
Demystifying Nutrition

By Lucho Crisalle RD



Demystifying Nutrition—

The “owner’s manual” to your metabolism.

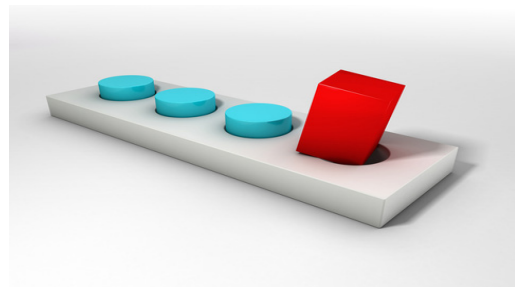


Over the years, and after working with thousands of clients, I have found that poor eating habits are the leading reason for failure in attaining optimal health and fitness. The habit of eating a balanced and satisfying meal is very often the missing link in optimal health and fitness. There are many reasons for not following a healthy diet; I have found that a lack of knowledge,

and an abundance of misinformation, tend to be the most common reasons. With that in mind, I decided to write this article to “demystify” nutrition, and to educate the health & fitness professionals and the general public on the topic. I have learned that people learn more easily with the use of analogies. Because everyone is familiar with how automobiles function, I have chosen to use them as the “vehicle” (no pun intended) to make this information even easier to understand.

In view of the fact that we are bombarded with so much nutritional information, it is very hard to decipher whether the source is legitimate or not. All the information in this article was based on clinical studies, along with over 25 years of experience as a clinical and sports dietitian. It is my passion and I have made it my goal to Demystify Nutrition... and I realized early on that I would not be able to achieve that goal on my own.

Because of that, I have created a systematic approach to nutritional counseling through our **Certified Fitness Nutrition Specialist™** certification course. We have a community of CFNS’s that have accepted the challenge and are equally committed to demystifying nutrition and helping folks just like you reach your health, nutrition, and fitness goals by providing clinically based information tailored to you as an individual as opposed to cramming your “square self” into the “one size fits all round hole” approach to nutritional counseling that is so prominent today. If you are reading this article, it is most likely due to one of our CFNS graduates having made it accessible to you as your “homework” before meeting with them one on one. If you have not made an appointment yet with one of our CFNS’s, I highly recommend that you do so right away. They offer a complimentary, no obligation session to see if one of our programs is a fit for your goals, lifestyle, values and beliefs.



Ignore the Folklore and the Hype.

The question I get asked most often is “what and when should I eat?” There is a wealth of contradictory nutritional information available including: eat carbohydrates or don’t eat carbohydrates; eat before going to bed, do not eat three hours before bed, or do not eat after 6 p.m.; combine foods, or do not combine foods. It appears that there is no end to this litany; hence, you should ignore the folklore and the hype and get your nutrition information only from a reputable source.

We are not concerned with how much you weigh, and neither should you.

Most of my clients’ goals are to gain or maintain their muscle mass and get rid of some body fat. Although one may think that these are mostly aesthetic concerns, the truth of the matter is that body composition or body fat percentage is THE true measure of health as opposed to how much we weigh. We are not concerned with how much you weigh, and neither should you. It may surprise you to know that a pint of water (two cups) weighs a pound; and that you may gain or lose a pound or more of body weight based on your hydration status and daily fluid intake alone. Thus, your success or progress cannot be based on your body weight alone. If I were to weigh you, have you drink a pint of water, and weigh you again, you would be a pound heavier. Will you be fatter? No, you will just be less thirsty, and a pound heavier!



Your weight is sure to increase as you increase your exercise levels...



As you begin an exercise program, your body starts to store more “fuel” in your muscle cells. This fuel is called glycogen, which is simply many glucose or blood sugar molecules hooked together and stored in your muscles and cells all over your body for later use. These glycogen molecules are so highly concentrated that your body must also store water in your cells along with glycogen in a ratio of 1:3 (one molecule of glycogen to three molecules of water). Because water weighs a pound for every

pint and glycogen also weighs considerably, your weight is sure to increase as you increase your exercise levels, and your glycogen and water storage increases in response to the increase in exercise.


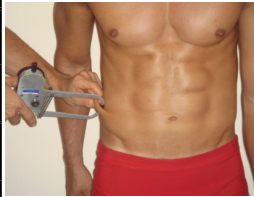
Does a car “get fat” every time you fill up the tank?

An analogy helps illustrate this phenomenon quite easily: If your fuel tank is on empty and you are going on a long trip by automobile, you will most likely fill up your tank. However, if your tank is on empty and you are only going to the corner store, you will most likely not go out of your way to fill up your tank. The same is true with your glycogen storage; the more you exercise, the more your body begins to store glycogen and water. Certainly, your car does not weigh as much when it is empty as it does when it is full. Well, does a car “get fat” every time you fill up the tank? Of course not! A car has only *one* gas tank; in the body, in contrast, there are trillions of cells that fill up with glycogen and water so you can use it as fuel next time you exercise, causing an increase in body weight, but not necessarily in body fat. The only way to know the difference is to **track your body fat percentage by measuring it weekly.**



Measuring Body Composition is the only way to know if you are getting results.

When looking at your body composition weekly, we look for the following four signs:

	MUSCLE	DIETARY INTAKE	FAT	
	↑ ↔	Nutrition plan is PERFECT!!!	↓	
	↑	Eating TOO MANY Calories	↑	
	↓	Not Eating Enough Calories	↑	
	↓	Not Eating Enough Protein	↓	

A gain in muscle and a loss in fat	=	you have a perfectly designed meal plan.
A gain in muscle and a gain in fat	=	the meal plan includes too many calories.
A gain in fat and a loss in muscle	=	you are not eating enough calories.
A loss in muscle and a loss in fat	=	you are not eating enough protein.

Out of the four scenarios listed above, the top two are simple to understand; when the plan is perfect, you will gain or maintain muscle and get rid of fat, and if you are overeating you will gain both muscle and fat. The bottom two, however, tend to confuse most people... even those in the health and fitness industry that have gone through some type of nutritional courses.

Here is an explanation of how one may be losing muscle and gaining fat from not eating enough, as well as losing muscle and losing fat when not getting enough protein.

How Cortisol Makes You Fat.

When we skip meals, starve ourselves, or just do not eat enough, our blood glucose levels drop. When our blood glucose levels drop be-



low a certain level, our body secretes a hormone called cortisol. Cortisol's job is to break down muscle tissue and turn it into sugar so that we can continue to "survive" and do whatever it is that we are doing. The problem with that (besides the breaking down of muscle) is that the excess or left over sugar that was created through this process and remains unused, is stored for later as fat, and the "storage location" of choice for this fat tends to be the belly (more on how this happens later in this article).



Eating More Protein May Not Be The Answer...

Here is an explanation for the last scenario, that of losing muscle and losing fat. For as long as I can remember, if a client was losing or not gaining muscle, the accepted practice was to increase the client's protein intake... some people are *still doing that to their clients...*



For the last few years however, we have been using digestive enzymes to address this issue *instead of over stuffing our clients with more and more protein*. Here's why: if a client's meal plan consists of 150g of protein per day, but the client can only digest and assimilate 100g, increasing their protein intake to 200g will not make a difference as they can still only assimilate/digest 100 out of the 200g being consumed; **therefore, eating more protein may not be the answer.**

Utilization and Absorption is More Important than Consumption.

However, if instead of increasing their protein intake we **increase their ability to digest, absorb, and utilize those 150g of protein** by introducing digestive enzymes, we can more effectively determine if they truly need more protein or if they were just unable to use the protein we were giving them in the first place.



Losing BOTH muscle AND fat could be due to not eating/digesting/assimilating enough protein, however, it can also be due exercising at high intensity (anaerobically), as well as due to too much cortisol production due to high stress levels, or, a combination of all of these factors.

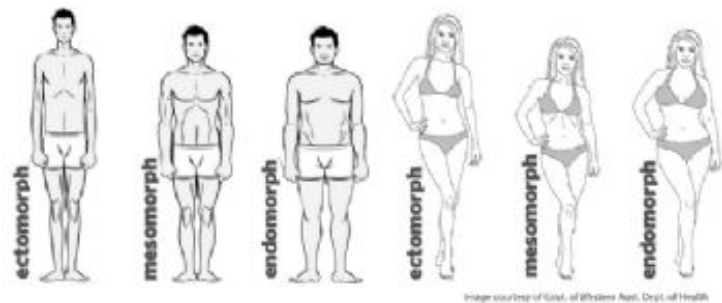
There is No One Size Fits All Approach to Nutrition.



This is why it is critical to meet with one of our **Certified Fitness Nutrition Specialist™ (CFNS)** and have a *custom nutrition plan* created just for you. No “one size fits all approach to nutrition” such as “calories in, calories out,” or a “40-30-30” type plan will give you the results you want. Neither will a plan that “crams you into a somatotype box” of being an “ectomorph, endomorph, or mesomorph.”

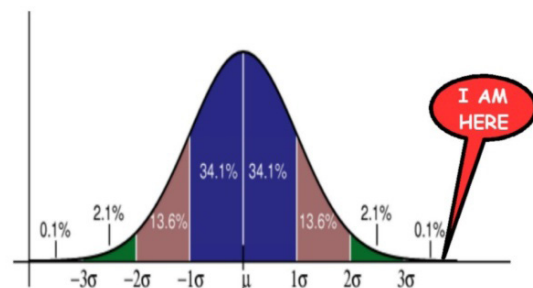
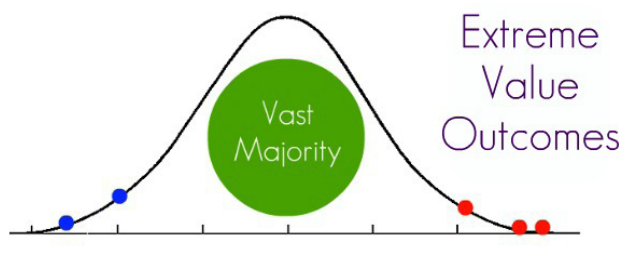
These “square peg into a round hole ideas of nutrition” are created through “research studies” that fit the **vast majority** of the study participants. However, if you happen to be one (of the many) **statistical outliers**, as shown by the blue and red dots in the graph below, these studies’ results cannot be applicable to you in any way whatsoever; no wonder you’re not getting results!.

Now, wouldn’t it be wonderful if **YOU** were the studies’ subject? Absolutely! And **THAT** is exactly what our Certified Fitness Nutrition Specialists™ do for you. They create a custom nutrition plan based on **you** as an individual, and meet with you on a weekly basis to assess how your body is responding to the plan and adjust the plan accordingly.

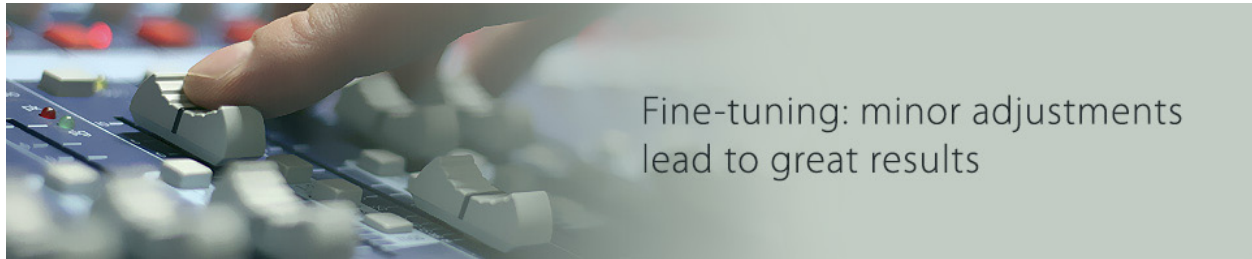


Once a custom plan has been created for you based on your lean body mass, duration, frequency, and intensity of exercise (or lack thereof), weekly meetings with your CFNS will ensure that your custom plan is adjusted based on how your body reacts to the nutrition and exercise plan introduced.

STATISTICAL OUTLIER



How Often Should I Meet With My CFNS?



Weekly meetings are best as they serve a number of purposes: they help **fine tune** your plan based on how your body is reacting, making it a truly customized plan - minor adjustments lead to great results; they allow the CFNS to take **quick action** before you get too far off course; they provide **accountability** and increased guidance and motivation, making it more likely for you to stay on track. Once you have reached your goal(s), you can meet once every two to three weeks to make sure you continue in the correct path and/or establish a maintenance program, depending on what your goals may be. Finally, you should consult with your CFNS as you establish new goals, or as your workout routine and schedule changes.

Basic Nutrition Information.

We help our clients achieve their goals of gaining muscle and losing body fat by teaching them three basic rules of success that are easy to follow no matter where their travels may take them. Before we discuss these rules, let's review some **basic nutrition information** as well as the mechanism by which fat is stored in our body.



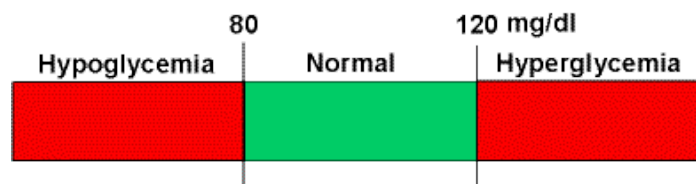
The Macronutrients and The Secret to Dietary Success.

Food consists of three macronutrients (so called not because of their size, but because of the amounts in which we need them), namely, carbohydrates (CHO's), fats, and proteins.

Whenever we eat CHO's they first go to the stomach where they are digested, and then proceed to the intestines where they are absorbed into the bloodstream in the form of glucose (blood sugar or blood glucose). As blood glucose levels rise, the body secretes insulin, a hormone that is responsible for storing glucose (in the form of glycogen) in muscle and organ cells. Normal blood glucose levels are between 80 and 120 mg/dl (a way of measuring glucose concentration, how much sugar is dissolved in our blood, or how "thick" blood gets).



Whenever blood glucose levels fall below 80mg/dl we feel hungry. If the glucose concentration were to fall well below 80 mg/dl the body would react by slowing down its metabolism to save energy. Continuing with our car analogy, this is very much as if we would let off the accelerator pedal and turn off the air conditioner in our car to conserve energy when we are running low on fuel. Of primary importance to us, however, is the fact that whenever our blood glucose levels rise above 120 mg/dl the residual glucose is stored as fat. ***Hence the secret to dietary success is to control blood glucose levels throughout the entire day as a means of maintaining a high metabolism and therefore minimizing fat storage.*** The practice of maintaining normal blood glucose levels alone will have the secondary benefit of helping you avoid food cravings and overeating.



The Importance of Gastric Emptying Time.



Because blood glucose control is very important in controlling diabetes, many studies have been conducted to determine how different foods affect blood glucose levels. One study is the “gastric emptying time test,” which measures how long it takes food to leave the stomach. The reason this is a very important study is that the more quickly carbohydrates leave the stomach, the more quickly blood glucose levels rise. Usually, the more quickly blood glucose levels rise, the more effectively glucose gets stored as fat due to larger insulin secretions. These large insulin secretions then cause a quick drop in blood glucose levels, causing us to get hunger pangs and/or cravings; highlighting the importance of blood glucose control.

Gastric emptying time studies show that the longest time that CHO's will stay in the stomach is one hour. In contrast, protein will stay in the stomach two hours, and fats will stay in the stomach three to five hours. This is why you find yourself getting hungry 20 to 40 minutes after having a piece of fruit, or some bread, pasta, rice, veggies, or even some cereal. This is also why you feel stuffed for four hours after having a high fat containing meal. These studies also found that when you combine a protein with a carbohydrate, both the protein and the fat contained in the protein (since most proteins have *some* fat in them or we have used fat or oil to cook them) cause the carbohydrate to stay in the stomach longer (approximately three and a half to four hours), which basically means that this increases gastric emptying time, a good thing, because a longer gastric emptying time also means a slow and controlled increase in blood glucose, which lessens the chances of storing a large portion of this meal as fat due to a quick and high increase in blood glucose followed by a large secretion of insulin.



A longer gastric emptying time also means mild successive increases over time, as well as mild or slower successive decreases in blood glucose levels caused by the longer time that it takes for food to leave your stomach. As a consequence, you do not get hungry as quickly, and are able to do away with your sweet cravings, which are usually caused by the need to raise low blood glucose levels after such a drop as described above occurs.

Eat Protein Every Time You Eat a Carbohydrate.

With this understanding, it makes sense to **eat protein every time you eat a carbohydrate**. This will increase the gastric emptying time, temper blood glucose swings, and control your appetite/cravings as well as increase and maintain your metabolism to a higher rate.

What IS a Protein?

This raises the question, “what is a protein?” Even today after all fad protein diets, people are still confused about the difference between a protein and a carbohydrate.



It's simple: ***If it swims, flies, or walks, it is a protein***; if it comes from a plant or grows out of the ground, it is a carbohydrate.

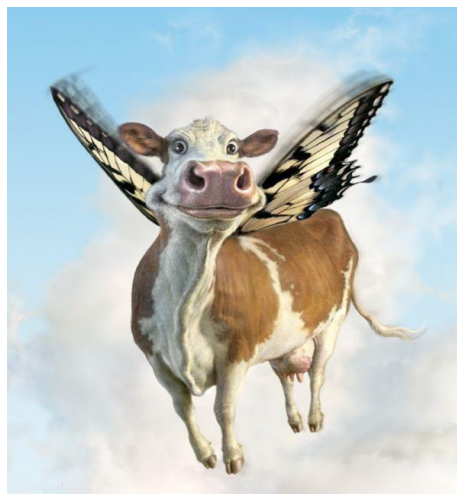
Surely vegetarians and other readers must be squirming at this broad generalization. Indeed beans are high in protein, as are many other legumes, plants and even some vegetables. However, because they have a much higher carbohydrate content compared to their protein content, they are considered a “protein containing” carbohydrate, as opposed to animal proteins that contain ZERO carbohydrates.



Therefore, in an effort to simplify things and to justify our generalization, we have looked at the largest component of a food, and grouped foods based on this component.



Because of that, even though a 1-cup serving of beans has 15g of protein, it also contains 40g of carbohydrates - beans are therefore deemed a carbohydrate as they contain almost three times as much carbohydrate than protein. In an analogous fashion, although an avocado is a fruit, because of its high fat content it is considered a fat. And although milk, yogurt, and buttermilk come from cows' milk, following the same logic, milk, yogurt and buttermilk are all considered carbohydrates even though cows fly. **No they don't!** I was just making sure you were paying attention 😊.



Carbohydrates leave your stomach quickly and raise your blood glucose levels quickly...

Given the short gastric emptying time of carbohydrates, no wonder you can be hungry by the time you get to your office after having a bowl of cereal with milk, several pieces of toast with jam or jelly, and a glass of OJ for breakfast! These are all **carbohydrates that leave your stomach quickly and raise your blood glucose levels quickly**, which causes **an insulin secretion that most likely stores most of what you ate for breakfast as fat**, and in doing so, causes your blood glucose levels to come crashing down like a rocket. You then go on without eating until 1 or 2 p.m., further slowing down your metabolism (remember, low blood glucose levels cause your metabolism to put on the

brakes), which will most likely cause you to overeat at lunch, or if you are “disciplined enough” and just have a salad for lunch, by the time you have dinner at around 7:30-8:00pm you find that you are ravenous and cannot be satiated no matter what or how much you eat.

But stop!

Haven't you heard that you're not supposed to eat after 6:00pm?

So, you might as well go to bed hungry. After all, once you fall asleep, you won't need any energy, will you? Actually, yes, you will need energy while you sleep to repair tissues, and conduct all sorts of metabolic functions that take place while you sleep. All these processes require energy. Again, the “no food after 6:00pm” theory is just another fallacy. The truth of the matter is that the human body will do anything to survive; that is its number one priority.

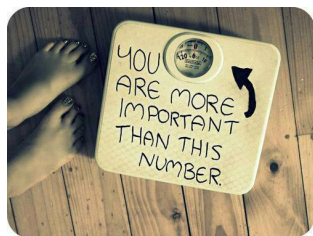
The Human Body Will Forego Burning **FAT**...

Since fat is long-term stored energy, the human body will forego burning fat and will initiate a process called “gluconeogenesis,” which simply means “the new formation of glucose.” Sounds harmless until you realize that the pathway by which new glucose is “formed” is by the secretion of cortisol, a hormone we mentioned earlier that is responsible for breaking down muscle tissue and turning it into sugar or glucose so that you can continue to breathe, walk, talk, think, exercise, etc.

So even though you *think* you are not eating, you actually are eating - ***you are eating your own muscle*** - slowing down your metabolism, and storing fat. These are most undesirable effects.

Muscle Weighs More Than Fat.

Because muscle weighs more than fat (the picture to the right shows five pounds of fat and five pounds of muscle - muscle takes about two-thirds less room than fat for the same weight), as you “eat” your



muscle you lose weight, so, there is no reason to get all excited about seeing lower numbers on the scale! In the worst case, your body may be entering a downward spiral of continual fat storage and suppressed metabolic rate... *hmmm, something to think about.*



Here is how gluconeogenesis works:

Your blood glucose levels drop below “safe,” so your body secretes cortisol to break down muscle tissue and turn it into glucose. Your body then uses that glucose derived from hard earned muscle to fuel whatever it is you may be doing... however, the “*excess*” or left over glucose gets stored for later... as fat, and usually around your tummy area.

Three Basic Rules for Success.

Based on gastric emptying studies and blood glucose control, we've come up with three basic rules for success that will **help you keep your muscle mass and get rid of fat.**

#1

Rule No. 1 is to eat every three and a half to four hours, *whether you are hungry or not.* Again reverting to the car analogy, you do not drive your car until you run completely out of fuel and have to call the Automobile Club to rescue you....well, hopefully *that* doesn't happen to you *too* often. The same applies to your body - you do not want to continuously run out of "fuel" and have Snickers® come rescue you either. The strategy is to control your glucose levels throughout the day as to prevent crashing and craving cycles.

#2

Rule No. 2—the most important rule—is to eat protein every time you eat a carbohydrate. Studies show that if the protein has a moderate amount of fat in it, blood glucose levels are better controlled.

But Wait!... What Is a Serving?

Before getting to the third rule, let's discuss carbohydrate servings. As blood glucose control is the most important aspect of a nutrition and exercise **program, and given that carbohydrates are the only macronutrients that really have a direct effect on blood glucose levels,** we must be able to determine in some fashion what is an appropriate portion of carbohydrates. Along with a portion of carbohydrates, we must also define a portion of protein and a portion of fat so that we not only control blood glucose levels but also control caloric intake. Fortunately, the American Diabetes Association, along with the American Dietetic Association (both are abbreviated ADA), have taken care of this task for us.



Since Carbohydrates Raise Glucose Levels, What is Considered a Serving?



There was a study conducted that determined what amount of carbohydrates it would take to raise blood glucose levels a measurable or noticeable amount. It turns out that it took **exactly 15g of carbohydrates** to do it. Because the word "serving" had already been used by millions of manufacturers of food products, we could not just redefine that word. The ADA's decided to come up with their own terminology and decided to call a 15g serving of carbohydrates an "exchange."

Nutrition Facts		Amount/serving	%DV*	Amount/serving	%DV*
Serv. Size 1 muffin (75g)					
Serv. Per Cont. 1					
Calories 170					
Fat Cal. 30					
		Total Fat 3g	5%	Total Carb. 32g	11%
		Sat. Fat 0g	0%	Fiber 5g	19%
		Trans Fat 0g		Sugars 4g	
		Cholest. 0mg	0%	Protein 7g	
		Sodium 200mg	8%		
*Percent Daily Values (DV) are based on a 2,000 calorie diet.		Vitamin A 0%	• Vitamin C 0%	• Calcium 4%	• Iron 8%

Therefore, even though an entire English muffin may be one serving, since it has 32g of carbohydrates it is considered to be “two exchanges.” So, instead of having ½ a cup of oatmeal every morning, you’re actually having two carbohydrate exchanges (½ cup oatmeal also contains 30g of carbohydrates). You may very well choose oatmeal, bread, cereal, pasta, rice, potatoes, pancakes, muffins, etc., until you reach the prescribed number of 30g of carbohydrates or two exchanges, or as many as your CFNS recommends you have for that particular meal.

Food Changes in Size When we Cook it.

Keep in mind that when we cook carbohydrates, they usually **expand** (rice triples in size, pasta and oatmeal, double, etc), and meats shrink by approximately 20%. For this reason, **we measure all foods after they have been cooked.** The one exception to this rule is oatmeal. Because



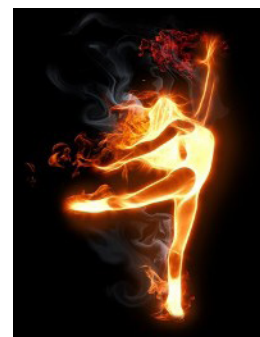
people have so many different ways of making it: soggy and watery, stiff, like cement, etc, we measure oatmeal **before** it is cooked; therefore, it does not matter how much or how little water is added to it because it will still contain the same amount of carbohydrates.

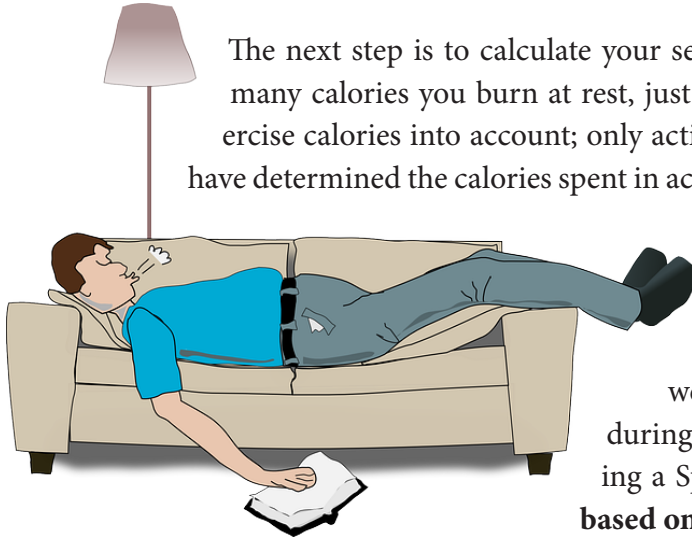


How to Determine How Many Exchanges YOU Need.

#3

There truly is a correct number of carbohydrate, protein, and fat exchanges that an individual needs per day, and it is not a one-size-fits-all 40-30-30 or 60-20-20 recommendation. Thus, **Rule No. 3** is to become aware of what an exchange is and how many you need per day as well as in what combination. To determine exactly how many carbohydrate exchanges you need per day, as well as how many protein and fat exchanges to combine them with, we really need to go through a nutritional assessment that takes just over one hour. In this assessment, your basic metabolic rate (BMR) will be determined. A CFNS can simply use a formula to estimate your BMR. This formula takes into account your gender, present weight, height, and age.





The next step is to calculate your sedentary activity calories, or simply put, how many calories you burn at rest, just being yourself. This figure does not take exercise calories into account; only activities of daily living are considered. Once we have determined the calories spent in activities of daily living, the next step is to determine

how many calories you do burn while exercising (for those of you who do exercise). These are calculated using a value for **calories per kilogram per hour** so that we know exactly how many calories **you** burn during specific exercises, be it lifting weights, taking a Spinn® Class, swimming, or even playing golf, **based on your body weight.**

Any program that rates your activity based on a “moderate, medium, or intense” scale is surely missing the mark

as going up the stairs may be considered “intense” by an out of shape client, while riding a century (100 miles on a bike) may be “moderate” for a professional cyclist. For this reason, the **ONLY** way to assess your exercise expenditure correctly has to be on a calories per kilogram per hour basis, meaning that a 100lb female riding a stationary bike at level 3 for one hour will burn a lot less calories than a 200lb female riding the same bike at the same level for the same amount of time.



Once we calculate all these calories we then add your specific value for the thermic effect of foods (TEF), which is a measure of how many calories you burn keeping warm and processing, digesting, and absorbing your food. The TEF varies widely based on your body composition or body fat percentage. The less body fat you have, the more your body has to do to keep you warm, hence the TEF of a lean person tends to be higher than that of a higher fat person.

Daily 1639 Calorie Meal Plan -- Individualized Menu

Specialist Formulated For: **Lisa Uman** INITIAL TEMPLATE: **2000** kcal

Carbohydrate: 145 grams (see percentage of total Calories below)
 Protein: 168 grams (see percentage of total Calories below)
 Fat: 43 grams (see percentage of total Calories below)

This menu shows how the exchange lists can be used to meet your needs. Use the exchange lists to **plan your own menus**.

MEAL 1 (8:00 AM)

8 1/2 cup Dry Oatmeal (each 1/4 cup dry = 1.5 oz)
 1 Egg white
 8 3/4 cup Spinach (blackberries, blueberries)
 6 Almonds

OR 1 Cup SF Almond Milk + 2 Scoops Proto Whey + 1/2 banana + 1 tsp Peanut Butter + ice & blend

MEAL 2 (12:00 PM)

3/4 cup Cheddar
 3/4 cup cottage cheese (1.7% 1.12% fat)

OR 1 Cup HF Milk + 2 Scoops Proto Whey OR 1/2 Cup Milk 1/2 cup water 2 Scoops Proto whey

MEAL 3 (1:00 PM)

1/2 cup White or Brown Rice
 4 oz Chicken, Turkey, Fish
 1 cup raw CR half as many cooked or steamed
 1 cup OR (spinach, olive)
 1 tsp for a FREE SALAD or used in cooking method

OR 1 Cup HF Milk + 2 Scoops Proto Whey OR 1/2 Cup Milk 1/2 cup water 2 Scoops Proto Whey

MEAL 4 (3:30 PM)

1/2 Pita pocket bread (6"-8" across)
 3 oz Tuna
 1/2 cup Yarn or sweet potato: plain
 4 oz Beans (fresh or canned)
 1 cup raw CR half as many cooked or steamed
 1 cup Hummus & Green Spread
 1 Tbsp over ice and veggies OR see fat list for substitutions

OR 1 Cup HF Milk + 2 Scoops Proto Whey OR 1/2 Cup Milk 1/2 cup water 2 Scoops Proto Whey

MEAL 5 (7:00 PM)

6 oz Carb Master Yogurt (Ralphs/Kroger)

Lisa Uman's Desired Weight: **125** lbs

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 Personal Trainer Nutrition Software
 Release 7-ADULT-0105

EXERCISE & NUTRITION WORKS

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# OF EXCHANGES	CARBS	PROTEIN	FAT	KCAL
2 Starches/Breads	30	0	2	1
4 Very Lean Meat/Substitutes	0	28	4	4
1 Fruit	15	0	0	1
1 Fat	0	0	11	419
Meal 1 Totals	45	28	17	419

# OF EXCHANGES	CARBS	PROTEIN	FAT	KCAL
1 Starches/Breads	15	0	1	1
3 Very Lean Meat/Substitutes	0	21	3	3
Meal 2 Totals	15	21	4	192

# OF EXCHANGES	CARBS	PROTEIN	FAT	KCAL
1 Starches/Breads	15	0	1	1
4 Very Lean Meat/Substitutes	0	21	3	3
1 Vegetable	0	0	2	8
1 Fat	0	0	11	41
Meal 3 Totals	15	21	17	192

# OF EXCHANGES	CARBS	PROTEIN	FAT	KCAL
1 Starches/Breads	15	0	1	1
3 Very Lean Meat/Substitutes	0	21	3	3
2 Scoops Proto Whey	0	2	0	8
Meal 4 Totals	15	23	4	192

# OF EXCHANGES	CARBS	PROTEIN	FAT	KCAL
2 Very Lean Meat/Substitutes	0	14	2	2
Meal 5 Totals	0	14	2	71

CATEGORY	GRAMS	PERCENTAGE OF CALORIES
Starches/Breads	145	35.4%
Meat/Protein	168	35.4%
Fat	43	23.6%
TOTAL MEAL CALORIES	1639	

MEASUREMENT	PROTEIN	FAT	ENERGY
Grams of Protein	1.19	9.1	g / lb BWM
Grams of Fat	2.90	9.1	g / kg BWM
Actual Protein per Kg Lean mass	1.03	2.3	g / Kg BWM
Grams of carbohydrates	1.03	2.3	g / Kg BWM

The next and final step is to design an ideal meal pattern or plan for you. A CFNS can put together a sound meal plan based on all the above data which will let him or her know how many exchanges of carbohydrates, protein, and fat your body requires for its optimal performance. The number of carbohydrate exchanges you will be eating per day depends solely on your body weight and body composition (with specific exceptions/instructions for endurance athletes). The number of protein exchanges that you will be eating per day depends on your lean body mass (muscle) as well as the duration, frequency and intensity of exercise routine prescribed for you (or lack of exercise). If you already have an established exercise routine, the CFNS will take it into account to ensure your body is

fueled adequately for those activities. Finally, the number of fat exchanges that you will be eating per day will be the equivalent of 15 to 30 percent of your total caloric intake with no more than 10 percent of that coming from a saturated fat source. Such a balanced meal plan will ensure that you attain your goals of gaining or maintaining muscle mass while getting rid of body fat.

For a quick review, here are the three rules and things to consider:

- 1. Eat every three to four hours; hungry or not!**
- 2. Every time you eat carbohydrates, make sure you eat them with protein.**
- 3. Find out what an exchange is, and how many you get per meal per day.**
- 4. Meet with your CFNS weekly to monitor your progress and make the necessary changes to keep you on track for attaining your goals.**

Contact the CFNS that gave you this article to schedule a complimentary session and have any questions that you may still have answered. Remember that there is no one size fits all approach to nutrition, and only a custom plan is sure to help you achieve your goal(s) in record time.