can stimulate MPS (*JISSN*), consuming that amount in a free-form amino acid supplement could theoretically replace a whole-food protein-containing meal and create a comparable effect whilst not taxing your gastrointestinal system. If allowed by your current dietary restrictions, adding a carbohydrate powder could further improve recovery through an anti-catabolic (muscle preserving) effect (bird) and also serve as a way to get in more carbohydrates and total calories in an easily digestible form for those who are pushing the upper limits of their digestive system during a bulking phase. Many forms of carbohydrate powder supplements exist on the market today with the tendency of increasing cost correlating with digestibility. This is a case for experimenting with different types to assess your tolerance. For example, some can get away with the cheaper dextrose powders whereas others may need a more refined carbohydrate such as a highly branched cyclic dextrin (HBCD).

So, there you have it, a relative primer on peri-workout nutrition. Does it seem like I stopped a bit short? I feel like I did, I would be looking for more nuance myself. However, for many reading this article, even the advanced among us, the 900 words or so that preceded this paragraph outlined a foundational hierarchy that is all too often overlooked. Let me toss some bullet points below for an easily digestible and implementable reading experience:

- Around-the-workout nutrition (aka peri-workout nutrition) is a trendy, often bastardized strategy

- The most important dietary considerations for an aesthetic-based trainee are total calorie and protein intakes on a day-to-day basis.

- A recommendation of ~1gram per pound of body weight per day is a sensible, general recommendation for most weight-lifting individuals. If dieting one may need a little bit more.

- Meal frequency is secondarily important as a *protein pacing* strategy of consuming 20-40 grams of EAA-rich protein every ~3hr can maximize the rate at which you essentially build muscle.

- Peri-Workout nutrition becomes a function of meal timing/spacing, biasing more easily digestible forms of protein and carbohydrate during this timeframe is advised.

- If a mealtime falls during your training session consuming 10-12 grams of EAA’s including 1-3 grams of Leucine can serve as comparable, more easily digested, protein feeding.

If I left you wanting more that’s great, I wanted to. While most simply need to consistently implement the strategies above to see all the results they’ll ever want or need, some may seek

more. This lends the article at hand to a “part two” where I can get more granular for those who have trained intensely in the gym for years and are reaching their genetic potential. For those of you who fall into that category, you’re used to waiting anyways. Writing good, meaningful content, much like building muscle, takes a lot of time and patience. Until the release of part deux keep filling up those shaker bottles with your protein brew of choice, and I will work on organizing my cabinets.

## References

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