**Nutrition and Hydration for Swimmers**

Here is a summary of what is needed for a swimmer for nutrition and hydration. This is so important for our athletes. For example, swimming a mile expends 3-4 times more energy than running a mile. We as parents need to make sure our swimmers are getting enough to eat and drink before, during and after practice or a meet. This is one thing the Olympic athletes at the *Fitter and Faster Tour* said made a huge difference for them.

Below is a chart on how much energy swimmers use during practice.

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| --- | --- | --- |
| Weight in pounds | Energy required for swimming @ 25m/minute or 27.7 yds/ minute for 1 hour =1662 yds | Energy Required for swimming @ 50m/minute or 44yds/ minute for 1 hour =2640 yds |
| 88 | 198 | 414 |
| 110 | 245 | 513 |
| 132 | 292 | 611 |
| 154 | 339 | 710 |
| 176 | 387 | 808 |

Our young athletes need nutrition to maintain health, optimize growth, energy needs, metabolism, and optimize athlete performance. Young athletes are different from Adults in many ways:

-Energy expenditure up to 30% higher, plus higher resting energy expenditure

- Fuel utilization

-Glycogen stores are lower because enzyme pathways are not fully developed.

-Decreased anaerobic capacity and lactate production.

- Higher surface area to weight ratio

-Slower acclimatization

-Lower sweat rate (don’t sweat until puberty)

-Lack of temperature regulation, leads to dehydration

-Dehydration more detrimental to children

Here is the recommended amount of protein needed per day

|  |
| --- |
|  |
|  | Grams of protein needed each day |
| Children ages 1-3 | 13 |
| Children ages 4-8 | 19 |
| Children ages 9-13 | 34 |
| Girls ages 14-18 | 46 |
| Boys ages 14-18 | 52 |
| Women ages 19-70+ | 46 |
| Men ages 19-70+ | 56 |

* 1 cup of milk has 8 grams of protein
* \* 3 – ounce piece of meat has about 21 grams of protein
* \*1 cup of dry beans has about 16 grams of protein
* \* 8 – ounce container of yogurt has about 11 grams of protein.
* At the peak of training, a swimmer needs double the protein and 1,000 more calories a day!

HYDRATION:

Most individuals lose an average of 1 to 4 pounds of water per exercise session. Swimmers will lose about 16 ounces of water per 90- 120 minute practice. Your swimmer needs to replace the water lost. For every pound of body weight, you need to be drinking ½ ounce of water per day. So if you are 100 lbs., you need about 50 ounces of water a day. Now add in the water lost during practice to get your daily total. Water is the best for practice. Save the sports drink for the meet or after practice.

There are many types of drinks on the market that do different things:

*Sports drink*- may boost energy and/or help muscle mass; water, sugar, salt, potassium are all common in sports drinks.

*True isotonic drinks*- replace fluid and electrolytes lost during lengthy exercise.

*Protein drinks*- amino acid drinks commonly made of whey used to help recuperate fatigued and overly tired muscles.

**What to Eat Before a Meet**

-Make your large meal, 600-800 calories, at least 3-4 hours prior to when you compete. If you are swimming in the AM it might be better to do this large meal at night.

-Eat complex carbohydrate foods and moderate amounts of lean protein: grains, cereal, bread, bagels, low fat yogurt, oatmeal, scrambled eggs, pb&j.

-Avoid high fiber foods or bars and cruciferous vegetables (cauliflower, broccoli, brussel sprouts), beans, grapes or fruit and juices that can cause gas. Nerves, fiber and gas= bad combo on block. High fat and high fiber stay in your system longer.

-Liquid meal replacement (carnation instant breakfast) are fine especially if you can’t stomach solid food in the morning. Low fat protein shakes or smoothies are great alternatives too!

\*Make sure you do not try new foods on the day of a meet. Always test it during training to see how it feels.

**During the Meet**

-Easy to digest sugars immediately after and 20-30 minutes between events.

-Hydrate with water or sports drinks. If you do a sports drink, drink then refill the container with water. You want equal water to amount of sports drink.

-Reduce the size of food intake as you approach the event time. 30 minutes or less, just drink.

-Eat every 1-2 hours eat a light snack, cereal bars, fruit or veggies with peanut butter, rice cakes, fruit juice, cherrios, goldfish.

-Pack your own food and drinks. Concession stands do not always provide the right kind of food.

**After Meet and Workouts**

\***Swimmer needs recovery food and fluids with 30 minutes of completing exercise**! Need about 4 grams of carbohydrates per 1 gram of protein.

-Lean protein like yogurt, milk (can do chocolate milk), grilled chicken

-Carbohydrates like pasta, potatoes, rice, bread, and fruit

-Potassium rich foods like potatoes, bananas, orange juice, oranges, and raisins

-Plenty of fluids like water, fruit juice, soup, sports drink, watery fruits and veggies (watermelon, grapes, oranges, tomatoes, lettuce and cucumbers)