

Macronutrient Ratios – Part 2



Very Low Carb

% Carbs	Carbs (Grams) for Men (2600 kcal diet)	Carbs (Grams) for Women (2000 kcal diet)	Goal/Population
<10%	<65g	<50g	<ul style="list-style-type: none"> • Neurological issues (Epilepsy, Alzheimer's, etc.) • Severe blood sugar problems

Next up is very low carb, so I would characterize this as less than 10 percent of calories from carbohydrate, which translates to maybe 65 grams on a 2,600-calorie diet, or less than 50 grams of carbohydrate per day on a 2,000-calorie diet. This level is best used for those with neurological or cognitive issues like epilepsy or Alzheimer's, et cetera. Of course, a ketogenic diet, which a patient could be in ketosis if they're consuming less than 10 percent of calories as carbohydrate, you see some references suggest less than 7 percent of calories from carbohydrate to be in ketosis, but it really depends on the protein intake, because protein can be converted into glucose and so if a patient is going to be on a ketogenic diet, then reducing protein intake would also be helpful. So either very-low-carb, ketogenic diet, which is of course a very-low-carb diet, those can be really good for all kinds of different neurological issues and brain-related problems.

One of the theories is that in these conditions like Alzheimer's, the brain has trouble utilizing glucose, and so ketones are an alternative fuel source for the brain to glucose, so if you reduce glucose intake and make sure that the patient is producing plenty of ketones, then that can provide that alternative fuel source for the brain and really help them. And in some cases, I've seen ketogenic diets slow, stop, and even reverse the progression of dementia in early-onset Alzheimer's and produce pretty profound improvements in things like Parkinson's and other neurological problems. The ketogenic or very-low-carb diet may also be helpful for people who had some success with weight loss on a low-carb diet, but maybe they plateaued and are taking it a little bit further with a ketogenic diet, can be helpful in some circumstances. Of course, in others, adding carbohydrate, ironically, back into the diet can help kickstart the weight loss again, so we

come back to the need for experimentation. And then people who have severe versions of the conditions that we just talked about, overweight or blood sugar issues, or even mood issues in some cases, can benefit from a ketogenic approach.

Before we go on, I want to bring your attention to something that I call the accidental low-carb diet. So, this actually happens quite a lot, it's common, and the scenario would be, your patient's on a Standard American Diet, and then they're eating a lot of bread and pasta and things like that, or even on a "healthy" type of low-fat diet, I have "healthy" in air quotes because of course we were told that was healthy for so long, so they can be on a vegetarian low-fat diet or just a standard kind of low-fat diet, they're eating a lot of carbohydrate, and usually it's in the form of flour, whether that flour is bread, pasta, crackers, muffins, that sort of thing, and then they switch to Paleo and they start eating meat and a lot of non-starchy vegetables and maybe a sweet potato here and there and an occasional fruit, and they are not eating some of the less common starchy plants like plantains, yuca, taro, lotus root, some of these types of starches, and they're not really trying or paying attention, monitoring their overall carbohydrate intake. That person is going to be on an accidental low-carb diet.

So let me give you an example. I had a patient, we'll call him Frank, he was 6'3", 215 pounds, extremely active, competitive athlete, and when he first came to see me, he had a lot of fatigue, difficulty with exercise recovery, his performance was dropping, he had switched to Paleo maybe nine months before and felt really good initially but had started to develop these problems in the last few months. So I asked him how he would characterize his diet in terms of macronutrient ratio, and he said moderate carb, and I said okay, can you be more specific? And he said sure, well, I eat meat and non-starchy vegetables for most meals, and then maybe four times a week I have a large sweet potato, and then maybe four times a week I have a half-cup of blueberries.

So given Frank's weight and activity level, he needs about 3,000 calories a day just to maintain his weight, and he was, like I said, very active and even wanting to put on muscle. But let's just say he needs 3,000 calories a day. At 25 percent of calories from carbohydrate, which I would say is a moderate-carb approach, that would be 188 grams per day of carbohydrate, so a large sweet potato contains 37 grams and a half-cup of blueberries contains 10 1/2 grams, and Frank ate about three to four servings of non-starchy vegetables per day. As I mentioned before, I don't really count these because of what I said, the low level of carbohydrates they contain and the energy expenditure burning of carbohydrates required to obtain them, but just for the ... we'll give them the benefit of the doubt and count them anyway, so that's 25 grams in addition per day.

So if you add that all together, Frank was eating maybe about 50 grams per day of carbohydrate, because he wasn't ... remember, he was only having the sweet potato four times a week and the berries four times a week. If you do the math, that comes out to only 7 percent of calories from carbohydrates. So without even trying to, Frank was on a really low-carb diet.

I think part of the reason this happened originally was that Paleo at first was ... the first kind of people who started doing Paleo came over from the low-carb camp, and it was kind of co-opted by the low-carb movement early on. So a lot of the emphasis was on low-carb foods, the non-

starchy vegetables and meat. Interesting thing is, when you look at the diets of most traditional hunter-gatherers that were studied, there aren't many of those groups left, but the ones who were studied through the '60s, '70s and '80s, their diets were not an extremely low-carb. The exception would be the traditional Inuit, but they were only that low on carb because they didn't have access to carbs. If they did they would have eaten them, but they were living in a very marginal environment and so they had an extreme diet. But when you look at most hunter-gatherers, they had a moderate or even higher intake of carbohydrate, and when you look at all the studies that have been done, or most of the studies that have been done in the contemporary scientific literature on Paleo diets, they have not been low-carb Paleo diets, they've been moderate-carb paleo diets with maybe 30 or 35 percent of calories as carbohydrate.

So this idea that Paleo should be low-carb is unfortunate because I don't think it serves most people, and a lot of people end up eating this accidental low-carb diet without even trying, simply because they don't know how to replace the bread and pasta with Paleo-friendly carbohydrates. Most people just think of sweet potatoes. They don't eat potatoes or white rice because they've been told that they're bad. That's another reason why I think potatoes and white rice can be part of a healthy Paleo-template approach, because they're helpful in adding carbohydrates back into the diet. And then they're not familiar with other carbohydrate sources like yucca, which is also a cassava or manioc, or taro or plantains, green or ripe plantains, or lotus root and all these choices that we have now that ... at least in some places. They can help contribute to this overall carbohydrate intake in a Paleo-friendly way, let's say.

So, I wrote an article called "Are you lower-carb than you think?" on my blog. We're going to include a link to it in the resources section, definitely recommend checking that out and sharing it with your patients, because I would say a large percentage of my patients that come to see me are on this accidental low-carb diet. You need to pay really close attention to their diet survey and the information that you get from them because making this seemingly small change can produce a really dramatic effect. In fact, it's sometimes a little ... I'm not sure what the right word is, surprising or funny or even disconcerting for some patients. They come to me with a whole wide range of complaints, and certainly we do all the up-front testing and we schedule a case review, but I end up maybe doing the initial consult, we make a suggestion of adding more carbohydrate back to their diet, and by the time they get to the case review a lot of their complaints are gone or significantly improved. So don't underestimate the importance of this, it's really crucial.

High Carb

% Carbs	Carbs (Grams) for Men (2600 kcal diet)	Carbs (Grams) for Women (2000 kcal diet)	Goal/Population
>30%	>200g	>150g	<ul style="list-style-type: none"> • Athletes and highly active people • Trying to gain weight/muscle • Fast metabolism • Pregnant/breastfeeding

Finally, the fourth category would be high carb, and this would be considered anything above 30 percent of calories from carbohydrate. This translates to 200 grams and up on a 2,600-calorie diet or 150 grams and up on a 2,000-calorie diet. This level is usually best either for people who are lean and have a very active metabolism, or people who are athletes, competitive athletes doing a lot of glycolytic activity, or people with highly active jobs where they're doing a lot of highly manual labor throughout the day. It may be that people who are underweight or people who are trying to put on and gain muscle, like I mentioned athletes, will do better at the high-carb diet. You'll see it with a lot of bodybuilders, like Jay Cutler, for example, have achieved pretty phenomenal results eating as much as 70 percent of calories from carbohydrate. And the bodybuilders, they may not always be using the safest methods to increase their muscle mass, but they're pretty keen on doing these kinds of experiments and paying a lot of attention to it, and you'll find that really low-carb diets are unusual in the bodybuilding community. Most bodybuilders are eating a higher-carb diet.