



MST
NUTRITIONAL GUIDELINES

MAXIMUM VELOCITY
REQUIRES MAXIMUM NUTRITION



The nutrients that you put into your body can make a major difference in speed, strength, endurance, health and overall athletic performance. Eating whole foods is optimal for your nutritional intake but supplements are a good alternative source of calories if you are having trouble reaching your daily calorie goals. MST aims to provide the highest quality of standards in assisting athletes with the best possible performance products on the market. Our standards are performance driven based on scientific research. That is why through comprehensive research we have chosen CytoSport and AdvoCare as the main supplement providers for all of our athletes.

Calories are the most important aspect of daily nutrition. So what is a Calorie? The calorie is a measure of energy available to the body. When you eat food, the number of calories it contains is actually the amount of energy units the food provides the body. The calorie is also the measure of energy that your body uses. Your body uses calories for many functions, such as breathing, pumping blood, resting, working, exercising and playing sports. So the calorie is used to measure both the amount of energy contained in foods, as well as the amount of energy your body uses.

The difference between the two is the Calorie Equation. To gain weight, eat more calories than you use. To lose weight, you simply need to use more calories than you eat. As an athlete we are always active, so we must be sure to take in plenty of calories to supply our body with energy.

Where Do Calories Come From?

There are six classes of nutrients:

1. Carbohydrate
2. Protein
3. Fat
4. Vitamins
5. Minerals
6. Water

Of these six classes of nutrients, only 3 provide calories or energy for the body: carbohydrate, protein and fat:

- 1 gram of carbohydrate = 4 calories
- 1 gram of protein = 4 calories
- 1 gram of fat = 9 calories

Calories are also found in alcohol. Alcohol is not a nutrient because it cannot be used in the body to promote growth, maintenance, or repair. It is a toxin that is broken down as an energy source and can be converted into fat.

- 1 gram of alcohol = 7 calories

We advise athletes to limit their alcohol consumption and abstain during the pre-season, in-season and/or high training periods.

Carbohydrates:

Carbohydrates are the backbone of the exercise/athletic nutrition foundation. Carbohydrates are broken down to produce glucose. Glucose is the main energy source which fuels your muscles. It is stored in two places in your body: muscle cells and liver. Glucose not only gives your body energy to run and jump, but it helps your brain think and react. Exercise/Athletics depletes both muscle and liver glycogen stores, which requires dietary carbohydrates to replenish them.

There are two types of carbohydrates:

Complex: Good to eat before workouts.

-They break down more slowly to provide your muscles with a longer constant source of energy.

Simple: Great for recovery.

- Quick break down to provide your muscles with energy as they continue to replenish glycogen stores.

Both endurance and strength athletes need carbohydrates to replenish their liver and muscle storages. If your stores are low then you will feel fatigued throughout your workout.

We recommend eating 2 – 3 grams per Lb. of body weight per day or 50-60% of your total daily caloric intake.

Food Sources: rice, pasta, whole grain breads, fiber cereals, fruits, vegetable, beans, sugar.

Protein:

Proteins are needed to supply maintenance for the body's tissue. They are very important for building, repairing and maintaining muscle. Protein is broken down into amino acids. Proteins are best described as the building blocks for muscle. Of the 20 amino acids used by humans, the 10-12 nonessential amino acids can be synthesized by the body, and are not required in the diet. The 8-10 essential amino acids, however, cannot be created by the body and must come from dietary sources. Amino acids from food support all the new growth and maintenance of cells and the making of working parts within them.

Amino acids can be used for muscle growth, conversion into glucose for energy, synthesis of fatty acids and ketone bodies, or maintenance of nitrogen balance. If you do not consume enough carbohydrates or fat for energy then food protein and body protein are sacrificed to supply energy. Thus, energy deficiency will incur wasting of lean body tissue.

We recommend approximately 1 gram per lb of body weight.

Food Sources: Lean beef, turkey, chicken, nuts, fish, milk, eggs, beans, soy products. Most animal sources of protein are classified as complete proteins because they contain all nine essential amino acids. Proteins found in plant foods, however, are called incomplete proteins because they are missing one or more essential amino acids. Eating multiple plant protein sources such as grains combined with legumes can adequately provide all essential amino acids. For example, bread and peanut butter, or rice and beans, provide all nine essential amino acids.

Fats:

Fats are a great source of energy for your body; they are the most energy dense nutrient. Eating the proper amount of fat will help you maintain your health. Fats are responsible for the formation of prostaglandins and other hormone like substances which regulate blood pressure, fight infection, regulate growth in children, and have an anti-inflammatory effect. They are also responsible for hair and nail growth. Fats provide a protective layer for your organs and muscles, which helps lower overall glycemic response to a meal and keeps blood sugar from spiking and keeps insulin release stable. There are fats which are called essential fatty acids. These are fats that your body cannot make them so they must be consumed from your diet. There are two main EFA that are considered essential which include: alpha linolenic and linoleic. Dietary fats also help you absorb the fat soluble vitamins A, D, E and K.

We recommend approximately 15-20% of your total daily calories are needed through fat.

Food Sources: Nuts, avocado, lean meats, oils, coldwater fish, eggs.

Note: Although fat is a great source of energy it is not the best energy source for most athletes. Intense activity presents a different picture. When muscle exertion is so great fat cannot be used because oxygen is required for its breakdown. Instead the body must rely on glucose which can be broken down without oxygen (anaerobic metabolism).

Vitamins and Minerals:

There are two types of vitamins, fat soluble (vitamins A, D, E and K) found in the fats and oils of foods and water-soluble (B vitamins and vitamin C) found in fruits, vegetables, milk, eggs, whole or enriched grains, lean meats and even some oils. Without vitamins the energy from carbohydrates, proteins and fat can not be broken down and used by cells. The antioxidant vitamins (vitamin A, C and E) help protect the body's cells from the harmful effects of oxygen. Vitamin D is classified as a hormone and recognized as an important factor in the building and maintenance of healthy bones. Vitamin K plays a role in bone health and influences blood coagulation.

There are about 20 important minerals that your body needs and uses constantly for the function of living tissue. Some of them are more important than the others like calcium, iron, zinc, and phosphorus. Calcium plays the role in bone health; Iron is for blood formation, which is intimately involved with the delivery of oxygen.

Zinc has many roles but is mostly used for building and repair of muscle and proper functioning of the immune system.

Other minerals such as sodium, potassium, chloride, and magnesium play an important role in maintaining fluid balance. These are known as electrolytes. As you sweat you are constantly sweating out water, sodium, and potassium. This means that eating the proper foods and drinking enough fluids before and after a workout, is very important.

Major Minerals (amounts larger than 5 grams): Calcium, Chloride, Magnesium, Phosphorus, Potassium, Sodium, Sulfur

Trace Minerals: Iodine, Iron, Zinc, Selenium, Fluoride, Chromium, Copper, Manganese, Molybdenum, Arsenic, Boron, Nickel, Silicon, Vanadium

Water/Hydration:

Water is the most indispensable nutrient. Water brings to each cell the exact ingredients the cell requires and carries away the end products of the cells life-sustaining reactions. Without water our cells would die.

Some main functions of water are the following:

- Carry nutrients throughout the body
- Cleanse tissues and blood of waste
- Solvent for vitamins, minerals, amino acids, glucose and other molecules
- Needed for chemical reactions
- Lubricates joints
- Aids in maintaining body temperature

Hydration is very important to an athlete's training performance and their health. Adequate hydration is one of the most important determinates of athletic performance, especially when you consider the fact that 45-70% of the human body's weight is made up of water. Muscle tissue is about 75% water, and therefore when you become dehydrated, the body's muscles can not work efficiently. Since we live in the hot climate of Florida, we have to be extra careful with heat stroke while training. This is why remaining hydrated is extremely important. Most athletes will collapse when their body temperature reaches 104 degrees or higher.

We recommended drinking 1.5 – 2.5 cups of fluid two to three hours before exercise. This will help replace water loss from sweating during exercise. For activity lasting longer than one hour a carbohydrate solution consisting of no more than 6-8% of carbohydrate is recommended. The reason for this is to prevent dehydration, delay fatigue, and minimize the risk for heat illness.

If competition is less than one hour then it is recommended to drink (3/4 – 1 cup) of cold water every 10-15 minutes. We recommend cold water because it leaves the stomach faster than room temperature water, it is absorbed rapidly and it is well tolerated. Athletes that are engaging in activities longer than one hour or high intensity intermittent activity for one to four hours should consume (6 – 12 OZ) of carbohydrate/electrolyte beverage every 15-20 minutes of activity (Cytomax or AdvoCare Rehydrate). Water in the beverage helps prevent dehydration, and the carbohydrate provides glucose to prevent glycogen depletion in the muscles.

So, how Many Calories Do I Need? (Fill out the chart on the last page) Your energy needs take precedence over all other body functions. For an adult, there are three factors that determine your total energy requirements:

- **Basal Energy Requirement.** This is the minimum amount of energy needed by the body at rest in the fasting state. It includes basic body functions such as respiration, cellular metabolism, circulation, gland activity, and body temperature control. It is affected by such things as age, gender, pregnancy, body composition, nutritional status, sleep, climate, and fever.
- **Physical Activity.** The amount of calories needed for physical activity depends on the type of activity or work, the intensity and the duration.
- **Specific Dynamic Action of Food.** This is the amount of calories needed to manage food intake and includes digestion, absorption, and metabolism of food.

Why Supplements Are Beneficial?



Fast Twitch:

Today's nutrition and workouts primarily stress slow twitch endurance fibers, which, while beneficial, limit muscle size. Fast twitch explosive fibers are harder to recruit, sustain more damage and require longer recovery. But fast twitch fibers have 30% greater growth capacity!

Fast Twitch Power Workout Drink fuels intense, fast twitch contracting workouts in two ways: by boosting nitric oxide (NO) levels and encouraging formation of the high-energy molecule creatine phosphate. Fast Twitch Power Workout Drink puts you in the intensity zone to fuel total muscle fiber contractions and enables muscles to produce more power during workouts, and grow larger thereafter. Additionally, intensity zone workouts raise metabolism, increasing fat loss significantly more than easier workouts.

Fast and slow twitch are generalizations for more specific muscle fiber types. Physiologists classify human muscle fibers as Type I (slow twitch; slow oxidative, SO), IIa (fast twitch; fast oxidative glycolytic, FOG), IIab (intermediate fiber), and IIb or x (fast twitch; fast glycolytic, FG). In general, slow twitch fibers are relatively fatigue resistant, but do not contract as rapidly or as strongly. Fast-twitch fibers contract more rapidly and forcefully, but fatigue more quickly. Although all fiber types respond to intense training, fast twitch fibers tend to have a greater ability for hypertrophy (growth). We are constantly using Fast Twitch muscle fibers during our high intensity workouts.

Why use Fast Twitch?

Strength, Power and Velocity: Fueling type II fibers increases explosive power and speed. This translates into more sets, reps and weight lifted.

Endo-Thermogenic: Fast Twitch enables muscles to produce more power, resulting in greater heat output. This heat production is endo-thermogenic. Increased body heat, plus enhanced oxygen consumption after harder workouts, boosts metabolism. Raising the metabolic rate can enhance calorie burning.

Jump Start Recovery: Cortisol, the body's primary stress hormone, naturally rises after workouts. Elevated cortisol can be catabolic to muscle tissue. Fast Twitch contains phosphatidylserine (SerinAid), which may help blunt exercise induced cortisol rise after workouts.

Enhanced Creatine Production: Creatine GCC, first used in Muscle Milk, helps support the body's own creatine production. New Kre-Alkalyn further advances creatine technology. Together, they need no loading, and are pH balanced to deliver massive creatine results.

What is creatine? It is the body's immediate source of energy. It is produced in small amounts naturally by the body. It is usually in the form of creatine monohydrate. It is a supplement taken to enhance anaerobic performance. Creatine Monohydrate is a white, odorless crystalline powder, clear and colorless in solution. It can be obtained in meats such as chicken and fish.

It serves as an energy reserve in muscle cells. Muscular contraction is powered by the breakdown of ATP (adenosine triphosphate) to ADP (adenosine diphosphate). When all the ATP is broken down, creatine phosphate in the muscle donates a phosphate group to ADP, and further energy reactions can occur. Creatine monohydrate is a precursor to creatine phosphate. By supplementing with CM, CP levels in muscle apparently are maximized, and more muscular work can occur, since there are greater energy reserves to use.

Creatine also helps with resistance training by providing the muscle with creatine rich fluid. This allows for greater leverage and requires the muscle to move less and lift more weight. The swelling action and the related stretching of the cells may in and of itself cause a reaction which stimulates the muscle cells to grow.

Get Pumped, Feel Great, Train Intense: Fast Twitch's nitric oxide amplifiers pump you up, and speed nutrients to hungry muscles. S-adenosylmethionine (SAME) production, highly regarded for enhancing mood and joint support. SAME, with other nutrients, help "get your mind right" for monster workouts

Ctyogainer:

With no simple sugars, no fructose, and no sucrose, Cytogainer's highly complexed maltodextrins (to provide energy and prevent sugar crashes) are specifically designed to give you a time release energy effect. You will not believe how you will be able to power through your most intense workouts feeling strong and energized. You will also replenish muscle and liver glycogen after your workout so you can fully recover and grow! CytoGainer provides a stable and enduring fuel, enhanced to drive growth nutrients into your thirsty muscles!

It helps build muscle and maintain because it gives you large portions of protein and carbohydrates, without the fat and sugar. It also contains the highest quality whey and whey peptides and is 98% lactose free; preventing the uncomfortable feeling commonly associated with high lactose, low quality whey proteins.

Cytogainer contains glutamine-rich partially pre-digested whey peptides for improved protein synthesis. Each serving also contains whey fractions shown to help increase IGF-1 (insulin-like growth factor). Your body's responses to these whey fractions, along with the branched-chain aminos found in CytoGainer, are primarily responsible for muscle growth.

Why Use Cytogainer?

Calorically Dense: CytoGainer is almost entirely complex carbs and ultra high quality whey protein. The protein is glutamine-rich, and contains partially pre-digested whey peptides for fast and easy digestibility. Carbohydrates are complex maltodextrins—to stabilize energy and prevent sugar crashes.

Growth: Provides the nutrients necessary to stimulate muscle growth. No more muscle catabolism due to lack of calories.

Digestibility: Allows massive caloric intake without the digestive distress and the extra fat of solid meals.

Convenience: Mixes instantly in water so you can ingest calories immediately after training. No blender required.

Cytomax:

Cytomax is an athletic drink which is made up of a 7% carbohydrate solution that is ideal to help you sustain energy levels over entire workout and prevent exercise induced glycogen depletion.

Athletes drinking Cytomax perform better; lactic acid levels are lower, reducing cramping and post-workout soreness, and promoting re-hydration, strength and improved endurance.

Cytomax is made with a unique blend of PolyLactate, other complex carbohydrates, and electrolytes for an optimal energy supply. Compared to any other nutrient supplement available, patented PolyLactate delivers energy faster, optimally fuels the body, and better protects it from acid build up.

Why use Cytomax?

Complex carbohydrates in Cytomax help you sustain energy levels over entire workout and prevent exercise-induced glycogen depletion. Cytomax's patented Alpha-L-Poly lactate™ buffers lactic acid in your working muscles, preventing burning and cramping during training and reducing soreness the next day. The antioxidants in Cytomax (Tangy Orange flavored powder only) help fight free-radical production in your body head-on during your workout. The succinctness in Cytomax improves the rate of

oxygen delivery to your working muscles, reducing perceived exertion at all intensity levels.

During workouts, you will be able to push your body harder without depleting your reserves and becoming exhausted at the end. This is due to enhanced oxygen carrying capacity, lower blood lactate levels, and stabilized blood sugar levels.

When you put maximum effort into a workout, you deplete your system of stored energy. You may feel great while your heart is pumping and the adrenalin is flowing during your workout, but this exercise-induced depletion extends your recovery time and may cause fatigue, mood swings, sugar cravings, episodes of strong thirst, and body temperature fluctuations in the hours after your workout. These are all signs that your body is in a breakdown state. You can still push yourself during workouts, but you need to make it easier on your body afterwards if you want to avoid fatigue and burnout.

Muscle Milk n Oats:

Muscle Milk 'n Oats is a quick, convenient, and portable solution for a terrific tasting, satisfying, and highly nutritious meal-on-the-go. When you need to take breakfast or a healthy snack to work, it only takes a minute to prepare. All you have to do is add hot water and Muscle Milk 'n Oats is ready.

Muscle Milk 'n Oats has something no other portable, instant bowl of oats has: Genuine Muscle Milk. Muscle Milk was specifically engineered to model the muscle-building factors found in human mother's milk and for years has been a mainstay of effective and convenient nutritional programs for serious athletes. The designer fats in Muscle Milk—good lipids, or medium- and long-chain polyunsaturated fatty acids—promote lean muscle growth and enhance the retention of minerals needed for muscle contraction. The calories in Muscle Milk are more likely to be burned for muscle energy and heat, rather than stored as fat. You can not tell by the great taste, but there are no empty calories in Muscle Milk.

When you combine Muscle Milk with whole grain oats, not only do you enrich your diet with a meal low in saturated fats and cholesterol, but you also receive a significant portion of the recommended daily amounts of whole grain foods and fiber. So Muscle Milk 'n Oats is a better choice for a genuinely nutritious meal-on-the-go that does what refined foods cannot do: it helps reduce cholesterol and the risk of heart disease. **Diets rich in whole grain foods and other plant foods, and low in saturated fat and cholesterol, may help reduce the risk of heart disease.** Research shows that not eating enough fiber-rich cereals and skipping breakfast is a bad idea. Muscle Milk 'n Oats is a good one.

Why eat Muscle milk n Oats?

Packed with protein: Muscle Milk 'n Oats packs 30 grams of protein with delicious breakfast oats to aid muscular repair and fuel you throughout the day.

Delicious, quick and convenient

Muscle Growth and Repair: EvoPro, clinically complete, multi-source balanced protein to support lean, toned muscle.

Carbs: Just the right amount of complex, low-sugar, low-glycemic index carbohydrates to fuel a great workout or a busy day

Efficient Energy Production: Lean Lipids are special fats that are easily mobilized for endurance workout energy, enhance your body's fat metabolism and promote protein synthesis, anti-inflammatory effects and mineral retention.

Zero lactose: Muscle Milk 'n Oats contains no lactose.

Complete Whey Protein:

High quality protein supplementation is an integral part of the diets of elite athletes and aids tremendously in general fitness gains. Complete Whey Protein offers large portions of high quality protein, without the added fat, sugars, or carbohydrates. This formula makes it the perfect product to help pack muscle-building proteins into your diet. Complete Whey Protein is high quality, digests easily, mixes well, and tastes great.

Complete Whey Protein is naturally rich in glutamine and branched-chain amino acids (BCAA's), cysteine, minerals, lactalbumin, lactoferrin, and contains only trace amounts of lactose and fat. Complete Whey Protein is rich in nutrients which raise glutathione levels, a major anti-oxidant, and enhance your immune system's ability to fight common infections.

Research has shown that the exact whey fractions plentiful in Complete Whey Protein help increase IGF-1 (insulin-like growth factor) which enables your body to burn fat and increase lean muscle mass at the same time.

Complete Whey Protein incorporates very low, low, medium, and high molecular weight whey peptides. Short and long chains of amino acids bonded together by a selective hydrolysate process present the essential nutrient (nitrogen) in the most ideal condition to be absorbed and incorporated into the human metabolic process.

You won't believe how great Complete Whey Protein tastes! Complete Whey Protein dissolves instantly in cold water, no mixer necessary!

Why take Complete Whey Protein?

Regulated Energy: Blood sugar levels are stabilized naturally.

Reduced Body Fat: Stored body fat is mobilized (by promoting favorable insulin levels) to become a preferred source of sustained energy.

Muscle Repair: Easy to digest amino acids minimize tissue breakdown and speed recovery from exercise.

Improved Health: Adequate protein consumption promotes healthy hormone production, immune system function, water balance, and maintenance of skin, hair and nails.

Best ways to use Complete Whey Protein

Before: Take one-two servings of Complete Whey 15-30 minutes prior to training. Complete Whey quickly floods amino acids into muscle tissues for high intensity training.

After: Take Complete Whey immediately after workouts to shift the body from catabolic to anabolic. Complete Whey provides protein to immediately kick start the recovery process



AdvoCare® Slam™ :

- High-powered, portable energy source*
- Quick and easy
- Sugar-free

Slam is a powerful, portable energy supplement in a tiny, 2 fl. oz. bottle.* Its unique combination of energy-producing nutrients and support for neural processes make it a perfect fit for the person on the go.* And with no sharp drop-off or energy crash, it's great for hours of energy.

AdvoCare Spark® Energy Drink:

- Sharpens mental focus*
- Long-lasting energy*
- Sugar-free

AdvoCare Spark® Energy Drink is a cutting edge formulation that contains the right ingredients to give you the energy that you need to live life to the fullest.* It contains an effective amount of caffeine to give you the quick boost you're looking for, the right blend of B-vitamins to enhance your body's natural ability to produce and sustain energy and the added neuroactives to help increase your mental focus.* Together, the 21 vitamins, minerals and nutrients in AdvoCare Spark® Energy Drink work synergistically to provide a healthy, balanced and effective source of energy that won't overburden or stimulate your body like most energy drinks on the market.* And the best part? It's sugar-free and contains only 45 calories per serving!

AdvoCare® Muscle Fuel:

- Energizes Muscles*
- Maximizes Workout*

AdvoCare® Muscle Fuel pre-workout drink mix is a powerful, one-of-a-kind performance product that helps energize your muscles and maximize your workout.* This patent-pending proprietary drink mix supports your muscle's metabolism so that you can work out harder and longer.* You'll feel the difference with the enhanced physical performance and endurance during your workout, and you'll notice the effects from better recovery and muscle gain after your workout.* Let the unique formulation of L-carnitine, creatine, L-arginine, D-ribose and 20 other nutrients take your conditioning to the next level.*

Arginine Extreme:

- Supports muscle tolerance and endurance*
- Provides cardiovascular nourishment*

Arginine Extreme drink nourishes the growth of lean muscle tissue in conjunction with an exercise program and aids in the body's natural production of nitric oxide, a substance involved in blood vessel relaxation and healthy blood flow.* For athletes, this powerful drink mix helps magnify the results of strength training as it facilitates healthy nutrient delivery to muscles. For anyone, Arginine Extreme helps maintain healthy blood flow, contributing to better vascular health and strengthened immune function.*

Muscle Gain™ :

- Increases muscle mass*
- High-quality protein

Protein is essential for gaining muscle and strengthening your body. Research has shown that the typical protein intake for strength athletes should be approximately 1.3 to 2g per day for every 2 pounds of body weight. That's as much as 200 grams for someone who weighs 200lbs.! Since it's almost impossible to consume that much protein through your diet without also consuming excess calories, fats and carbohydrates, AdvoCare offers Muscle Gain protein formula as a superior source of high-grade protein. It offers a metabolically balanced protein blend that feeds your muscles the amino acids and other components that are essential for building muscle.

Post-Workout Recovery:

- Minimizes soreness
- Optimizes muscle recovery

Your muscles will inevitably become sore after a proper workout. Many people allow themselves to be overcome by the challenges of their exercise program, including severe soreness after workout and limited success in increasing muscle mass. Post-workout recovery is a great source of over 30 vitamins, minerals and other nutrients that supports your muscles' metabolic processes in recovery and aids in lessening occasional soreness after workouts. The faster and more effectively you can recover, the more potential you have for muscle growth. Post-Workout Recovery is the best solution for fighting the aches and pains of working out.

Rehydrate:

- Electrolyte balance
- Optimal hydration

When we sweat, we also lose electrolytes and minerals such as calcium, potassium and sodium that help regulate the body's fluid balance. Rehydrate Electrolyte Replacement Drink provides the necessary nutrients to maintain proper metabolism and delay the onset of fatigue. It hydrates your body by re-establishing your electrolyte balance with its superior formulation. Unlike other sports drinks, Rehydrate Electrolyte Replacement Drink includes the antioxidants, carbohydrates and other nutrients that effectively promote optimal hydration and recovery.

Reasons Why Supplementation Is Important For Optimal Athletic Performance?

Cytogainer, Post-Workout Recovery, & Muscle Gain

1. Is an extremely convenient meal for post work out to replenish glycogen stores and aid in muscle repair.
2. To help increase daily dietary needs to achieve enough calories for your muscles to grow and function properly.
3. Protein supplements supply the body with many essential amino acids needed for tissue repair and recovery.
4. Protein supplements are used by athletes after strength and power sessions to repair and build muscles after a tough workout.
5. To gain muscle mass.

Cytomax & AdvoCare Rehydrate

6. To replace your electrolytes after a workout that was lost by sweating.
7. Buffers lactic acid in your working muscles, preventing burning and cramping during training and reducing soreness the next day.

Fast Twitch, AdvoCare Muscle Fuel, Arginine Extreme, Slam & Spark

8. To increase your muscles ability to contract fast twitch muscle fibers so you can become a faster and stronger athlete.
9. To decrease the catabolic breakdown happening to your muscle tissue by the elevated cortisol levels.

Muscle Milk n Oats:

10. Quick, convenient, and portable meal while on the go.
11. Contains just the right amount of protein, complex carbohydrates, low sugar, low-glycemic index carbohydrates to fuel your body.

Important Q &A's

1. How many calories do I need? (Complete the chart on the last page)
2. What happens if I eat a low cal diet?

Eating a low cal diet puts the athletes at risk for muscle loss or bone mass loss, inability to increase muscle or bone mass, menstrual irregularities, decrease in performance, injury and illness.

3. What should I eat before working out/competition?

The meal should be high in carbohydrate, moderate in protein, low in fat, and adequate in fluids and energy.

4. Should I eat during my competition?

If you are performing a prolonged exercise then eating simple carbohydrates helps delay fatigue and prevent hypoglycemia.

Every athlete needs 30-60 grams of carbohydrate per hour during a prolonged exercise of lasting longer than one hour. This will help delay fatigue and improves performance by sparing liver and muscle glycogen.

5. Should I drink water or sports drink for prolonged exercise lasting longer than one hour?

For activity lasting longer than one hour a carbohydrate solution consisting of no more than 6-8% of carbohydrate is recommended (Cytomax or Advocare Rehydrate). The reason for this is to prevent dehydration, delay fatigue, and minimize the risk for heat illness.

If competition is less than one hour then it is recommended to drink (3/4 – 1 cup) of cold water every 10-15 minutes. We recommend cold water because it leaves the stomach faster than room temperature water, it is absorbed rapidly and it is well tolerated.

Athletes that are engaging in activity longer than one hour or high intensity intermittent activity for one to four hours should consume (6 – 12 OZ) of carbohydrate/electrolyte beverage every 15-20 minutes of activity. Water in the beverage helps prevent dehydration, and the carbohydrate provides glucose to prevent glycogen depletion in the muscles.

Nutritional Guidelines for Athletes

1. Eat every three hours
2. Have six small meals spread evenly throughout the day.
3. Don't skip meals, especially breakfast & post-workout.
4. Make sure you're drinking a gallon of water every day.
Sports beverages are best during games (Cytomax Powder, AdvoCare Rehydrate).
5. Include a lean protein source in every meal.
6. Eat mainly low-glycemic carbs, and limit processed carbs.
7. Eat carbs before games, practice and/or training.
8. Take in essential fats each day.
9. Increase the amount of fiber in your diet.
10. Avoid drugs & alcohol.

Lean Muscle Gain

1. Eat 10-20% more calories than needed for maintenance
2. Eat at least 1g of protein per pound of bodyweight per day or no more than 30% of total calories
3. Eat at least 2-3g of carbs per lb. of bodyweight depending on gender, activity, etc.
4. Drink at least a gallon of water a day
5. Take in 25-35g of fiber daily.
6. Eat plenty of healthy fats (about 80g for a person whose maintenance baseline is 3,000 calories per day)
7. Consume a post workout meal that contains simple carbs and protein.
8. Take a multivitamin/multi-mineral pack every day
9. Supplement with a high calorie shake or bar.

Carbohydrates digesting rate:

The slower digesting (Slow & Medium) carbs sustain energy levels and should be the primary source. The faster digesting carbs give quick increase in energy and glucose levels and should be the source for after games, practice and/or training to replenish energy/glucose levels.

The following chart shows some examples:

<u>Slow</u>	<u>Medium</u>	<u>Fast</u>
-Brown Rice	-Pancakes	-Cold cereal
-Apples	-Fruit (most)	-Cream of wheat
-Beans	-Honey	-Muffins
-Oatmeal	-Peas	-Sports Drinks
-Red potatoes	-Corn	-Juices
-Oranges	-Rice (White/Basmati)	-Potatoes
-Rye Bread	-Pasta	-White bread
-Seven Grain	-Yams	-Bagels
-Yogurt		

Vegetables (Fibrous Carbs)

1. Vegetables are such a key source of many nutrients, vitamins, minerals and phytonutrients. They should be consumed above and beyond any restrictions you place on carbohydrate consumption
2. They are an excellent source of fiber.
3. They are relatively low in calories and can help provide satiety to your nutrition program without adding bodyfat

Good selection of vegetables

- Asparagus
- Broccoli
- Carrots
- Cauliflower
- Peppers (all colors)
- Spinach
- Squash
- Zucchini
- Anything with color, eat them, the health benefits are endless.

Better Protein Sources

- Ground beef- at least 90% lean
 - Lean cuts of steak
 - Chicken breast- skinless, white meat
 - Eggs-whites
 - Low fat cottage cheese
 - Fish-lean, white fish, red tuna, flounder, bass, halibut
 - Canned tuna-in water
 - Lean cuts of deli meat-turkey breast, roast beef
 - Skim milk
- If you fail to meet your daily requirements of protein, supplement with a powder or bar. At MST we have made sure that our supplement providers (CytoSport & AdvoCare) are the highest quality in performance and safety for athletes.

Better Fat Sources

- Almonds (2oz or handful)
- Avocado (2oz)
- Cheese (4oz low fat)
- Eggs (2 whole)
- Olive oil (1 tbsp)
- Flaxseed Oil (1 tbsp)
- Peanut Butter (All Natural)
- Nuts (2oz)
- Salmon (8oz Atlantic) also a good protein source

Matching your nutritional needs to your training level is fundamental for athletic success. Your individual nutrient requirements are based on genetics, gender, activity level, body size and the physical demands of your sport.

Most of your calories should come from a whole foods diet. If you are struggling to get enough calories in your diet from whole foods then supplements are a great choice to help reach your goal. Contact your speed trainer at info@myspeedtrainer.com with any questions.



Determining Daily Energy Needs

% Breakdown of Daily Carbohydrates, Protein, & Fats

Use the chart below to estimate your energy needs. Then use the suggested foods in your nutritional guidelines to establish a nutrient-rich diet. Diets will vary as each individual has specific needs. Be sure your calorie % of carbs, protein & fat = 100%.

A. Determine Total Calorie Needs

Gender Factor	Daily Rate	Activity Level	Total Calorie Needs
1.0 for males		0.64 = Low	
	X _____ lbs	X 24 hours	X _____ KCAL
0.9 for females		0.68 = Moderate	
		0.73 = High	
		0.80 = Very High	

B. How Many Grams of Carbohydrate? (4 Kcal = 1 gram of carbohydrate)

_____ KCAL per day X 0.6 = _____ CHO/KCAL

_____ CHO KCAL Divided by 4 = _____ CHO Grams

C. How Many Grams of Protein? (4Kcal = 1 gram of protein)

If your goal is to...

Build lean Muscle _____ KCAL per day X 0.25 = _____ **Protein KCAL**

Maintain Muscle _____ KCAL per day X 0.20 = _____

_____ **Protein KCAL** Divided by 4 = _____ **Protein Grams**

D. How Many Grams of Fat? (9 Kcal = 1 gram of fat)

_____ KCAL per day X 0.20 KCAL = _____ **Fat KCAL**

_____ **Fat KCAL** Divided by 9 = _____ **Fat Grams**