

clips on sugars

FOR UP-TO-DATE INFORMATION ON SUGARS IN HEALTHY EATING

Sugars and Health

Sugar has influenced Western history, more so than any other food. In ancient history, sugar was used as a medicine, but gradually became part of European cooking during medieval times. Historically, sugar was a highly valued commodity, only accessible to nobility. As it became more abundant and less expensive, sugar was available to all citizens. With its transition from a luxury substance to a basic ingredient, came a shift in the perception of sugar, particularly related to health. There is a lot of misinformation surrounding sugar and health, yet the most reliable information comes from scientific research.

Sugars are carbohydrates

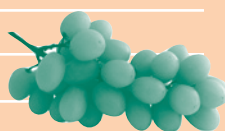
Carbohydrates include starches, sugars, and fibre, which are found mostly in grain products, vegetables, fruits and milk products. The body breaks down starches and sugars into the sugar glucose, the body's source of fuel. Health Canada recommends that we obtain 45 – 65% of our total calories from carbohydrates.

Sugars are carbohydrates that are a natural part of many foods. Sugars are also important ingredients, providing sweetness and other functional roles in foods. 'Sugar' refers to sucrose, the most abundant of the sugars found in nature. Sucrose is the major product of photosynthesis, the process that turns sunlight into energy in green plants. The sugar in your sugar bowl is the same substance (sucrose) found naturally in sugar cane, sugar beets, apples, oranges, carrots and other fruits and vegetables. The body uses sugar from sugar cane and sugar beets in the same way as the sugars in fruits and vegetables.

Common Types of Sugars

Common Sources

Sugar (Sucrose)	Fruits, vegetables, maple syrup, sugar cane, sugar beets
Glucose	Fruits, vegetables, honey, corn syrup
Fructose	Fruits, vegetables, honey
Lactose	Milk and milk products
Maltose	Germinating seeds (e.g. barley), starch
Corn Syrup (glucose syrup)	Corn starch
High Fructose Corn Syrup (glucose/fructose)	Corn starch which is broken down into glucose and then changed (using enzymes) into fructose; glucose and fructose are then blended



Sugars play an important role in a healthy body and healthy body weight.

Sugars, like other carbohydrates, are a source of calories in the diet (4 calories per gram). However, sugars do not uniquely contribute to excess calories or weight gain. Studies have consistently shown that people who eat more sugars are less likely to be overweight or obese than those who eat less sugars². This association may be due to the fact that generally, diets higher in carbohydrates and sugars tend to be lower in fat; and fats are higher in calories (9 calories per gram). Keep in mind that weight gain is very complex and that decreasing or avoiding specific foods or nutrients in isolation will not prevent weight gain, or lead to weight loss. Rather than eliminate specific foods, it's better to match the amount of energy consumed from food with the amount of energy expended, which can be increased by physical activity.

Sugars do not displace important vitamins and minerals.

Vitamins and minerals are essential to good health as they play an important role in many processes in the body including bone health, eye sight, and the maintenance of healthy skin. Sugar is often described as "empty calories"; meaning that it contains calories, but does not contribute other nutrients. However, sugar is seldom eaten in isolation, but most often as an ingredient in foods that provide vitamins and minerals. In fact, most sugar is consumed in foods included in the Canada's Food Guide, such as fruits and vegetables, grain and milk products. Sugar adds sweetness and important functional properties to a variety of foods; it does not displace vitamins and minerals in the diet¹.



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Sugars are a good source of fuel for physical activity.

A nutritious, well-balanced diet is important for good health and energy. When it comes to the best choice for fuelling physical activity, carbohydrates play the starring role.

When carbohydrates are eaten as starches (in cereal, bread, pasta, etc.) or sugars (in fruit, milk, table sugar, honey, etc.) your body breaks them down into glucose. Glucose can then be used to provide immediate energy to the body's cells, particularly in the brain and muscles, or it can be stored for future use. This storage form of glucose, found in the liver and muscles, is called glycogen. Glycogen can be broken down into glucose any time the body needs energy or when blood glucose levels are low. For most of us, glycogen stores are enough to keep us going during exercise. But if your activities last longer than an hour, your glycogen stores will be low and you may need to turn to carbohydrate-rich foods or beverages to continue fueling your body³.

Sugars do not cause diabetes.

Diabetes is a complex disease related to a number of genetic and lifestyle factors. Scientists believe that lifestyle changes including weight control, healthy eating, and physical activity can help prevent or delay the onset of type 2 diabetes, the most common form of diabetes. Blood sugar (glucose) control is an essential part of diabetes management; however, the intake of sugar and other carbohydrates does not cause diabetes.

Current research shows that it is the amount of all carbohydrates (starches and sugars) eaten and the rate of their digestion that are the most important factors in blood glucose control⁴. According to the Canadian Diabetes Association, sugars can be included in a healthy diet as a part of a carefully prepared meal plan.

All carbohydrates, including sugars, should be spread evenly over the day, as part of slowly digested meals. If you are concerned about calories, it is important to check the nutrition facts panel on the food label. Remember, fat provides 9 calories per gram, more than twice the amount provided by carbohydrate (including sugars) and protein.

Sugars are not addictive.

The term "addiction" refers to behaviours associated with psychological or physical dependence and is typically applied to substances like alcohol or drugs. Psychological dependence takes place when a substance is required to feel comfortable or to cope with daily life. It has been suggested that certain foods, and in particular sugars, meet these criteria for addiction. Based on this definition however, all foods could be considered "addictive".

The second kind of addiction is a physical dependence, which involves developing a tolerance to a substance and negative physical withdrawal symptoms when substance use stops. Unlike drugs and alcohol, foods, such as sugars, do not produce the effects of tolerance and withdrawal that are typical of addictive substances⁵. Our preference for sweet tastes is with us from birth, but this preference should not be confused with addiction.

Sugars do not cause hyperactivity.

Scientific research has shown that sugar intake is not linked to hyperactivity in children or those with attention-deficit/hyperactivity disorder (ADHD). Researchers have suggested that occasional bouts of excess energy among healthy children may be linked to the excitement associated with special activities like parties, holiday celebrations and recess, but not to the sweets or other foods served at these events⁶.




For healthy teeth, brush and floss.

Sugars and starches in foods including bread, fruit, vegetables, milk, and breakfast cereals can promote tooth decay (dental caries). However, it is not the total amount of sugars and starches ingested that contributes to the formation of dental caries, but the frequency of carbohydrate consumption, how long the food is in the mouth, and whether it sticks to the teeth². The longer teeth are in contact with carbohydrates in these foods, the greater the risk of tooth decay. The good news is that the incidence of dental caries has been dramatically reduced over the last 20 years by the use of fluoridated water. In addition, brushing your teeth with fluoridated toothpaste after meals, and using dental floss at least once a day helps to prevent dental caries.

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This fact sheet, developed with the collaboration of Registered Dietitians and Nutrition Researchers, is published by the Canadian Sugar Institute. If you have any questions about sugar and its relation to nutrition and health, feel free to contact:

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