Sports Nutrition News & Notes

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Sports Nut

Carbohydrates...To Go!

Carbohydrates provide energy for working muscles. Carbs also provide fuel for the brain. If you get enough carb to fuel the muscle, you spare protein to be used for muscle building or repair rather than needing to use the protein as a major fuel source.

When you don't eat enough carbohydrate, the body uses protein to supply needed energy. This means you are risking not being able to build lean mass or muscle. Eating the right mix of carbohydrates and proteins is in your best performance interest!

During digestion, your body converts carbohydrates into sugar (glucose). The sugar enters the bloodstream where it is transferred to our body's cells for energy. Sugar not used immediately is stored in your liver and muscles as glycogen.

Glycogen is used as an energy source when you need more sugar for energy than is available in the bloodstream. Your body can store about 2000 calories as glycogen to support you during exercise. This is why during intense exercise sessions lasting longer then 90 minutes, you may run out of glycogen ("hit the wall"), such as in a long distance run or soccer match.

As mentioned earlier, carbohydrates are needed for the brain or central nervous system. If the brain does not receive sugar, the lack of glucose can result in weakness, dizziness and low blood sugar. This could lead to mental and physical fatigue, and likely hinder your performance.

Do you know?

- ***What is a high carbohydrate food?***
- ***There are two types of fiber...both extremely important to your overall health?***
- ***What is a nutrient dense carbohydrate?***

Meet with one of our dietitians to learn more!

Timing of Carbs is the Key

A continual supply of carbs in the diet every day is necessary to make sure you have an adequate supply of fuel for physical activity. One high carb meal before exercise will not really impact your performance if all other meals the week prior are inadequate in carbohydrate. It is important to consume a daily diet of about 7-8 grams/kg of your body weight to be "adequate". Some runners or cyclists (endurance athletes) may even need up to 10-12 grams/kg.

During intense exercise, our bodies can run out of stored fuel quickly, so it is important to also maintain glucose levels before, during and after the intense exercise. The pre-event meal should be eaten 2-3 hours before an event or strenuous activity, and eating high carbohydrate foods will boost your glycogen stores. Choose foods high in carbohydrate, moderate in protein, and low in fat. Examples might be a whole grain bagel and peanut butter, low fat yogurt with some fruit, or pasta with red sauce. If you can tolerate eating carbohydrate 30-60 minutes before activity, this will also help top off your glycogen stores. If eating this close to your event, it may be wise to try a sports drink or some fruit and a few low fat crackers that go easy on the stomach.

Refueling during exercise is really only needed if you are going to be exercising intensely for more the 90 minutes. If so, then the key is to ingest about 30-60 grams of carbohydrate every hour. To prevent stomach upset and help absorption, you may want to divide this into 15-30 minute intervals.

After exercise, early energy replacement is critical to maximize the ability to perform at your best in the next exercise event- especially if it is within the next 24 hours. Eat early after exercise for best recovery. Consider 16 oz. chocolate milk or a fruit and yogurt smoothie as a great start to replacing your glycogen stores within 15-45 minutes after exercise.

Counting Carbs...

Carbohydrates are found in whole grain breads and cereals, fruits, vegetables, beans, legumes and dairy products. They are also found in candy and snack foods. Each gram of carbohydrate contains 4 calories. An athlete's goal is to get at least 7-8 grams of carb per kg each day. How can you reach this goal without over eating and gaining weight in this fast but fatty convenience food world? First, figure out your carbohydrate needs. Then, with your goal in mind, read food labels and count how many carbs you are currently eating. If your food doesn't carry a label such as fruits and vegetables, just ask the sports nutritionist in your facility for help or visit a reliable website (such as nutrientdata.com). You may also be able to find a packaged food similar to that item with a label to help you. Here is an example of how to count your carbs for an athlete who needs 600 grams a day: Start with a carb loaded breakfast such as 1 c. Grapenuts (92 grams), 1 medium banana (25 grams), 1 c. milk (10 grams) and 1 c. yogurt (40 grams). This athlete has started the day with 162 grams of quality carbs and 28% of their needs for the day. It is fascinating to look at labels and notice differences in foods. For example, 2 servings of pretzels have 55 grams of carbs, while 2 servings of chips only have 21 grams (with significantly more saturated fat). Make wise choices throughout the day!

Some other ideas of foods high in quality carbohydrates:

1 package oatmeal=30grams	8 oz. chocolate milk=25 grams
15 oz. raisins=25 grams	1 large baked potato=55 grams
1/2 c. corn=18 grams	1 bean burrito=50 grams
3 oz. whole grain bagel=45 grams	2 slices cheese pizza=40 grams

Artificial Sweeteners: Good or Bad?

Artificial Sweetener	ADI*	Estimated ADI equivalent
Aspartame(Nutrsweet,Equal)	50 mg per kg	18-19 cans of diet soda
Saccharin (Sweet'N Low, SugarTwin)	5 mg per kg	9-12 packets of sweetener
Acesulfame K (Sunette, Sweet One)	15 mg per kg	30-32 cans of diet lemon-lime soda***
Sucralose (Splenda)	5 mg per kg	6 cans of diet soda***
Neotame	18 mg per kg	No consumer products available in the US

*FDA-established acceptable daily intake (ADI) limit per kilogram (2.2 pounds) of body weight

**Product-consumption equivalent for a 150 pound person

*** These products usually contain more than one type of sweetener

Artificial sweeteners are often thought to cause cancer and a variety of health concerns. According to the National Cancer Institute, there is no scientific evidence that any artificial sweetener approved for use in the US causes cancer. Numerous studies confirm that artificial sweeteners are safe for the general population.

What is all this grams per kg information?

Find your kg of body weight by using your pounds body weight then dividing by 2.2! If you are looking for your carb intake needs, multiply your kg by 7 or 8. If you are looking for artificial sweetener limits, multiply your kg by the ADI number above!

Please feel free to contact your team's sports dietitian for an individual nutritional consult!
We are also glad to provide group presentations, just ask!
We look forward to helping you reach your nutritional and performance goals!