ESD EAGLES

SPORTS NUTRITION

Fueling for Football

Football is a game of strength, speed and skill; all of which can be affected by what, when and how much an athlete eats and drinks.

Athletes need to apply the same effort to proper fueling as they give during practices and competition. Players sometimes neglect nutrition, which can result in poor performance.

Proper nutrition is extremely important for football players. Because football requires short bursts of energy, eating enough carbohydrates is critical. As an athlete, you are always looking for the edge over your opponent. Nutrition is that edge. It does not only impact strength, speed and stamina, but recovery as well. You, as athletes, are responsible for taking control. You must provide your body with optimal body fueling. A player who comes to practice without having eaten breakfast or lunch, or skimps on fluid intake during hot summer practices, is not going to reach his full potential – which ultimately affects the performance of the team as a whole.

When considering the athlete's diet, we need to consider 4 questions:

1. What are we eating?
2. When are we eating?
3. Why are we eating?
4. How much are we eating?

For sports nutrition purposes we can divide foods into 4 categories based on what nutrients they provide, and how they contribute to athletic performance.

Athletes need:

1. Energy to perform = Carbohydrates (carbs)
2. Nutrients for recovery = Protein
3. Nutrients to stay healthy and fight disease = Fruits & Vegetables
4. Fluids for hydration

When considering nutrition we need to think of the **WHAT**s (Carbs, Protein, Fruits & Veg, and Fluids). The **WHEN**s (nutrient timing in relation to activity) and **HOW MUCH** (calorie levels). A balanced nutrition plan takes all three factors into account daily. *By ignoring any one part, you are ultimately sacrificing performance.*

Remember that what you eat today effects not only how you perform today, but how well prepared you are for tomorrow.

General Guidelines:

- Match your calories to your activity
- Stay hydrated! If you are thirsty, you are already dehydrated.
- Plan ahead
- Eat breakfast
- Eat more frequently
- Listen to your body
- Limit nighttime eating
- Enjoy your food

OVERVIEW OF NUTRITION

CARBS ARE KEY

Football is a stop-and-go sport with short burst of intense effort, followed by rest. Therefore, the primary fuel for football is **carbohydrates**. An ideal diet for football players requires 55 to 60 percent of their daily caloric intake to come from carbohydrates, 15 percent from protein and 30 percent from fat. Simply stated, your diet should be 2/3 carbohydrates and 1/3 protein, with an emphasis on moderate fat. Carbohydrates-containing foods with lower fat should be emphasized. For example: bagels over doughnuts, mashed potatoes over fries, grilled chicken over fried, frozen yogurt over ice cream.

Upping the amount of carbohydrates in your diet will provide you with more available energy during practice and games. Less fried foods often decrease the chance of an upset stomach, which may also boost performance.

During Two-a-days/Pre-season, carbohydrates must be the main fuel source. Players will not recover in time for the next practice unless carbohydrate intakes are adequate. Watch your protein intake. While protein is needed in an athlete's diet to build and maintain muscle mass, excess protein consumption will be stored as fat and may dehydrate the body. For example, turkey and cheese roll-ups, fruit, vegetables, Gatorade bars, etc., are good food choices.

PRE-GAME MEALS

The primary goal for providing athletes with a pre-game meal is to fuel the body for competition. The best strategy is to choose lower-fat foods. Fats take longer to digest, so high-fat meals can leave the athlete with a full, heavy stomach and not enough energy to perform at his best. When planning a pre-game meal early

in the day try to avoid foods such as, fried meats, fried potatoes, bacon, and sausage. Instead, choose foods that favor leaner protein and carbohydrates such as bread, cereal, and toast. For afternoon/evening games choose grilled, baked, or broiled meats, tomato instead of cream sauce, low-fat milk, and baked or broiled, instead of fried potatoes. Additional food options for pre-game meals include:

- Turkey or ham subs, fruit salad, and frozen yogurt
- Eggs, waffles, ham, fruit
- Pasta with red meat sauce, grilled chicken, salad and fruit
- Smoothie, cereal, fruit
- 8-ounce cuts of steak with carbohydrates on the side.
- For beverages: sports drinks, juices, and water.

POST-GAME MEALS

Before you sit down for a meal, you should begin by replenishing your fluids and carbohydrates immediately following the game with sports drinks, pretzels, sports bars (containing the proper nutritional ratio), or fruit. This is usually the hungriest time for the players. Some good choices include:

- Steak kebabs, rice
- Salmon, green beans, and corn
- Roast beef, mashed potatoes and salad
- Hamburgers, grilled chicken sandwiches, baked potato and juice

When it comes to weight loss or weight gain, you must do it in small increments. In order to add Lean Muscle Mass and discard Fat Mass you must combine a proper nutritional plan and strength training program. By adding or subtracting the extra 500 to 1000 calories you are allowing your body to change its composition.

POST GAME/LIFT SNACK

For optimal recovery after competition/practice or lifting, you need to consume a protein-carbohydrate mix. The snack should contain 6 grams of protein and 35 grams of carbohydrates. Suggestions include peanut butter crackers, trail mix, yogurt with cereal, a bagel with cream cheese or peanut butter, or a sports bar containing the right proportion. ***This snack should be consumed within 30 minutes after competition, practice or lifting for optimal benefit.***

COMMON NUTRITION MISTAKES

- ***Not Eating Breakfast***
- ***Not drinking enough fluids***
- ***Not eating at regular intervals***
- ***Eating too much protein and short-changing carbohydrates***

IN DEPTH LOOK INTO NUTRITION

WHAT: CARBOHYDRATES

WHY: Carbs provide the body with the energy it needs to do quality work. Both starches and sugars are considered carbohydrates. Your body eventually breaks all carbs down to sugar in our blood. HOW QUICKLY the sugar gets into our blood is measured by the GLYCEMIC INDEX (0-100, with 0 taking the longest).

When carb levels are low in the blood and your body stores glycogen, you will fatigue faster and lose a step. Muscles that are naturally slow to relax between contractions are those most likely to become fatigued. These muscles become tight and are more vulnerable to cramping or pulling. Over time, slight pulls and tears can lead to scar tissue build up in the muscle which can lead to an increased risk of that muscle becoming a chronic problem.

WHEN & HOW MUCH: PRE-WORKOUT/COMPETITION: We generally eat slow digesting (Glycemic index 0-70) cards about 2-4 hours pre-competition (usually about ½ of your plate).

DURING & IMMEDIATELY AFTER WORKOUT/COMPETITION: We use simple sugars (usually in a sports drink) to avoid cramping and get the carbs back into our muscles.

ON INACTIVE DAYS: You will not be burning nearly as many calories as during a training day. Therefore, you need to CUT FAST DIGESTING CARBS and eat smaller portions of SLOW DIGESTING CARBS (usually about ¼ of your plate).

High blood sugars (too much carb in diet) can promote the accumulation of body fat and the host of problems associated with TYPE II DIABETES. Kidney damage, high blood pressure, and decreased ability of anti-oxidants to cope with stress are all effects of high blood sugar.

COMMON SLOW DIGESTING CARBS **ACTIVE & INACTIVE DAYS**	MODERATE DIGESTING CARBS **ACTIVE DAYS**	COMMON FAST DIGESTING CARBS **PRE/POST WORKOUT**
Carrots	Pasta	Hash browns
Sweet potatoes	Special K, Frosted Flakes, etc.	Mashed / Baked potatoes
Boiled potatoes w/ skin	Apples	Graham crackers
Lentils	Plums	Pretzels
Kidney beans	Peaches	White rice
Black beans	Oranges	White bread
Whole wheat pasta	Grapes	Pop tarts
Ravioli (cheese or meat)	Bananas	Bagels
Brown rice	Mangos	Breakfast bars
Wild rice	Papaya	English muffins
Rice pilaf	Cantaloupe	Baguettes
Couscous	Pineapples	Waffles
Whole wheat bread	Snickers	Pancakes
Multi grain bread	Puddings	Sugar cereals
Pumpernickel	Granola bars	Sweetened soft drinks
Pita bread	Angel food cake	Watermelon
Whole grain		
Cereals / oatmeal		

WHAT: PROTEIN & CALCIUM

WHY: Protein breaks down into Amino Acids, which are the building blocks of muscle. We need the **IRON** in animal protein, the **CALCIUM** in dairy proteins, and the cardiovascular benefits inherent to **VEGETABLE PROTEINS**. We need to establish a good mix of proteins in order to minimize our muscle soreness while improving recovery time.

Spreading protein intake out throughout the day is important to improve our efficiency or rate of recovery as well as promoting tissue remodeling after your workout.

WHEN & HOW MUCH: Your rate of **PROTEIN SYNTHESIS** is at its peak about 2 hours after activity and again at night. This is why we try to get athletes protein right after activity and again before bed. We keep our amount of protein the same between **ACTIVE DAYS & INACTIVE DAYS**. However, we have a little more room for medium and high fat meats on active days since we are burning more

calories. If you are always choosing lean proteins, even on **ACTIVE DAYS** you have more room to utilize the Healthy Fats (Vitamin E foods) that contain antioxidants.

Not long ago, Americans were afraid of **FAT** in their diets. We need some fat in our diets to provide essential fatty acids. It is just a matter of choosing the best fats for us.

COMMON LEAN PROTEINS ACTIVE & INACTIVE DAYS	**COMMON MEDIUM FAT PROTEINS ACTIVE DAYS**	**COMMON HIGH FAT PROTEINS ACTIVE DAYS (Limited)**
ANIMAL SOURCES:	**ANIMAL SOURCES:**	**ANIMAL SOURCES:**
Egg whites	Regular eggs	75% Lean ground beef
95% Lean ground beef	85% lean ground beef	Beef ribs
Ground round	Prime rib	Spare ribs
Sirloin / Flank steak	Rib eye	Bacon
Veal / Buffalo	Corned beef	Hot dog / Sausage / Bologna
Ham / Pork tenderloin	Hot dog / Sausage / Bologna	(6 grams per serving or more)
Chicken / Turkey	(3-5 grams fat per serving)	Salami
Ostrich	Poultry - Dark meat w/ skin	Kielbasa
Salmon	Fried chicken	**DIARY:**
White fish	Fried fish / Shellfish	Whole milk
Tuna	**DIARY:**	Yellow cheese
Scallops / Shrimp	2% milk	Swiss cheese
DIARY:	Cottage cheese	**VEGGIE:**
Skim milk	White cheeses	Peanut butter
Fat free cottage cheese	Plain yogurt	Soy cheese
Parmesan cheese	**VEGGIE:**	
Low-fat Yogurt	Tofu	
VEGGIE:	Soy yogurt	
Peas / Lentils / Beans	Soymilk	
Soy protein shakes		

WHAT: ANTIOXIDANTS & ANTI-INFLAMMATORIES

WHY: These foods consist of fresh vegetables as well as healthy oils from nuts and seeds. **These foods have properties (Antioxidants & Anti-Inflammatories) that help promote a healthy immune system, and minimize your down time due to illness.**

By preventing unnecessary illness and downtime from training and competition, Antioxidants & Anti-Inflammatories help you to outwork the competition. The player that is healthy and has been able to practice hard all week has the advantage over the player whose body won't allow him to work as hard.

These foods have a profound effect on your body's ability to deal with the **STRESS** of training as well as your everyday life. A chronic exposure to **STRESS** (Metabolic: training, Environmental: heat, flu season, etc., Emotional: dealing with media, finances, etc.) **AND INFLAMMATION** (the body's response to stress) has recently been identified as major factor in contributing to the onset of heart disease, high blood pressure, diabetes, cancer, neurological disorders and a whole host of autoimmune diseases.

It is time we start looking at step one foods as preventative **MEDICINE**!

COMMON FRUITS

VITAMIN C & CAROTENOIDS

Cantaloupe
Mango
Mandarin Oranges
Tangerines

VITAMIN C

Kiwi
Oranges
Papaya
Strawberries
Pineapples
Grapefruit
Peaches
Raspberries
Honeydew melon
Blackberries
Cranberries
Blueberries

CAROTENOIDS

Prunes
Apricots
Plum

COMMON VEGGIES

VITAMIN C & CAROTENOIDS

Sweet potatoes
Red bell peppers
Butternut squash
Broccoli
Salsa
Tomatoes
Tomato juice / Sauce
Spinach
Collards
Turnips
Beets

VITAMIN C

Green & Yellow peppers
Cauliflower
Brussels sprouts
Green peas
Zucchini / Squash
Green beans

CAROTENOIDS

Carrots
Pumpkins
Yellow squash

COMMON NUTS ETC

VITAMIN E FOODS

Olive oil
Soybean oil
Canola oil
Sunflower seeds
Almonds
Walnuts
Peanuts
Peanut butter
Cashews
Macadamia nuts
Olives
Avocado / Guacamole
Egg yolk
Chick peas

HELPER ANTIOXIDANTS:

Apples
Celery
Dark cocoa
Eggplant
Grapes
Onions

WHAT: FLUIDS & HYDRATION

WHY: Hydration is a major issue for athletes. Dehydration is a major issue and can lead to many medical issues including death. **DO NOT WAIT UNTIL YOU ARE THIRSTY TO DRINK.** If you feel thirsty you are already partially dehydrated.

Athletes are at risk for dehydration given the high sweat losses during practice / conditioning, especially in the heat or during two a days. Dehydration can lead to heat stroke – symptoms are headache, nausea, dizziness, clumsiness, and even loss of consciousness.

SEE YOUR PEE: One way to monitor your hydration status is to observe the color of your urine. A well-hydrated athlete will have light to clear urine. Dark, concentrated urine is the sign of dehydration and/or heavy supplement use:

Urine Chart | NSW Rural Fire Service | 10

Urine Chart

HOW DEHYDRATED ARE YOU?

For frontline fire fighting, 1 litre of fluid should be taken every hour

DARK YELLOW	**Highly Dehydrated** – Drink a large bottle of water immediately!
BRIGHT YELLOW	**You are still seriously dehydrated** – Drinking more now will make you feel a lot better
YELLOW	**Moderately dehydrated** – You lose fluid on a regular basis throughout the day – Drink more water to get hydrated
LIGHT YELLOW	**Almost there** – Get some more water in your system – Stay hydrated and healthy!
CLEAR	**Great job** – Now don't let yourself get dehydrated – Drink at least 8-12 large glasses of water throughout the day

CAFFEINATED AND SUGARY DRINKS AND ALCOHOL DEHYDRATE – LIMIT YOUR CONSUMPTION

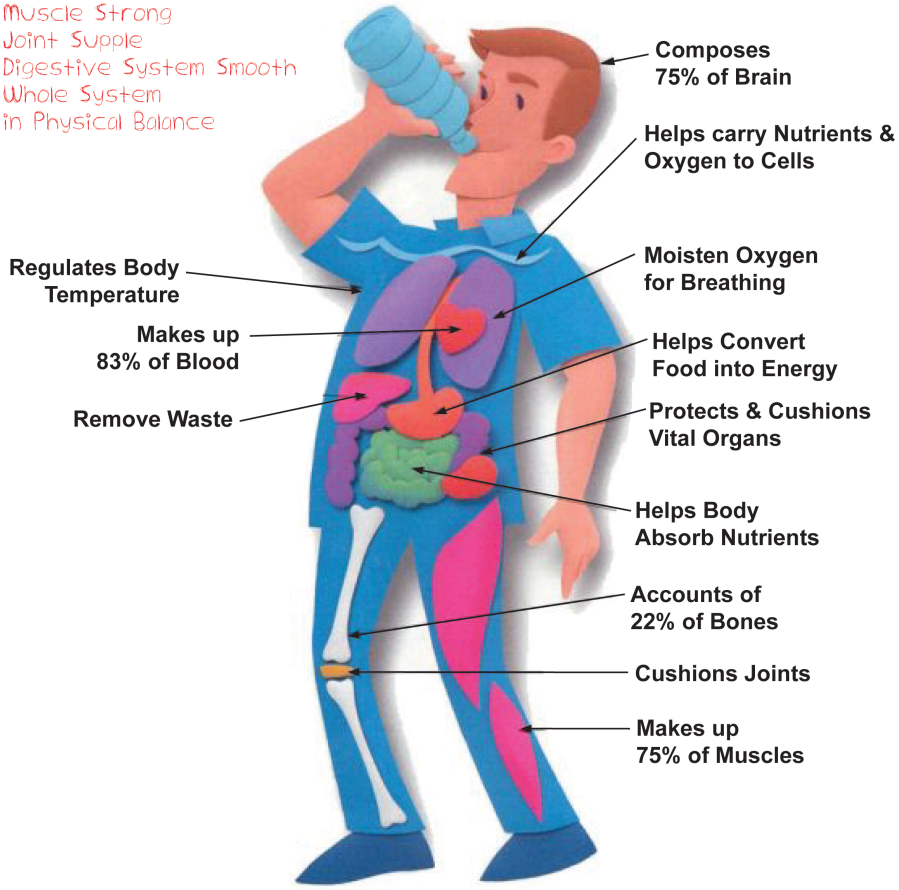
You can have a sport drink to supplement electrolytes. They should be taken at the ratio of 1 sports drink to 10 equivalents of water.

Approved by the NSW Ambulance Service

CAFFEINATED AND SUGARY DRINKS AND ALCOHOL DEHYDRATE!!!

Water Benefits

Water keeps:
Energy up
Weight Down
Muscle Strong
Joint Supple
Digestive System Smooth
Whole System
in Physical Balance



WHEN & HOW MUCH: Our thirst and drive to drink do not match the rate at which we lose fluids. Being **WELL HYDRATED BEFORE A WORKOUT** or competition is the best way to prevent dehydration. **DURING ACTIVITY** you need about 1-2 cups of water or sports drink every 15 minutes or more. **SPORTS DRINKS** help stimulate the drive to drink due to the sodium in the formulas. **WATER** can often diminish our drive to drink. Sports drinks also contain a dilute source of fast digesting carbs to help prevent blood sugars from falling to a dangerous level.

If you don't take in fluids as you sweat, your blood actually thickens. This makes your heart pump harder and slows oxygen and nutrient delivery to exercising muscles. Result: Your body suffers!

Electrolytes are necessary for maintaining fluid levels in the body, muscle contractions, and nerve impulse transmission. Electrolytes are lost in our urine and during periods of high sweat loss. If we do not replace the electrolytes lost, we become dehydrated and our blood levels can drop to dangerous levels. Sodium and Potassium are needed to contract your muscles (including your heart). By replacing electrolytes we prevent muscle cramping and heat stroke due to dehydration.

During periods of high fluid losses **AVOID CAFFEINE** products as they can decrease your short-term ability to reclaim fluids.

CAUTION: many liquid supplements contain **LARGE** amounts of caffeine. **CHECK THE LABELS** for caffeine. Be especially aware of products that contain the words **"ENERGY", "FAT BURNING", or "THERMOGENIC".**

Drink enough fluid per hour based on your sweat rate, which you can determine with the formula below:

1. Weigh yourself before and after exercise. Try to weigh in wearing as little clothing as possible.

2. Keep track of the number of ounces of fluid you consume during exercise.

3. Subtract your post-exercise weight from your pre-exercise weight, then convert it to ounces [16 ounces to a pound, so if you lose 2 pounds during exercise, you have lost 32 ounces].

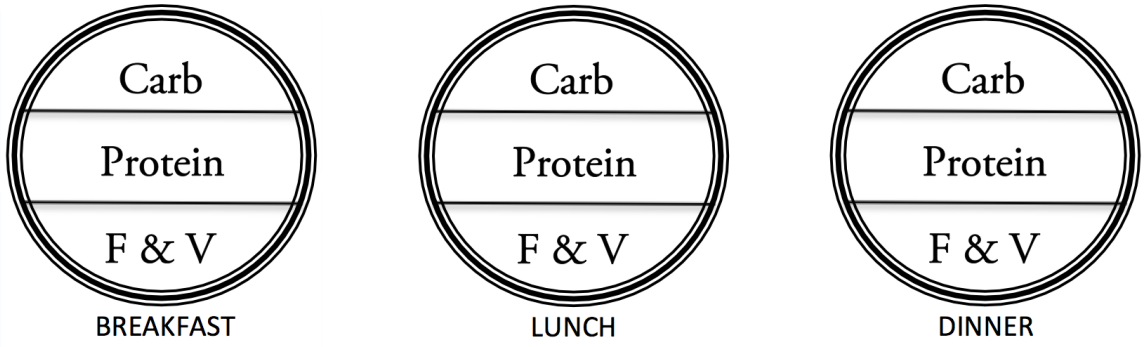
4. To get your hourly sweat rate, add the number of ounces of fluid lost to the number of ounces of fluid consumed. Divide the sum by the number of hours you exercised.

Example
Pre exercise weight = 190 pounds/ Post exercise weight = 187 pounds
Difference = 3 pounds [48 ounces]
Amount of fluid consumed during exercise = 20 ounces
Number of hours of practice = 2

48 + 20 = 68 ÷ 2 = 34 ounces of fluid required per hour

WHEN: OFF DAYS

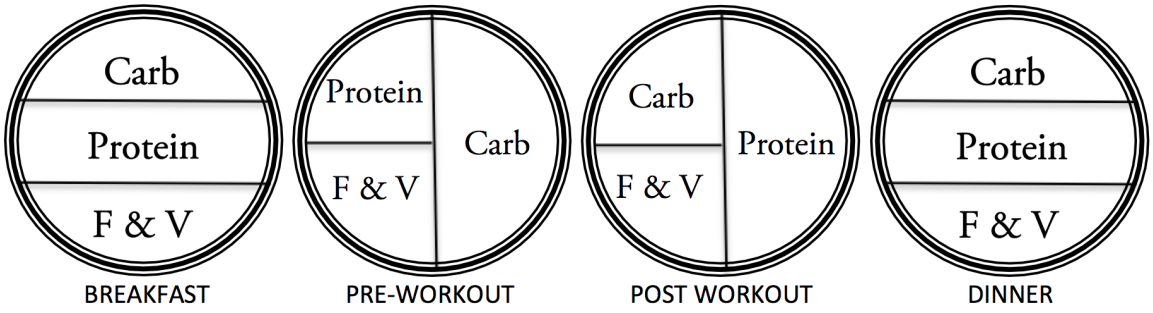
Off days your eating pattern will be drastically different than on a day with any level of activity. Since your muscles and body are not being shocked by workouts or practice, you can eat a general balanced meal plan. Choose equal parts of carbs, protein, fruits, and veggies at each meal. If you are prone to gain unwanted weight, these are the days you really need to be careful of. Choose moderate to slow digesting carbs as a rule. If possible, try to incorporate mid morning and mid afternoon snacks to help keep your metabolism running.



WHEN: WORK OUT DAYS

On light work out days you need to fuel your workouts with plenty of glycogen and recover from your workouts with plenty of protein. You have some room for fast digesting carbs pre-workout and immediately post-workout. If you are trying to lean up, limit medium fat meats here. Avoid high fat meats.

On heavy work out days, you need the same breakdown of foods at each meal, but since you are burning more energy, you need more fuel. Use your heaviest workday to fit in any high fat or dessert type items. On these days your metabolism is running at its highest, and you are less likely to store these extra calories as fat.



WHAT: POST WORK OUT NUTRITION

What you eat and drink in the first two hours after a workout is just as important as what you do in the workout itself. Nutrition is the primary determinant of the outcome of this critical short-term muscle recovery process. Athletes who consistently take in the right nutrients in the right amounts during the "muscle recovery window" will recover faster, adapt more fully, and eventually wind up far ahead of those who consistently do not.

Poor post work out nutrition can lead to: Increased soreness and fatigue, decreased performance, a decrease in muscle gains despite training, increased fatigue in your next work out.

When you work out, your body continues to break down even after exercise has stopped. You deplete your energy storage and increase muscle break down. You will continue these negative effects until your body receives signals to stop. Your post work out feed provides these signals.

Under normal conditions, your body responds to a meal by sending the nutrients you just took in all over the body to provide the energy you need to survive, some of these nutrients end up in the muscles. After intense work outs, you have essentially traumatized your muscles (your body doesn't know you are doing this on purpose). When we eat immediately (20 minutes to 2 hours) after a heavy work out, your body senses this "trauma" and sends much more of the nutrients to the muscles.

Remember, it is these nutrients that head to the muscles that will provide the energy for tomorrow's work out. Proper nutrition today, gives you the edge tomorrow!

There are four categories of nutrients you need to consume as soon as possible after every workout: water and electrolytes, carbohydrates, protein, and antioxidants.

Water and Electrolytes

During exercise, body fluid comprising water and electrolytes (sodium, chloride, magnesium, and potassium) is lost. It is not possible to restore water and electrolytes as quickly as they are lost during moderate to high intensity exercise.

So, even athletes who are conscientious about hydration always complete their workouts in a state of fluid deficit. This phenomenon is known as "involuntary dehydration". Dehydration causes blood volume to stay low, which in turn slows the delivery of vital nutrients to the muscles and the removal of metabolic wastes from the muscles.

Carbohydrates (Replenishing Glycogen)

The primary fuel source for moderate to high intensity exercise is glycogen that is stored in the muscles and comes from dietary carbohydrate. After exercise, the sooner you begin to replenish muscle glycogen by consuming carbohydrate, the better. This is because, following exercise, the muscle cells are much more receptive to insulin, the hormone responsible for transporting glucose through the bloodstream to the liver and muscles, where it can be stored as glycogen. The body can synthesize glycogen two to three times as fast during the first two hours after exercise than it can at other times.

Studies have shown that taking in a small amount of carbohydrate and protein in the first 20 minutes after a workout can drastically improve recovery and decrease muscle soreness. The most effective mix of carb and protein seems to be 4 grams of carbs for every 1 gram of protein. This mixture in the first 20 minutes appears to help stimulate the muscles to begin the recovery process as well as stimulating the insulin response, which drives the carbohydrate into the muscles. Some examples of foods with close to the 4-to-1 carb-to-protein ratio are: chocolate milk, Gatorade shakes, Ensure, Cliff Bars, and Myoplex Shake with milk.

How much carbohydrate is needed? As a general guideline, athletes should try to consume about one gram of carbohydrate per pound of bodyweight during the first two hours of exercise. Most or all of this carbohydrate should be high-glycemic, because high-glycemic carbohydrates stimulate greater insulin release and are therefore delivered to the muscles and liver more quickly than their low=glycemic counterparts.

Many athletes find it most convenient to get their post-exercise carbohydrate simply to continue using a sports drink following workouts. A majority of sports drinks provide the water, electrolytes, and carbohydrate the body needs for recovery. Also, it’s often much easier to drink than it is to eat a full meal soon after exercise.

Protein

Protein is used to produce some energy during strenuous workouts when carbohydrate fuel runs low. Also, the normal process of protein building is virtually shut off during workouts. Because protein is an important structural element of muscles, protein breakdown during exercise leaves the muscles in a weakened state afterward. In order to properly recover from and adapt to this particular training stress, athletes must act quickly to rebuild muscle protein. Timing is as important for protein rebuilding as it is for glycogen and protein to muscle cells. Again, the muscle cells are extraordinarily sensitive to insulin during the first two hours after exercise.

Antioxidants

A major cause of post-exercise muscle soreness and weakness is oxidative stress, or free radical damage. Oxygen is a highly reactive type of molecule – a free radical. During intense exercise, an athlete's rate of oxygen consumption increases dramatically.

Fortunately, antioxidants such as vitamin E are able to protect body tissues by neutralizing free radicals. Research has shown that athletes who take in a healthy dose of antioxidants after exercise experience much less free radical damage than those who do not. Antioxidants are plentiful in many fruits and vegetable, and a growing number of sports drinks and performance recovery drinks contain them.

RECOVERY

Recovery is a vital component of any conditioning program. What you do between your workouts will have a large impact on your improvement and progress! Below are some suggestions in regards to this area that will help your post-workout recuperation:

1) **SLEEP** – proper sleep each night is essential to your recovery. While the amount of sleep necessary is an individual thing, it is advised that you get eight (8) hours of sleep each night. If you cannot do this, try to get an afternoon nap, especially on training days.
2) **REST** – this is what you do with your waking hours when not working out. Your activities during this time can enhance or diminish your ability to recovery and progress in your workouts. If you spend too much time doing additional things (i.e. – dancing at the clubs every night, playing three hours of hoops each day, etc.) you will not recover completely and, consequently, you will not progress from a physical standpoint. How much you can do during your non-workout time is also an individual thing. You must use good judgment here!
3) **WARM DOWN** – by performing low intensity work immediately after a workout you will increase blood flow and enhance recovery. Track and field athletes and Olympic lifters have used this often-ignored part of the training workout successfully for years. You should never fail to warm down after a workout! Below are some examples of warm down activities:
    a) **Bike**- at a low level for 5-10 minutes
    b) **Stepper**- at a low level for 5-10 minutes
    c) **Jogging**- at easy pace for ½ to 1 mile

4) **WHIRLPOOL** – sitting in a warm whirlpool can facilitate blood flow and enhance recovery. This can be used 4-5 times per week following a workout for 12-15 minute sessions.
5) **SAUNA** – using the sauna properly can also enhance recovery. First, you should take a warm shower (leave hair dry). Next you should sit on the lower level of the sauna for 2-3 minutes. After this, move to the higher level for 6-7 minutes. The best position is to lie on your back if you can. After this 8-10 minute session in the sauna you should quickly take a cool shower for 20-40 seconds, then alternate with a warm shower for a few minutes. This shower procedure should be repeated 3-5 times. After the shower, you can repeat this procedure is so desired. Use this technique no more than 1-2 times per week.
6) **HOT-COLD CONTRAST** – alternating hot and cold modalities can also enhance recovery after workouts. Two examples follow:
    a) ***Shower***- Hot (3 minutes) – Cold (40 seconds). Repeat 3-5 times.
    b) ***Whirlpool*** - Hot (3 minutes) – Cold Plunge (40 seconds). Repeat 4-5 times.
7) **FOAM ROLLER MUSCLE RELEASE** – in this one you use the foam roller (can also use a massage stick) to work out muscle spasms and trigger points. You roll over the muscle to find sore spots. Then you either hold that spot for 30-60 seconds or roll over it 8-10 times until it loosens.

Note: When training hard, it is necessary to use some form of recovery enhancement if you want to maximize your progress!

TIPS FOR WEIGHT LOSS

To lose 1 to 2 pounds a week you must subtract 500 to 1000 calories per day to equal 3,500 calories per week.

• Eat more fruits and vegetables

• Limit fast food intake or make healthy fast food choices

• Drink more water

• Limit your amount of soda, candies, desserts, and other simple sugars.

• Do not eat any fried foods.

• Do not restrict carbs.

• **Do not skip meals**, but do decrease portion size. It is usually not the pasta that

is the problem but the amount that you choose to eat! A little off the top at each meal works very well. For example, eat 25 chicken wings instead of 40, drink a 12-ounce beverage instead of a 20-ounce glass, or eat a 12-ounce steak instead of one that is 24 ounces.

• Trim calories by cutting down on condiments and snacks.

• Many find it easier to lose weight by eating smaller, more frequent meals that are more evenly divided throughout the day, instead of three meals.

• Decrease calories from beverages by diluting juices, choosing diet soda or ice tea, and using smaller glasses.

• Include filling foods such as protein and foods that require chewing: salads, vegetables, a baked potatoes, meat, and fruits.

• When eating fast food, choose regular instead of super-size meals.

• Put snacks into a bowl instead of sitting down with the whole bag.

TIPS FOR WEIGHT GAIN

To gain 1 to 2 pounds per week, you must add 500 to 1000 calories per day to equal 3,500 extra calories a week. Simply put: you must take in more calories than you burn off!

• Eat 4 to 5 meals plus 2 to 3 snacks a day.

• Start a meal with food, not liquids, so have the sandwich first, and then the shake.

• Replace low-or no-calorie beverages with juice, lemonade, milk, and sports drinks instead of water.

• Try to eat one-quarter more at every meal and snack.

• Keep snack food around to nibble on.

• Add higher calorie foods to every meal: granola instead of sugared cereal.

• Add nuts to cereal or snacks.

• Eat bagels instead of bread.

• Add more protein, but only four ounces more a day, through food, ***not supplements***. Choose cheese, low-fat lunchmeats, and an extra piece of chicken, milk and yogurt.

EATING ON THE RUN

Breakfasts:

- Pancakes, waffles, or French toast w/syrup – no butter
- Egg sandwich – no cheese
- Unbuttered English muffin, bran muffin, bagels or toast w/preserves, jelly or apple butter
- Low-fat milk or yogurt w/fresh fruit and a bagel
- Low-fat granola bars – Kellogg's or Nature Valley
- Dry or cooked cereals w/or w/o milk w/fresh or dried fruit
- Pita bread stuffed with peanut butter (high in calories) and raisins and cottage cheese, or veggies and low fat cheese.

Lunches:

- Vegetables or chili stuffed potatoes
- Salad bars: use low fat dressings, veggies, dried beans, beets, carrots, pasta, and add crackers, rolls, or bread
- Pack lunches: Sandwich whole grain bread, fruit, fig bars, and vegetables
- Pastas with meat or meatless sauce
- Tacos without sour cream
- Baked or broiled meats instead of fried
- Fantastic soups or pasta meals that can be reconstituted water
- Fast Food restaurants: Grilled chicken sandwiches, grilled hamburgers, roast beef sandwiches, baked potatoes, or salad bars (no mayonnaise, special sauce, butter, sour cream etc.)
- Thick crust pizzas with veggies – no extra cheese

Dinners:

- Meats should be baked, broiled, or grilled instead of fried
- Pasta with clam sauce or marinara sauce
- Shellfish in tomato sauce or steamed without butter
- Chicken breast without the skin with rice and vegetables
- Stir fry dishes with lean meats and lots of vegetables in minimal oil
- Grilled salmon, tuna, swordfish, or mackerel

Snacks:

- Whole grain crackers
- Graham crackers
- String cheese
- Low-fat yogurt
- Dry-roasted nuts
- Fruit juices
- Bagels
- Bread sticks
- Pretzels
- Dry cereal
- Fresh fruits
- Dried fruits

Watch the caffeine – It lowers blood sugar and can make your hungrier. It is also a diuretic and can be dehydrating.

ADDITITIONAL HEALTHY CHOICES

- Bread, bagels, pita, muffins, biscuits or rolls with less than 2g of fat
- Cold cereal with less than 2g of fat
- Hot cereals
- Corn tortillas
- Air Popcorn – Unbuttered
- Pretzels, Rice cakes
- Pasta, Rice, Barley
- Crackers with 1g of fat
- Fresh vegetables
- All fresh fruit
- 1% Low fat or skim Milk
- 1% Low fat Yogurt
- Cheeses with 2 or fewer grams of fat/oz.
- Frozen dairy desserts with 2g of fat or less 1⁄2 cup
- Beef: Top Round
- Beef: Eye of Round
- Pork: Tenderloin
- Chicken breast without skin
- Egg Whites
- All dried beans, peas
- Canned Fish packed in Water

ATHLETE RECOMMENDED SNACKS

(pre-game and post- game)

The food and beverages an athlete consumes before and after competition and practice is just as important as what is consumed during an event.

Snacks

- Pretzels
- Fig Newton's
- Graham Crackers
- Rice Cakes
- Cut-up Fruit (oranges, apples, bananas)
- Granola Bars
- Cliff Bars/Power Bars
- Raisins, Dried Fruit
- Crackers
- Bagels

Beverages

- Water
- Gatorade or other sports drinks
- Fruit Juice

Items NOT APPROPRIATE before, during or after athletic competition:

- Soda pop or carbonated drinks of any kind
- Candy
- Cakes or cupcakes
- Donuts or muffins
- Chips
- Cookies

SAMPLE DAILY MEAL PLAN

Breakfast

2 eggs
2 slices whole-grain toast with butter or margarine
1 slice ham
12 oz low fat milk or 8 oz yogurt
8 oz juice
12 oz water

Lunch

Sandwich on a hoagie roll
5 slices lean meat [e.g., turkey, ham, lean roast beef or a packet of tuna]
1 slice cheese
1 piece fruit
Crackers, pretzels or baked chips [2 handfuls]
A granola bar or a low-fat muffin
12 oz water and 12 oz milk, juice or water

Dinner

8 to 10 oz lean meat, poultry or fish
2C pasta, rice or potatoes, with some fat added
2C vegetables (cooked or in a salad) with some fat added
1C light ice cream, frozen yogurt, sherbet, sorbet or pudding
12 oz milk or juice

Evening Snack

Sandwich made with whole-grain roll or bread, 4 slices turkey breast, lettuce, tomato, mayonnaise, pickles
20 oz water