

PRACTICE FUEL

What and when you eat before, during and after daily practices could be the key to turbo-charging your swimming this season. In the last Nutrition Spot, we discussed how daily good fuel provides the energy for high quality practices, and how, in turn, daily high quality practices lead to fast swimming.

DAILY GOOD FUEL → DAILY HIGH QUALITY PRACTICES → FAST SWIMMING

Choosing appropriate practice fuel and knowing when to eat around practice time are keys to setting the stage for high quality practices day after day. Here's how to do it:

BEFORE-PRACTICE FUEL

- **Eat 2-3 Hours Before Practice, Mostly Carbohydrates**

Carbohydrates are your body's master fuel. Your body easily and quickly metabolizes carbohydrates into energy. This makes carbohydrates the perfect fuel just before practice. Carbohydrates digest in anywhere from 15-minutes to 2-3 hours, depending on whether it's a simple carbohydrate (sports drink, fruit, veggie sticks) or a complex carbohydrate (potato, pretzels, whole grain cereal/bread.)

- **Avoid Fat, Some Protein is OK**

Protein and fat take too long (4-6 hours) to empty from the stomach and convert to usable energy, and can delay the absorption of the carbs you eat. If you eat foods high in protein or fat just before practice, they will still be in your stomach during practice, syphoning energy away from working muscles to be used instead for digestion. Not good for practice!

That said, there is some evidence that the presence of *a little* protein before and during exercise slows muscle breakdown during exercise and speeds-up post-exercise muscle growth and recovery. Protein also helps you feel satiated longer.

- **Drink Water!**

Stay hydrated all day long. About 60% of body weight is water. If this fluid is not replaced at regular intervals during the day, and especially during practice and competition, it can lead to dehydration. A dehydrated athlete has a decreased volume of blood circulating through the body. Consequently, muscles do not receive enough oxygen and the by-products of exercise are not flushed out of the body efficiently, leaving you feeling exhausted and performance suffering.

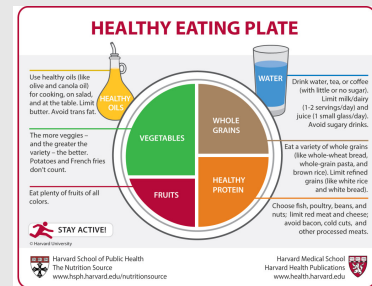
Stay hydrated. Sip on water all day long, and especially just before, during

and after practice!

- Ideas for Pre-Practice Fuel:

It's not always possible to eat 2-3 hours before practice, especially during the school year. As a general rule, the closer you are to practice time, the more you want to consume fast-acting, easily digestible carbohydrates. Here are some pre-practice fuel examples, depending on when you have a chance to fuel-up:

1-hr or less before practice	**2-3 Hours before practice** (ideal)	4 or more hours before
<p>Easily digestible carbohydrates</p> <p>raisins or dried fruit</p> <p>banana</p> <p>fig bar (x2)</p> <p>apple sauce</p> <p>sports drink (8oz, diluted)</p> <p>toast (1 slice)</p> <p>crackers (x5)</p> <p>WATER!</p>	<p>Solid (complex) carbohydrates</p> <p>baked potato (plain)</p> <p>pretzels</p> <p>whole grain cereal + milk</p> <p>whole grain bagel/bread + p.b.</p> <p>fruit + honey + f.f. greek yogurt</p> <p>fruit/Veggie smoothie</p> <p>oatmeal + milk + fruit</p> <p>bar</p> <p>fresh fruit + any of above</p> <p>WATER!</p>	<p>My Healthy Plate</p> <p>½ plate veggies & fruit</p> <p>¼ plate grains</p> <p>¼ plate lean protein</p> <p>some healthy fat</p> <p>WATER!</p>



DURING PRACTICE FUEL

- Drink Water or Sports Drink
- For Practices Longer Than 1.5 Hours – you might benefit from consuming carbohydrates every 15-30 minutes during practice

Consuming easily digestible, fast-acting carbohydrates during longer practices ensures that muscles receive adequate amounts of energy, especially towards the end of practice. Here's a test: if you feel like your performance towards the last stages of practice is consistently lagging, try consuming carbohydrates in the form of a sports drink every 15-30 minutes from the beginning of practice. Take 2-5 swigs each time to maintain the flow of energy to muscles throughout your practice.

If you do not “hit the wall” at the end of most of your practices, then you probably don’t need the carbohydrates during practice. Endurance athletes develop the ability to very efficiently store and use the energy stores in their body.

- **Double Practices – Replenish!**

Double or back-to-back practices, for example swim followed by dryland when you are exercising for 2 or more hours at a time, are an example of when you should definitely be replenishing your energy stores by taking in carbohydrates during practice. Even the most well-trained endurance athletes eventually run out of gas. Keeping up your fuel supply with swigs of sports drink throughout practice will ensure that you maintain a high quality practice from beginning to end!

AFTER PRACTICE FUEL

- **Within 30-Minutes – Eat Carbohydrates With Some Protein (4:1)**

Carbohydrates will replenish your energy (glycogen) stores, while a little protein will fuel muscle repair and growth. The first 30-minutes after exercise, your body is primed to absorb carbohydrates as energy stores and to kick-start muscle recovery.

Recovery Snack Ideas:

chocolate milk
banana with peanut butter
pita and hummus
fruit and non-fat yogurt
cereal with milk

- **Within 2-Hours – Eat a My Healthy Plate Meal**

Eating a balanced meal will within 2-hours of exercise will ensure that your body continues to restore glycogen (stored energy) in your body as well as continue to promote muscle repair and growth.

