

body to digest food. If you're not digesting food properly, the body doesn't absorb the necessary nutrients for peak performance.

For many years, coaches have been pushing carb-loading to increase energy levels prior to competitions. Carb-loading is still a valid technique for aerobic and anaerobic sports. For sports such as shooting, however, our bodies need sustained energy for longer periods of time. The type of carbohydrates consumed is critical. There are 2 types of carbohydrates: *short-term energy (high-glycemic)* and *long-term slow-release (low-glycemic)*. What causes the 'crash' a couple hours after eating a snack which provides a short-term burst of energy is the slowed release of fatty acid caused by eating high-glycemic food. Conversely, low-glycemic foods stimulate the production of fatty acids which increase the body's rate of energy production thereby improving stamina.

Carbs are no longer the only answer to long-term energy. Improving performance and overall muscle stamina requires an increased protein intake. Eating protein prior to competition may postpone exhaustion. Specifically, meats take more time and energy to digest and are not the best source of protein. You need to spend your energy concentration on your shot—not share it with your digestive system. Therefore, eggs, energy bars, cheese and yogurt are good candidates for pre-competition meals or snacks. Short-term energy bars contain various forms of sugars (read the label)—either avoid these bars or follow them with one of the foods from the low-glycemic list in order to prevent the blood sugar imbalances which result in the 'crash'.

Food plays a more important role in your performance than you may have thought. The foods you choose to eat can affect your ability to concentrate, to control the gun, to control your temper and to increase your stamina. Some foods are thought to have therapeutic effects in areas essential to shooters. Bananas can combat fatigue, sunflower seeds may cool your temper, chicken helps increase your concentration, nuts support your muscles and yogurt calms your nerves. Foods thought to improve brain function include beans, whole grain and fresh fruit (among others). Cauliflower, broccoli and spinach induce a calming effect thus reducing temper tantrums. Nuts, seeds, peanuts, fish and bananas are stress reducers (due to their high vitamin B content).

Examples of High Glycemic Foods:

Apricots, bagels, sweetened baked beans, bananas, beets, cake and cookies, candy, carrots, dates, fruit in syrup, hamburger/hot dog buns, ice cream, pineapple, pizza, baked or fried potatoes, pretzels, pumpkins, raisins, rice cakes, sugared cereal, sweet corn, tofu, watermelon, white bread, white rice, and sweetened yogurt.

Examples of Low Glycemic Foods:

Apples, beans, brown rice, buckwheat, cherries, chick peas, citrus, fish, grapes, green vegetables, meat, milk, nuts, oatmeal, oats, pasta, peanuts, pear, peas, popcorn, rye, soy milk, sweet potato, tomato, and sugarless yogurt.

Last but not least, optimal hydration is essential for maximum concentration and muscle coordination. Include a nutrition and hydration plan in your shooting journal. Don't go to the range hungry or you'll eat all the wrong food and be ready to take a nap when it's time to perform. Plan ahead, stick to the plan and you just may see an improvement in those scores.

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Match Day Recommendations

- ◆ Drink a bottle of mineral water first thing in the morning to 'charge your brain'.
- ◆ Eat a high-protein meal at least 2 hours before your first match. Drink water or unsweetened fruit juice. If you must drink coffee or tea, follow it with an 8-ounce chaser of water. Take a good multi-vitamin.
- ◆ During the ride to the range, snack on food from the low-glycemic list (apples, grapes, sunflower seeds, nuts, sugarless granola) or a slow-release sports bar. *Drink mineral water.*
- ◆ Eat a slow-release, low glycemic carbohydrate just prior to stepping on the line. *Drink mineral water.*
- ◆ For lunch, eat whole-grain bread or muffins, peanut butter or tuna (sandwich), yogurt, chili, salad, etc. *Drink mineral water.*
- ◆ Between matches, snack on a slow-release energy bar or food from the low-glycemic list. *Drink mineral water.*
- ◆ For the last match of the day, a quick-release snack food is acceptable, as the sugar low will hit after the match. However, to counteract the sugar imbalance, immediately after shooting, eat a long-term energy food. *Drink mineral water.*
- ◆ Evening meal between competition days: Eat slow-release energy foods such as pasta, rice, sweet potato. Avoid mixing carbs and proteins as they digest at different rates and may result in sluggishness.
- ◆ After the final match, replenish the nutrients used up during competition. This definitely includes rehydrating, but should also include a well-balanced meal.