

Nutrition for the short season

2.5 – 3 months with our athletes. Not too much can be done at home or at school. As coaches, we are left with the job of educating our swimmers about nutrition.

We do not have enough time to monitor them for weight loss or gain because the season is too short. In addition, most long term affects of deficiencies will not be available to the naked eye and we don't have the equipment or facilities to monitor health closely.

All we can do is educate and hope they listen.

Nutrition can be overwhelming for most coaches, parents, and swimmers. Try to find some simple explanations for what, when, and why we should eat foods and you will find thousands of confusing articles written on the basis of research.

My goal today is to provide you with a simple explanation of the role of nutrition in sports. I would like to provide you with a lesson that will take less then ½ hour and you do not need to worry about it again the rest of the season.

Everyday nutrition

Consider your diet a team. The team members are proteins, carbohydrates, fats, vitamins, minerals, and water—They are teammates that work together to provide good nutrition. Just as each team member carries out different tasks, each nutrient performs specific functions in your body. A lack of just one nutrient is a disadvantage to your body, just as losing a player to the penalty box is a disadvantage for a hockey team. Your body needs all these nutrients all of the time, so the foods you eat should supply them every day.

Variety of food is the key to healthy eating. Keep it simple and eat different foods and different colors of food. The idea is that if one food is deficient, another will make up the difference.

Daily food intake

What should I eat *VARIETY – switch it up often..*

Fruit (fresh first, then frozen and/or canned)

Bananas, Strawberries, Mangos, Apples, Oranges, Pears, Raspberries, Blueberries, grapes, cranberries

Veggies (fresh first, then frozen and/or canned...mixes are ok)

Broccoli, Baby Carrots, Corn, Peas, Tomatoes, Onions, Peppers, Lettuce (Romaine, Spring Mix)

Juice

Fresh, frozen or bottled

Tomato Sauce

Bottled or canned

Bread

Bagels, Multi-grain, English muffins, Buns, Boboli

Cereal

Grape Nuts, Mini Wheats, granola, Wheaties Energy Crunch, hot oatmeal

Pasta

Spaghetti, Egg noodles, Macaroni noodles

Rice

White or brown

Snacks

Crackers, Pretzels, Popcorn

PROTEIN FOODS:

Meat

Boneless Skinless Chicken Breasts, 80% Lean Ground Beef, Steak, Fish (salmon, halibut, shrimp, scallops), Canned tuna

Dairy

Yogurt, Milk, Cheese...sliced, shredded, sticks...cottage, mozzarella, blue crumbles, gorgonzola crumbles, parmesan

Eggs

Large or Egg Beaters

Seeds & Nuts

Sunflower seeds, almonds (sliced or whole), pine nuts, pistachios, walnuts

Legumes (Beans & Lentils)

Baked beans, kidney beans, lima beans, navy beans, chick peas, hummus, 7-bean soup (see bean packages for recipes!)

Peanut Butter

Any kind

When should I eat? – *regular consumption – snack after every workout, Breakfast, lunch, small snack, workout, small snack, dinner – control portion sizes and eat more frequently.*

Hydration – Plays a major role in daily nutrition. Fluids help the digestion process.

Why stay hydrated?

It only takes 1% dehydration to affect performance.

Core body temperature rises during exercise. The body increases blood flow to the skin and releases water into the atmosphere as a part of thermoregulation. Sweating depletes the body of fluid and replacing these fluids is critical. Once you are dehydrated, 24-48 hours is required for recovery.

How much is enough? Throughout the day, stop at water fountains and take a few gulps. 20 – 40 oz. of fluid per hour during workout

What should I be drinking? – *water before, water or sport drink during, water or sport drink after.. < 1 hour workout is water, > 1 hour workout is sport drink.*

How often should I be drinking?

Before workout – *Pass a fountain, take a gulp...In the hour prior to workout you should consume 16 - 32 ounces of water. This will also help to prime the stomach for faster ingestion of fluid during workout. –*

During workouts – *Every 15- 30 minutes. You want to try and replace the amount of sweat you lose (minus amount lost from urination.) Approximately 20 – 40 Oz. of fluid should be ingested per hour.*

After workout – *Replacement of fluid after workout is important for filling any deficiencies created during workout. It also aids in the recovery period which is discussed in more detail later. A good rule of thumb is <60 minutes water 20-40 oz., >60 minutes, sport drinks at the same rate. The electrolytes help the body to retain fluid and the carbohydrates help the body to replenish energy stores. Follow these recommendations and hydration will not be an issue..*

Lorna Garden – Sports dietician..

Supplements

What are they? – According to Mayo Clinic, 1 out of 10 high school athletes are taking performance enhancing supplements. *Supplements are designed to help replace inadequacies in our diet.*

Are they good? – Daily Vitamin is good. The FDA does regulate supplements but their resources are low. They can't keep a close watch on it and there are many loopholes that allow for other substances to be added into the supplement. The only way to be sure you are safe is to NOT TAKE Supplements.

Are they dangerous? Yes, some can be dangerous. The list is very extensive and involves far too many factors for me to suggest taking them.

Before workout

What should I eat? Eating before workout is really a personal preference. Some athletes have the ability to eat just prior to working out and others cannot eat any food at all. The following are some minimal guidelines to follow when eating before a workout.

- You should try and swim with an empty stomach
- Your last meal should fall 2-3 hours before the workout
- drink 16 oz of water 15 minute prior to workout.
- stay on a regular routine and keep it simple.

During workout

Assuming workout is 2 hours or less.

The only concern during workout is fluid replacement. Refer to the Hydration section above.

After workout

One of the most important times for refilling the empty tanks.

Optimal training requires optimal recovery. This is where nutrition plays a significant role. The Australians consider nutrition as a major role player in top level athletes. After a workout the body is starving for nutrients and studies show the most affective time to replenish lost nutrients is within 15-20 minutes after a workout.

Guidelines for recovery – fluid and electrolyte balance restoration – no matter how much planning is involved, some level of dehydration will occur and it is vital to replenish especially if there are doubles or a workout planned the next day. Do not wait until you are thirsty. It is too late. Stick to your planned intake. Replenish Glycogen stores – within 15-20 minutes you should ingest 50 – 100 grams of carbs (what is this and how much? –

Snacks

- 25 – 35 oz of a sports drink e.g. Gatorade
- 16 oz of fruit juice / a sweetened soft drink
- 50g packet of jelly sweets or 10 marshmallows
- A large muffin with a small bunch of grapes
- 1 ½ hot cross buns with a banana
- 3 granola bars or a granola bar with a fruit yogurt
- 3 rice cakes with a large apple

Mini meals

A whole wheat salad sandwich or roll with a slice of lean meat or cheese and a fruit

A bowl of thick vegetable soup with a large whole wheat roll

A bowl of fruit salad with a carton of fruit yogurt

A bowl of your favorite cereal with low fat milk or yogurt

2 slices of toast with a generous helping of baked beans

2 pieces of pizza

A glass of home made low fat milk shake or a fruit smoothie

Why is it beneficial? – Imagine janitors cleaning up a messy room everyday. The walls get dirty (from workout deposits) and you scrub the walls everyday. It will begin to wear on the walls and cause damage. This damage can be repaired by proper nutrition.

What is the best choice of foods for recovery?

Fluids for hydration, carbs for energy stores, proteins for insulin activation and increased tissue repair – ouch, in a nutshell – drink a sport drink and have a food item snack with protein.

Eating before a meet

First off, most energy used in a meet is the accumulation of days of proper diet.

While the pre-meet meal can supply your body with significant amounts of energy, don't expect it to supply all the energy you'll need for the event. You should eat the right kinds of food for several days before the event to charge up your muscles with glycogen. Glycogen is a key energy source your muscles use during most sports activities. Although the pre-meet meal won't cause large increases in muscle glycogen, it will:

- Help avoid hunger during the event
- Stabilize blood-sugar levels and add some food energy to complement existing energy stores of muscle glycogen
- Hydrate the body (supply water to the body's cells)
- Provide a relatively empty stomach at game time if you eat 2-3 hours before the meet.
- Prevent gastrointestinal upset or other adverse reactions to food

No one pre-meet meal is right for every athlete or every event, but some food choices are much smarter than others. General guidelines for individual food selection and meal planning are below. Make sure your pre-meet meal plans follow these guidelines.

- Allow enough time for digestion. Eat the meal at least three hours before an event.
- Choose a meal that's high in starch. Starch is easy to digest and helps steady the levels of blood sugar. Most starches are found in the grains and cereals food group.

- Restrict sugary foods. Sweets can cause rapid energy swings
- Consume only moderate amounts of protein. Protein foods take longer to digest than starch. And high-protein meals may lead to increased urine production, which can add to dehydration.
- Limit fats and oils. They take too long to digest.
- Avoid foods and drinks that contain caffeine. Caffeine stimulates the body to increase urine output, which can contribute to dehydration problems, and a full bladder can be very uncomfortable.
- Watch out for foods that produce gas. Certain raw vegetables, fruits, or beans may cause problems for some young athletes. Be aware of the foods that cause you problems, and avoid them just before an event.
- Within these guidelines, chose foods you like to eat.

Remember to drink plenty of fluids with your pre-meet meal.

High Nutrient Density Cereals >30 grams carb >4 grams protein <40% of carbohydrate is sugar	Moderate Nutrient Density Cereals 20-30 grams carbohydrate 2-4 grams protein <40% of carbohydrate is sugar	Low Nutrient Density (“candy”) Cereals >40% of carbohydrate is sugar
Quaker Toasted Oatmeal Raisin Bran Smart Start Blueberry Morning Basic Four Wheaties Energy Crunch Raisin Nut Bran Honey Nut Shredded Wheat	Cheerios Team Cheerios Rice Crispies Corn Flakes Special K Total	Fruit Loops Cinnamon Toast Crunch Captain Crunch Cocoa Puffs Fruitie Pebbles Frosted Flakes