

Common Sense Nutrition, Part 2

By Kim Baugher

In part one of this series I discussed a basic nutritional strategy – eating the right kinds of foods will lead to favorable body composition as well as better performance and health. Now if some of you were paying attention you noticed that I didn't go into much detail about when to eat or how much to eat. In this second installment I'll address these issues in further detail.

Different Strokes for Different Folks

Something I touched upon in part 1 is individual differences – that is, everyone is different and so they have different needs when it comes to nutrition. I cannot stress this point enough. What works for one person may not work for the next; although I'll provide guidelines for you to follow, in the end you have to try it and see if it works. If it doesn't, stop doing it. Adjust your diet until you find what works for you!

How Much?

So how much of each macronutrient should one get in one's diet? Some nutrition experts advocate the elimination of a particular nutrient (e.g. Atkins, low-fat, etc.) while other nutrition experts suggest an exact ratio (e.g. The Zone – 40% carbohydrates, 30% protein, 30% fat). You may remember in part 1 that I stated that there is no one single macronutrient that I consider bad. I also don't buy into the idea of an exact ratio. Why? There are many factors to take into consideration when it comes to how much of each macronutrient one should get in their diet - activity level, types of activity, carbohydrate tolerance, lifestyle, etc. It's too simple to suggest that everyone eat the same way. I'll address some of these factors below.

Activity Level and Types of Activity

Some people are more active than others, and different people take part in different activities. This may seem like a pretty obvious statement, but what may not be so obvious is what this means from a dietary standpoint. When at rest, taking part in light activity or aerobic exercise the body's preferred energy substrate is fat in the form of fatty acids. However, during more intense (anaerobic) physical activity your body will shift more towards glycogen utilization. So what does this mean? Those people who take part in more intense anaerobic work may benefit from including more carbohydrates in their diets, and those who are less active or partake in lighter intensity work may benefit from more fat. So this means you'll want to eat based on what you'll be doing within the next few hours – more carbohydrates for more intense/anaerobic activities, less for less intense/aerobic/sedentary activities.

Exercise, particularly anaerobic variety, is a powerful *nutrient partitioner* – that is, not only will your body favor carbohydrates as a source of energy beforehand, but your body

will also better utilize carbohydrates when taken in afterwards as well. Furthermore, during physical activity cortisol levels can increase dramatically. High levels of cortisol can impact recovery and muscle gains among other things. However, increased levels of insulin can blunt cortisol. This means that getting some carbohydrates in after a workout is a *great* idea! If your *carbohydrate tolerance* (see below) is good or moderate these carbohydrates should be high-GI – Gatorade mixed with whey protein is a good combination, or even a bowl of cereal with a whey shake. However, if you are less carbohydrate tolerant you may want to use something low-GI or reduce the amount of carbohydrates taken in post workout.

Carbohydrate Tolerance

Carbohydrates tend to increase circulating levels of insulin more so than other macronutrients. Insulin, among other things, is the body's "storage hormone". Those who are more *insulin sensitive* respond more favorably to insulin, and they are better able to store substrates in the form of muscle glycogen – this means that they can tolerate higher levels of carbohydrates better than some people. However, those who are more *insulin resistant* are not able to do this as well. How do you know which group you fall into? If you tend to be sluggish or "crash" after a high carbohydrate meal (particularly a high GI meal), or you tend to put on fat more easily when your carbohydrate intake increases, or blood sugar levels decrease slowly after ingestion of a high carbohydrate meal it probably means you're more insulin resistant. This may warrant a reduction in carbohydrate intake. However, if you can tolerate carbohydrates well you should make an effort to take in more.

Most people tend to fall somewhere in the middle. Those people who are more active tend to be more carbohydrate tolerant because regular exercise can increase the insulin sensitivity of skeletal muscle. So if insulin resistance is a problem for you, you need to start hitting the weights!

Lifestyle

Exercise isn't the only thing that can increase cortisol levels. Stress itself can increase cortisol as well. Those of us who have very demanding jobs or who get less sleep may suffer from increased cortisol levels. How do you know if you have cortisol issues? One strong indication is having a demanding job or irregular sleep. Another indication is a pot belly; there is a correlation between higher cortisol levels and *visceral adipose tissue*, or VAT. This is fat that resides behind the abdominal musculature, in and around the organs, which tends to put the stomach out. In the case of high cortisol levels an increase in carbohydrate intake may be warranted, since higher levels of insulin can help blunt cortisol levels. Keep in mind though that you should endeavor to *control* cortisol levels, and not eliminate it entirely!

Fat and Protein

The points I addressed above mainly have to do with carbohydrate consumption. So what about fat and protein? When is it appropriate to increase or decrease these macronutrients?

In general, as carbohydrate consumption decreases, fat intake should increase. As stated above in “Activity Level and Types of Activity”, fewer carbohydrates would be needed for less intense/aerobic/sedentary activities. This in turn would warrant an increase in fat. I don’t believe that one necessarily needs to eat exclusively fat or carbohydrates in a meal, but there are two good reasons not to do this. The first is that a meal containing both fat and carbohydrates may pack in a lot of calories, so be careful if your meal contains both. The other reason is that usually you will either be sedentary or be participating in some sort of activity, so one or the other would probably be appropriate rather than both.

As for protein, protein intake should remain fairly constant. Faster digesting proteins (whey) are more appropriate during or immediately after intense activity or first thing in the morning to provide needed amino acids. Slow digesting proteins (casein, meats) should be used at other times to provide a steady stream of aminos.

Putting it Together

Now that you understand when macronutrients are appropriate and what roles they play, I’ll lay out some basic guidelines for you to follow. Keep in mind that these are *guidelines*. Start here and adjust accordingly. Account for individual differences!

Protein – A good starting point here is at least 1 gram of protein per pound of *lean body weight* (LBW). I suggest basing it on LBW because fat is less metabolically active than muscle and other tissues. Most often better results will be seen when adjusting this number up, as there are very good benefits to be had from higher protein intake (e.g. increased thermogenesis, higher nitrogen retention, etc.) However, this makes for a good starting point. Use faster digesting proteins in the morning and post workout, and slower digesting ones at other times.

Carbohydrates - I would suggest starting with at least 1.5 grams of carbohydrates per pound of LBW and adjusting accordingly. Those who can better tolerate carbohydrates will most likely perform better on higher carbohydrate consumption, so up to 2x LBW or higher may be appropriate. Those who do not tolerate them as well should stick with 1x LBW as a maximum, and may want to go even lower. Higher levels of stress in daily life may warrant an increase in carbohydrate consumption. And again, higher levels of intense physical activity will warrant higher levels of carbohydrates.

Fat – Fat consumption should vary depending on carbohydrate consumption. .25 grams of fat per pound of LBW is a good starting point, but adjust up or down accordingly.

Fiber - Fiber provides satiety and helps to “keep the pipes clean”. You should get an adequate amount of this provided you eat your fruits and veggies. Aim for at least 20g-30g a day in the form of both soluble and insoluble fiber.

Calories – I’m not big on tracking exact caloric intake. However, sometimes this can be appropriate. I will occasionally total calories up to see if there are any big changes in how many I’m getting in on my diet and then adjust accordingly. Around 12 calories per pound of body weight is how much one needs to maintain weight. You would then want to adjust up or down according to physical activity level as well as your personal metabolic level. If you want to determine your macronutrient levels based on total caloric intake, figure out your protein and carbohydrate requirements first (protein is 4 calories per gram, carbohydrates is 4 as well), then use what is left over to determine fat intake (fat is 9 calories per gram).

And That’s It... for Now

Hopefully I’ve been able to take a lot of the guesswork out of determining your macronutrient needs!