

Nutrition: Carbohydrate Backloading

Hey, everybody, in this presentation we're going to talk about a strategy known as carbohydrate backloading. Carbohydrate backloading is a diet strategy that was developed by John Kiefer for optimizing body composition. It's used for weight loss, muscle growth, and better sleep quality, and it's frequently used in athletes and those that are training hard, for example, people that are doing CrossFit or powerlifting. It's based on the theory that insulin sensitivity is highest post-workout and in the evening.

There's some basic steps to the diet. First is eat lightly or even fast in the morning and at lunch, and to limit or avoid carbohydrates prior to exercise. Then you would train or exercise in the afternoon between four to six p.m., and then eat a very large amount of carbohydrate close to workout and throughout the evening, and there is no limit on the types of carbohydrates to eat, so anything goes: bread, pasta, oatmeal, any kind of carbohydrate at all.

The claim with carbohydrate backloading is that it has the following benefits: it prevents common problems of low-carb dieting, things like insomnia, gut dysbiosis, thyroid dysfunction; it's easier to adhere to than a strict low-carb diet, it allows for inclusion of high-carb foods and treats, so people are more likely to stick with it; and it's more effective for muscle growth than a very-low-carb diet.

But there are some problems with this carbohydrate backloading strategy. Number one is that it's just a theory and it's not supported by any convincing research at this point. There are several studies that say that the timing of food intake doesn't affect weight loss. Another issue is that carbohydrate backloading is designed for metabolically healthy and athletic individuals, not appropriate for people with diabetes and pre-diabetes, gut disorders, people who aren't exercising intensely and regularly, because the consumption of highly refined, processed carbohydrates could exacerbate all of those conditions.

Building on that, there's no attention to carbohydrate quality in the carbohydrate backloading strategy. In some ways, it actually encourages junk food consumption. Refined carbs, grains, sugars, they're all fair game in carbohydrate backloading. So it's still possible to overconsume total calories, even if you're eating lightly and fasting during the day, and it's also worth noting that protein foods can raise insulin too, so if you need a strategy based on keeping insulin levels low, then there's a potential disconnect there.

Another issue is that carbohydrate backloading could actually negatively impact athletic performance. A lot of athletes benefit from carbohydrate intake prior to training, especially if they're doing intensely glycolytic activity.

What I'd recommend if you're interested in exploring this approach is a less extreme version of it, where you eat a lower-carb, higher-protein diet in the morning and through the day. You could also even consider skipping breakfast entirely, which is intermittent fasting, another strategy we're

discussing in the course, and then just simply eat a higher-carbohydrate dinner. So you could have some Paleo-friendly starchy tubers, sweet potatoes, potatoes, even something like white rice if you tolerate it well, and you could have a substantially higher amount of those kinds of foods at night than you are having in the morning, and in fact, I know many athletes and people who train hard who follow this approach and do quite well with it.

Research shows that a high-protein breakfast increases energy and reduces hunger, so it's an effective tool for weight loss and leaning out, if that's a goal. And then higher-carbohydrate dinners can promote sleep. I've also seen that to be true in my clinical practice in my work with patients. We know that intermittent fasting can be an effective weight-loss technique for some people, so it's not that there's nothing to this idea, this strategy of carbohydrate backloading, it's that the way that it's implemented I think is problematic.

Appropriate calorie intake, high nutrient density, and a balanced macronutrient diet are essential, in my opinion, for healthy weight loss. Most people who are trying to lose weight don't need to do carbohydrate backloading, and in fact, it may not be an effective strategy for weight loss for the majority of people. It's more likely as a strategy to appeal to those who are trying to go from being relatively normal weight to being super-lean and fit.

There are many other effective strategies that you can employ if you're trying to lean out. Carbohydrate backloading is just one of them. I would suggest, as I said, a modified version with high protein intake in the morning and throughout the day and low carb, and then a higher intake of Paleo-friendly carbohydrates in the evening, and I think that's going to be much more effective in terms of leaning out for most people and still has a lot of the benefits of carbohydrate backloading. So, remember as with all diet topics we're talking about in the course, the key is experimentation; you want to encourage that in your patients and give them some options for things to try. At this point, I can't really recommend the typical implementation of carbohydrate backloading because it doesn't limit foods that we know can be really harmful for a lot of our patients. Okay, that's it for now, see you next time.