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Sugar and Athletes

While Americans typically fear the word sugar, most athletes have come to terms with the fact that sugar is another word for “glucose” and thus understand that this is what fuels their workouts. In direct contrast, we know that most Americans take in too much sugar on a daily basis which can contribute to obesity and being overweight. So what does the healthy athlete need to know and do in order to stay healthy while maximizing performance?

The Acceptable Macronutrient Distribution Range (AMDR) for carbohydrates is 45 to 65 percent of total calories (3). As you know, carbohydrates exist in both complex and simple forms. Sugar, a simple form of carbohydrates can be found naturally in foods (such as the fructose in fruit or the lactose in milk) or added to the food. Added sugars, also known as caloric sweeteners, are sugars and syrups that are added to foods at the table or during processing or preparation (such as high-fructose corn syrup in sweetened beverages and baked products). See table 1 for ways to identify added sugars on your food label. The body's response to sugars does not depend on whether they are naturally present or added to the food—added sugars supply calories, but few or no nutrients (6).

According to the Dietary Reference Intake (DRI) Report from the Institute of Medicine (IOM), “the maximal intake of added sugars (should) be limited to providing no more than 25% of total energy (2).” That is 500 calories (30 teaspoons or 10 tablespoons) for someone on a 2,000 calorie diet and 1,000 (60 teaspoons or 20 tablespoons) calories for an athlete on a 4,000 calorie plan. You do not need to be a registered dietitian to know that one quarter of your intake adds up to a lot of sugar.

Other organizations are taking notice and agree with this assessment. A recent report from the American Heart Association suggests that individuals follow a prudent upper limit of intake of half of the discretionary calorie allowance (4). See table 2 for a definition of discretionary calorie allowance. Basically, the new guidelines recommend that women should eat no more than 100 calories of added processed sugar per day, or six teaspoons (25 grams),

while most men should keep it to just 150 calories, or nine teaspoons (37.5 grams).

Americans need to cut back dramatically on sugar consumption, the AHA stated. Their new guidelines are far below the 22 teaspoons (90 grams) or 355 calories of added sugar consumed by the average American each day, according to a 2004 government survey (4).

How Does This Fit Into Athletes' Guidelines?

Research on performance shows that an athlete likely needs carbohydrates to compose 55 – 65% of their total calorie intake (1). Taking into account these newer limits on simple sugars, an athlete should continue to consume adequate carbohydrate calories during exercise as the guidelines recommend 0.8 – 1.0 grams of carbohydrates per minute, or approximately 25 – 30 grams every half hour (5) and be sure the rest of your training diet contains limited amounts of added sugars.

Locating Sugars On Labels

Reading the ingredient label on processed foods can help to identify added sugars. Names for added sugars on food labels include:

Adapted from http://www.mypyramid.gov/pyramid/discretionary_calories_sugars_print.html, accessed 9/15/09.

agave	honey
brown sugar	invert sugar
corn sweetener	lactose
corn syrup	maltose
dextrose	malt syrup
fructose	molasses
fruit juice concentrates	raw sugar
glucose	sucrose
high-fructose corn syrup	sugar
	syrup

Adapted from http://www.mypyramid.gov/pyramid/discretionary_calories_sugars_print.html, accessed 9/15/09.

Discretionary Calorie Allowance

Each person has an allowance for some discretionary calories. But, many people have used up this allowance before lunchtime. Most discretionary calorie allowances are very small, between 100 and 300 calories, especially for those who are not physically active. For many people, the discretionary calorie allowance is totally used by the foods they choose in each food group, such as meats with higher fat content, cheeses, whole milk, or sweetened bakery products.

Source: http://www.mypyramid.gov/pyramid/discretionary_calories.html, accessed 9/15/09. ■

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