

# Test Your Sugar I.Q.



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1. **What is sugar?**
  - a) a carbohydrate
  - b) sucrose
  - c) a product of photosynthesis
  - d) all of the above
  
2. **Eating sugary foods does not lead to hyperactivity or other behavioural problems in children.**  
True / False
  
3. **How many calories are in one teaspoon (4g) of sugar?**
  - a) 9
  - b) 16
  - c) 25
  - d) 40
  
4. **Low carbohydrate diets are more effective than other diets.** True / False
  
5. **Based on Canada's Food Guide, which food groups provide sources of carbohydrates and sugars?**
  - a) Grain Products
  - b) Milk Products
  - c) Fruits and Vegetables
  - d) all of the above
  
6. **Eating sweet foods causes a rush in blood sugar followed by a low.** True / False
  
7. **On average, what % of total calories do Canadians consume from sugars added to foods?**
  - a) 5%
  - b) 13%
  - c) 20%
  - d) 30%
  
8. **Athletes have higher requirements for carbohydrates (sugars and starches).** True / False
  
9. **On the food label, the claim "no sugar added" must meet which of the following criteria:**
  - a) no sugars (e.g. sugar, honey, fruit juice) have been added to the product
  - b) no sweetener (e.g. aspartame, sugar alcohols) has been added to the product
  - c) no sugar is in the product
  
10. **Sugar is added to foods only to provide sweetness.** True / False

## Answers:

- 1. d) All of the above.** 'Sugar' refers to sucrose, a carbohydrate found naturally in fruits and vegetables. Sucrose is the major product of photosynthesis, a natural process that turns sunlight into energy. Sucrose is the most abundant sugar found in nature, and occurs in the greatest quantities in sugar cane and sugar beets. While the term 'sugar' refers to sucrose, the term 'sugars' can also be used to describe sucrose, as well as other types of sugars found in nature such as glucose, fructose and lactose.
- 2. True.** Although many believe that sugar can lead to hyperactivity and other behavioural problems in children, several comprehensive scientific reviews have concluded that no evidence exists to link sugar intake to hyperactivity in normal children or those with Attention Deficit Hyperactivity Disorder (ADHD).
- 3. b) 16.** There are 16 calories in a level teaspoon of sugar (1 tsp = 5 ml or 4 g). This compares to 36 calories for the same amount (4 grams) of fat or oil (e.g. butter, margarine, canola oil).
- 4. False.** Low-carbohydrate diets have been popularized without detailed evidence of their effectiveness or safety. Among published studies, weight loss while using low-carbohydrate diets was principally associated with decreased caloric intake and increased diet duration but not with reduced carbohydrate content. Also, much of the initial weight loss comes from water loss when stored carbohydrate (glycogen) is used for energy. The truth is that body fatness depends on the amount of calories eaten and the amount expended through daily activities. Scientific studies have shown that eating more carbohydrate-rich foods actually leads to a healthier diet and to lower body weight over the long term.
- 5. d) All of the above.** Foods in each of these food groups naturally contain carbohydrates, including sugars and starches. When a sugar-containing food is eaten, the body cannot tell whether the sugar in the food came from a fruit or vegetable or whether it was spooned from a bowl. Sugar, regardless of its source, is broken down in the same way - all carbohydrates (sugars and starches) in foods become glucose.
- 6. False.** People often mistakenly think that eating sugar-containing foods causes a dramatic rise in blood sugar followed by a crash, causing tiredness and food cravings. In fact, in healthy people, blood sugar levels are kept within a narrow range, and tiredness and food cravings are very rarely due to low blood sugar. Studies in humans have shown that sugar actually causes a smaller increase in blood sugar than eating certain starchy foods such as mashed potatoes and white bread.
- 7. b) 13%.** Canadians consume approximately 12% of their energy (Calorie) intake as added sugars, equivalent to about 60 g of added sugars per person per day. This is considered a moderate amount and well within current dietary guidelines. "Added sugars" include all sugar, corn syrups, honey, and maple syrup added to foods. It does not include sugars that naturally occur in fruits, vegetables and dairy products. This estimate is based on disappearance data (all sugars, syrups and honey "available for consumption") and US dietary survey data because there are no national survey data available in Canada. Disappearance data are higher than actual intakes because they do not account for sugars lost in food processing (e.g. bread, wine), wastage, and used for non-food purposes.
- 8. True.** People who are very active (e.g. athletes) have particularly high carbohydrate (sugars and starches) requirements, and should consume at least 60% of their calories from carbohydrate-containing foods. During low intensity exercise, the body gets most of its energy from body fat. As the intensity of exercise increases, so does the percentage of energy coming from carbohydrate. Carbohydrate is stored in muscles in the form of glycogen, and the more glycogen people have stored in their muscles, the longer they can exercise before feeling tired. This can be accomplished by eating carbohydrates before, during and after high intensity exercise.
- 9. a) No sugars have been added to the product.** "No sugar added" means that the product must not contain added sucrose or any other sugars as ingredients, such as honey, maple syrup, fruit juice, fructose, etc. The food may however, contain artificial sweeteners such as sucralose and aspartame, or sugar alcohols. Sugar alcohols are carbohydrates that are partially digested and absorbed, and therefore provide calories. Despite the "no sugar added" claim, the food product can contain sugars naturally present (e.g. from fruits, milk).
- 10. False.** Sugar performs a variety of functions in food products, in addition to providing a sweet taste and flavour. For example, it is a natural preservative, as sugars attract water which helps to prevent food from spoiling. Sugar is added to ready-to-eat cereals, where it contributes to binding and browning characteristics. In baking, sugar provides a source of nourishment for the growth of yeast, which helps the leavening process. Sugars or other carbohydrates (except lactose) can also be used to produce alcohols by fermentation.