

The Definitive Guide to the Primal Eating Plan



Do the Math

In my recent [Context of Calories](#) post, I explained how the different macronutrients we eat at each meal (fats, proteins, and carbohydrates) have different effects in the body. I suggested that, despite their raw calorie values, it's far more important to get a lasting intuitive sense of how much of each macronutrient you need and when you need it (or not).

But how do you do that? How do you figure out the proper number of calories – and breakdown of fats, protein and carbs – to accomplish your fitness and health goals? To lose weight? Lose fat? Gain muscle? Maintain status quo? Run marathons?

In fact, **most popular daily diets look at overall calories as the main factor in weight loss and weight gain.** The age-old conservation of energy Conventional Wisdom says that “a calorie is a calorie.” From there most diet gurus generally prescribe some formulaic one-size-fits-all breakdown of fats, protein and carbs. A classically trained [Registered Dietician will tell you](#) that protein should be around 10-15% of calories, carbs should be 60% (and mostly from whole grains) and fat under 30%. This macronutrient breakdown stays the same regardless of how much weight you need to lose or what other goals you might have. Barry Sears has his 40/30/30 “Zone” diet. The USDA bases everything on a choice of between 2,000 and 2,500 calories a day. But, as I said earlier, it's not that simple. Calories do have context.

The human body uses these macronutrients for a variety of different functions, some of which are structural and some of which are simply to provide energy – immediately or well into the future. Moreover, with regards to energy conservation or expenditure, the body acts as both an efficient fuel storage depot (and as a toxic “waist” site) as well as a potent generator of energy, depending largely on the hormonal signals it gets. It will store glycogen and/or fat and it will build muscle – or it will just as easily tear them all down and use them for fuel – based on input from you: what you eat, how much you eat, when you eat, what you're doing before or after you eat – even what you're thinking when you eat. Yet because your body always seeks to

achieve homeostasis over time, the notion of you trying to zero in on a precise day-to-day or meal-to-meal eating plan is generally fruitless (yes, Charlotte, some fruit is allowed). The good news in all this is that falling off the wagon once or twice this week won't have the immediate disastrous effect that you might imagine – as long as you can keep your average intake under control and understand how the various macronutrients function over time.

Which brings me to the crux of today's discussion. **Not only is it nearly impossible to accurately gauge your exact meal-to-meal calorie and macronutrient requirements, doing so will drive you crazy.** In fact, to accurately figure your true structural and functional fuel needs (and hence to achieve your goals) it's far more effective to look at a much larger span of time, like a few weeks, and aim for an "average" consumption. Then you can review that average daily intake over weeks or months and adjust accordingly. Below, I'll give you a way to figure a "jumping off" point to start with, but remember, our genes are accustomed to the way our ancestors ate: intermittently, sporadically, sometimes in large quantities, and sometimes not at all for days. Their bodies figured out a way to maintain homeostasis and preserve lean tissue and good health through all this and so can we. **Our genes want us to be lean and fit.** It's actually quite easy as long as we eat from the long list of [Primal Blueprint healthy foods](#) and try to avoid that other list of grain-laden, sugary, processed and otherwise unhealthy foods. Realistically, we also want to allow for the occasional party-splurge, a pre-planned (or accidental) intermittent fast, an over-the-top workout or even a week of laziness. Where most people get into trouble is in miscalculating their energy needs over extended periods of time – not day-to-day. They don't see the average amount of carbs creeping upwards, or they figure they need x amount of calories, but don't have a clue as to what kind of food those should be coming from.

I start with these four basic principles to guide my Primal Blueprint eating style:

1) 80% of your body composition will be determined by your diet. Yes, exercise is also important to health and to speed up fat-burning and muscle-building, but most of your results will come from how you eat. I'll write more on this later, so just trust me on this one for now. Suffice to say, people who weigh a ton and exercise a ton, but eat a ton, still tend to weigh a ton. I think I'll have that made into a t-shirt...

2) Lean Body Mass (LBM) is the key to life. I've [said it many times](#) on this site: lean mass (muscle and all the rest of you that is not fat) is directly correlated with longevity and excellent health. Rather than strive to "lose weight", most people would be better off striving to lose only fat and to build or maintain muscle. Since other organs tend to function at a level that correlates to muscle mass, the more muscle you maintain throughout life, the more "organ reserve" you'll have (i.e. the better the rest of you will work). Refer back to rule #1 and eat to build or maintain muscle.

3) Excess body fat is bad. Most human studies show that being significantly overweight increases your risk of nearly every disease (except osteoporosis – because ironically it responds to weight-bearing activities). Fat just doesn't look that great either. See rule #1 and eat to keep body fat relatively low.

4) Excess insulin is bad. We've written about it [here](#) a lot. Chronic excess insulin may be even worse than excess sugar (and we know how bad that is). All animals produce insulin, but within any species, those that produce less insulin live longer than those who produce a lot. Eat to keep insulin low.

Here is how I use these principles to guide my individual macronutrient intake:

Protein



Protein takes priority. If there is ample glycogen (stored glucose) and the body is getting the rest of its energy efficiently from fats, **protein will always go first towards repair or building cells or enzymes.** In that context, it hardly seems fair to assign it a “burn rate” of 4 calories per gram. It’s like saying the 2×4 studs that support the walls of your house can burn nicely if you run out of firewood. They will, but I prefer to burn other fuel first. At a minimum you need .5 grams of protein per pound of lean mass/per day on average to maintain your “structure”. If you are moderately active you need .7 or .8, and if you are an active athlete you need as much as 1 gram of protein per pound of lean mass. That’s at a minimum, but it’s on a daily average. So a 155 lb moderately active woman who has 25% body fat (and thus) has 116 lb of lean body mass needs 93 grams of protein on average per day ($116 \times .8$). If she gets 60 or 80 some days and 110 on others, she’ll still be in a healthy average range. And even if she exceeds the 110, it’s no problem if she’s eating low carb because the excess protein will convert to glucose, which will reduce her effective carbohydrate needs (see below). At 4 calories per gram, that’s between 320 and 440 calories per day in protein. It’s not that much.

Carbs



If you’ve forgotten everything you ever learned in biology, just remember this and “own” it: Carbohydrate drives insulin drives fat (Cahill 1965, and Taubes 2007). The idea in the PB is **to limit your carbs to only those you need to provide glucose for the brain and for some reasonable amount (certainly less than an hour) of occasional anaerobic exercise.** And the

truth is, you don't even need glucose to fuel the brain. Ketones from a very-low carb diet work extremely efficiently at that task. Either way, ideally, **we would like most of our daily energy to come from dietary or stored fats**. Typically, (if you are at an ideal body composition now) I use a rule of thumb that 100-150 grams of carbohydrate per day is plenty to keep you out of ketosis (and ketosis is NOT a bad thing) but away from storing the excess as fat if you are the least bit active. Don't forget that your body can make up to 200 grams of glycogen from fats and protein every day, too. On the other hand, if you are looking to lose body fat, keeping carbs to under 80 grams per day will help immensely in lowering insulin and taking fat out of storage. On the other hand, if you are insistent on training hard for long periods of time, you would add more carbs (say, 100 per day extra for every extra hour you train hard). It becomes a matter of doing the math and experimenting with the results.

Ironically, it's tough to exceed 100 grams of carbs even if you eat tons of colorful vegetables – as long as you eat like our ancestors and consume no grains, no sugars and few starchy vegetables (potatoes, yams, beets, legumes, etc). Even if you eat a ton of vegetables AND a fair amount of fruit, you'll be hard pressed to exceed 150 grams of carbs on average per day. Our remote ancestors couldn't average 150 grams of carbs a day if they tried, yet they had plenty of energy and maintained their lean mass. At 4 calories per gram that's only between 400 and 600 calories per day. Add that in to the protein above and our sample girl is barely at 1,000 calories on the high end. So where does the rest of the fuel come from?

Fats



Learn to love them. They are the fuel of choice and should become the balance of your Primal Blueprint diet. **Fats have little or no impact on insulin and, as a result, promote the burning of both dietary and stored (adipose) fat as fuel.** Think about this: if protein and carbs stay fairly constant (and carbs stay under 150), you can use fat as the major energy variable in your diet. Feeling like you need more fuel (and you've already covered your bases with protein and carbs)? Reach for something with fat. Nuts, avocados, coconut, eggs, butter, olive oil, fish, chicken, lamb, beef, the list is a long one. 100 grams of fats per day would only add 900 calories to our girl's daily average, putting her at between 1620 and 1940 calories a day. Even if she averages somewhere between 1400 and 2200 calories per day over a few weeks, as long as she pays

attention to protein and carbs, her body composition will shift to lower body fat and more desirable lean mass. If she decides to do some walking, a few brief intense weight sessions and a sprint day here and there, that process would accelerate greatly. If she gets to a point where she's content with her body fat, she can even add in a little more fat to provide energy that she previously got from her stored fat.

The main thing I've figured out from eating this way for years is that I don't need nearly as many calories to maintain health, mass, and body fat as I once thought I did – or as the Conventional Wisdom says I do. **I eat 600-1000 calories per day less than when I ate a carbohydrate-based diet, yet I maintain slightly lower body fat and slightly higher muscle mass on even less training.** Remember: 80% of body composition is determined by diet. The best part is that I don't ever feel hungry because I base my eating on exactly what my 10,000-year-old genes want me to eat.

For a look at my upcoming book, The Primal Blueprint, [click here](#). I've included a sneak peek at the jacket artwork, a PDF of the table of contents and full chapter summaries.

Further Reading:

Definitive Guides to:

[The Primal Blueprint](#)

[Grains](#)

[Fats](#)

[Cholesterol](#)

[Insulin, Blood Sugar and Type 2 Diabetes](#)

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