

# Metabolic Efficiency :: Introduction



**“TELL ME  
WHAT YOU  
EAT, AND I  
WILL TELL  
YOU WHAT  
YOU ARE.”**

Metabolic efficiency was created by Bob Seebohar in 2007 and is one of the best methods to improve your health and performance without dieting. Metabolic efficiency is a lifestyle change which will adapt to your needs as you progress through life and sport. Metabolic efficiency, in short, is utilizing the nutritional composition of food to control blood sugar which improves the body's ability to burn fat and preserve carbohydrates. Whenever blood sugar is high, the pancreas secretes the hormone insulin which reduces blood sugar. However, whenever insulin is high, it inhibits the body's ability to burn fat. There are both health and performance implications that every athlete should learn.

# Metabolic Efficiency :: Improving Through Nutrition

The most significant method of improving metabolic efficiency is through nutrition. By altering your daily nutrition plan, you can improve your body's ability to utilize fat faster than through aerobic exercise alone. Combining them is the ideal scenario but it is not realistic for some athletes who want to develop metabolic efficiency during a competition season. As stated on a previous card, the secret to improving your metabolic efficiency is blood sugar control. If you think about how many waking hours you have in the day (typically 14-18 depending on how many hours of sleep you get) and how many times your blood sugar physiologically ebbs and flows (3-4 hours), you have approximate 4-6 meals and/or snacks to improve your metabolic efficiency. Each feeding opportunity presents your body an opportunity for proper hormone release or not due to changes in blood sugar. To optimally control your blood sugar, and thus your hormonal balance, simply combine a source of protein and fiber at the majority of your meals and snacks. Fat, while extremely beneficial to help keep you fuller longer, is not necessarily prescribed since it is usually included in most protein rich foods. Thus, your first step in altering your nutrition to support your body's ability to use fat as fuel is to think about the combinations of food you have for breakfast, lunch, dinner and snacks.





## Nutrition Tips ::

- Do not become a slave to the percent leanness of a protein such as meat. While it is important to choose lean most of the time, it is not paramount that you stay within a certain range.
- You can certainly include whole grains, but you must be extremely careful when including grains and starches due to the higher carbohydrate effect that they will have on your overall nutrition plan.
- It is very healthy, and encouraged in moderation, to include misses into your plan. It is nearly impossible to completely forego these foods and in fact, if you do, you will likely create an intense craving response which may lead you into binging on these types of foods.

## Action Items ::

1. Complete a list of the foods you enjoy that fall into each of the following categories:
  - a. Protein (meat, dairy, nuts, beans, seeds, soy products, etc.)
  - b. Fiber (fruits and vegetables)
  - c. Whole grains (bulgur, whole wheat, triticale, quinoa, whole grain rice, etc.)
  - d. Misses (chocolate, alcohol, sports nutrition products, cookies, chips, etc.)
2. Clear out your pantry and refrigerator of any foods that are not good sources of the above listed foods. It is much easier to start with a clean slate when beginning your metabolic efficiency journey.

# “SIMPLE IS SUSTAINABLE.”

## Metabolic Efficiency :: The Daily Nutrition Plan

Now the fun part begins! You learned about the nutrition component and you should have a somewhat comprehensive list of foods that you enjoy eating that include protein and fiber. The next step is to combine them in the proper manner. I do not believe in adding much complexity to eating and in fact, the more quantitative a nutrition plan gets (calorie counting, measuring, etc.), the less you will be able to follow it for a long period. There are two implementation strategies to include as you become metabolically efficient:

- 1) Periodization Plates™
- 2) Carbohydrate to protein ratio.



# Periodization Plates™

## The Hand Model

My preferred teaching model for athletes is what I call the “hand model”, which is extremely easy to implement without worrying about calorie counting or measuring food.

### MEALS :: .....

Choose a protein source that is as big as your left hand (fingers included). This typically equates into 5-6 ounces or about 3/4 - 1 cup, depending on the size of your hand. Next, choose a fiber source that is as big as your right hand. This typically means approximately 1-2 cups vegetables or 1 fruit depending on its size. This very basic model will allow you to align your protein and fiber sources as close to a 1:1 ratio. The math works out nicely because 1 gram of protein provides 4 calories which is the exact same as carbohydrate rich foods. This ratio is very important because it has been found in diabetes research that the optimal ratios of carbohydrate to protein include a 1:1 or 2:1. Consuming a 3:1 ratio or more during meals or snacks will spike your blood sugar and decrease your body’s ability to burn fat.

### SNACKS :: .....

Follow the same ratio method, but decrease your quantity to one-half of your hand. I recommend following a 1:1 or 2:1 carbohydrate to protein ratio for most meals and snacks throughout the day through all of your training cycles. There may be times where you include more of a 3:1 ratio (as will be explained on card #9) but this will not be a frequent occurrence. And of course, as I mentioned previously, including “misses” is a very important part of this process and while they will likely not work out to be an optimal ratio, I encourage you to include them during a day where you are following more of a 1:1 or 2:1 ratio so the “misses” do not completely derail your blood sugar goals.

### TIPS :: .....

1. If you are seeking weight loss, make sure you eat 75% vegetables and 25% fruit. If you are not concerned with weight loss, you can make this a 50/50 percentage.
2. Whenever you eat, always identify and approach your protein sources first. It is very easy to choose fiber rich foods (fruits, vegetables, grains) but sometimes challenging to have enough protein to help stabilize your blood sugar.

# Metabolic Efficiency ::

This card is devoted to providing you sample meal and snack ideas that are metabolically efficient and easy to prepare. For more recipes and ideas, refer to Bob Seebohar's ebook, "Metabolic Efficiency Recipe Book", available at [www.fuel4mance.com](http://www.fuel4mance.com).

## **BREAKFAST** .....

- Yogurt (plain or Greek), walnuts, whey or soy protein isolate powder (optional), dark chocolate baking cocoa, blueberries
- Smoothie: cow or plain soy milk, banana, strawberries, whey or soy protein isolate powder, ice
- Smoothie: cow or plain soy milk, spinach leaves, carrots, bananas, chocolate Generation UCAN powder, whey or soy protein isolate powder, cinnamon, ice
- Hard boiled eggs with an orange
- Scrambled eggs, bell peppers, mushrooms, tomatoes, shredded cheddar cheese
- Omelette: eggs, mushrooms, ham, chives, tomatoes, bell peppers, topped with shredded cheddar or mozzarella cheese

## **LUNCH/DINNER** .....

- Tofu Stir Fry: tofu, vegetables, olive oil or peanut sauce
- Chicken Stir Fry: chicken strips, vegetables, olive oil or peanut sauce
- Beef Stir Fry: beef strips, vegetables, olive oil or peanut sauce
- Black bean concoction: black beans, tofu or ground beef, turkey or chicken, salsa, green bell peppers, assorted vegetables
- Salmon with asparagus or broccoli
- Chili: kidney and black beans, ground turkey or veggie meat, tomatoes, onion, garlic
- Baked skinless chicken rubbed with olive oil with a spinach salad
- Salad: spinach or romaine lettuce, carrots, avocado, olives, mushrooms, chickpeas, shredded cheddar cheese, sunflower seeds, hard boiled eggs, bell peppers, tomatoes, sprinkled with olive oil and balsamic vinegar (optional)

# Metabolic Efficiency ...

## SNACKS

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- Part-skim mozzarella string cheese with a piece of fruit
- Walnuts or almonds, cherries (optional)
- Yogurt (plain, Greek) with your choice of berries
- Cottage cheese, pineapple or grapes (optional)
- Edamame
- Trail mix with nuts, seeds and dried cranberries or raisins
- Protein enriched Generation UCAN
- Cow or plain soy milk mixed with whey or soy isolate protein powder
- Deli meat with an apple

Be creative with your food but just remember to always try to combine a carbohydrate source with a protein source as closely to the 1:1 or 2:1 ration as possible.

