Nutrition for the adolescent swimmer:

Hydration:

* When people think of nutrition, often they forget water!
  + Water is a critical nutrient for athletes.
  + An individual should drink ½ of their body weight in ounces of water daily for example a 100 lb child should drink at least 50 oz of water per day
  + BUT! Athletes need more water than the average person
  + Why??? Because of sweat and increased respirations (And yes, swimmers do sweat!)
  + About 3-8oz of additional fluid should be consumed every 15 minutes during activity- This varies depending on intensity
  + Maintaining good hydration helps prevent muscle cramping and fatigue, allowing your body to maintain efficiency and continue with training
  + BONUS: chilled fluids are absorbed faster and help lower body temperature.

Why is good nutrition important in athletics?

* Basics- nutrition is important for athletes because it provides a source of energy required to perform the activity
* Fueling the body appropriately helps with
  + Performance
  + cognition or understanding
  + Growth and recovery

Food as Fuel:

* No matter what diet you follow (ie. vegetarian, vegan, or no restriction), it is important as an athlete to think about what you are putting in your body and focus on balance and high quality foods.
* Quick Facts:
  + Athletes can achieve peak performance by training and eating a variety of foods
  + FAT, CARBS, PROTEINS
  + Athletes gain most of the energy needed for activity from the carbohydrates stored in the body (glycogen)
  + Fat also provides fuel; the usage of fat depends on the duration and intensity of the activity being performed (glycogen is also necessary to break down fat to energy).
  + Intense activity, and stress on the muscles increases the athlete’s need for protein (mostly in the recovery phase)
* It is important as an athlete to be meeting caloric needs daily so that the body does not break down muscle for energy, and so the athlete has enough energy to exercise.
* Pre and post exercise fueling:
  + Pre- Focus on both simple and complex carbohydrates, with some easier to digest fat and protein (ex. Turkey sandwich on whole grain bread)
  + Post-Again focus on carbohydrate. Simple carbohydrates are recommended following exercise to replenish glycogen stores and prepare for the next bout of activity (only 100-150calories are needed), along with some protein and fat to help rebuild muscle
* Providing your body with proper nutrition throughout the day can be just as important as the pre and post exercise snack
* Science of exercise usage during exercise
  + Glycogen-energy stored in the muscles, prior to activity. This is the first source of energy during activity and depending on intensity will last the athlete 60-90minutes. The body is cool! The more you exercise and adapt, the more glycogen your body will store :)
  + Blood glucose- from food that was consumed within 3 hours prior to activity. Again depending on how much is available will last ~30-45 minutes
  + Fatty acids, proteins, others- your body will start pulling from other places for fuel, which are much left efficient. At this point hopefully there is some carbohydrate available (ex. Sports drink) to provide some quick energy.