

clips on sugar

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

Different Sugars for Different Tastes

Sparkling crystals, feather-light powders, moist brown sugars or thick syrups: sugars come in many types with distinctive flavours and uses.

The process of extracting and purifying sugars contained in various plants (sugar cane, sugar beet, maple trees, etc.) allows for the production of a large variety of sugar products. The degree to which these sugars are purified will often determine their texture and taste. For example, raw sugar results from the first crystallization of sucrose contained in cane or beet juice. Made up of golden crystals, this sugar must first be purified before it meets government health standards.

Granulated sugar is the most common sugar, obtained from raw cane sugar or sugar beets. More than 99.8% pure sucrose, granulated sugar has a pure sweet flavour, making it the perfect standard against which the flavour of other sugars and sweeteners are compared.



Sucrose crystals of all sizes

Sugar manufacturers offer granulated sugars in various crystal sizes. Examples include:

- **table sugar** – fine all-purpose crystals, the most commonly used sugar;
- **extra fine, ultra fine, verifine, special fine, super fine, fruit sugar, and berry sugar** – very fine crystals that blend well with other ingredients in commercial powdered preparations and dissolve easily in cold beverages;
- **icing sugar** – very finely ground crystals with a touch of starch to prevent lumps, excellent for icings and fondants;
- **coarse sugar** – large sugar crystals, perfect for candies;
- **decorative, pearl or sanding sugar** – bright crystals, medium size, used to decorate pastries.

Brown sugars, golden or dark, are refined sugar crystals covered with a fine coat of syrup (molasses) selected for colour and flavour. Other brown sugars include: **demerara sugar**, a coarse golden brown sugar, and **muscovado sugar**, which may be darker in colour and more pronounced in flavour than demerara. Both are pure sugars covered with a heavier coat of molasses.

Turbinado sugar (often called “raw” sugar, sugar “in the raw” or “plantation” sugar) is a purified specialty sugar with a heavy molasses coating, giving it a golden colour and mild caramel taste.

Molasses and syrups

Sugars can also be sold in many liquid forms. Table molasses, or **fancy molasses**, is lighter in colour and milder in taste than **blackstrap molasses**, which is mostly used in animal food. **Table syrups**, varying in colour and taste, are in fact sucrose dissolved in water with added flavour and colour. **Liquid sucrose** (or liquid sugar), is granulated sugar dissolved in water, which is used by the food industry in beverages, jams, candy, ice cream, and cooked fondants (e.g., fudge). **Liquid invert sugar**, very useful to the soft drink industry, contains a mixture of pure sucrose and sucrose converted into its two component sugars – glucose and fructose.

A bouquet of sugars

Once boiled and concentrated, the sweet sap of maple trees produces **maple syrup**. **Maple sugar**, which is mainly sucrose, can be obtained by crystallizing the syrup, much the way granulated sugar is obtained by crystallizing syrup from the sugar cane or beet. **Corn syrup** is prepared by converting corn starch into a mixture of non-crystallized sugars. As for **honey**, it is literally produced (not harvested) by bees! Bees digest the sucrose-rich nectar from flowers using a gland located under their tongue. Honey is mainly a mixture of fructose and glucose. Flowers from which the nectar is gathered influence the colour, flavour, and consistency of honey.

CONSUMER SMARTS

How to store sugars: a handy guide

Granulated sugars have an excellent shelf life. Left unopened in their original package, they can be kept for many years in a cool, dry place. When exposed to moisture, **granulated sugar** tends to harden as it dries. It is usually quite easy to restore its granular state by simply stirring or sifting. **Icing sugar** contains a small amount of starch to prevent the tiny crystals from forming lumps. If, in spite of this, it becomes packed, again simply stir or sift.

Brown sugar crystals, on the other hand, are coated with a thin layer of molasses syrup. When this syrup begins to evaporate or becomes thicker in the cold, it tends to “cement” the crystals together, much to our dismay! Simply put a piece of bread or apple in the brown sugar jar for a few hours and the sugar will regain its original consistency. You can also heat hardened brown sugar for 20 seconds in the microwave just before using it in a recipe.

Liquid sugars need more care than granulated sugars because of their high water content. **Honey**, if pasteurized, will keep up to 18 months when stored at a cool temperature in its original, unopened container. The same holds true for **maple, corn, and table syrups, fruit or grain syrups, jams, and jellies**, although the time limit for these is one year. Once opened, all liquid sugars must be refrigerated in airtight jars. If syrups begin to crystallize, add a little water and stir vigorously to restore liquid consistency. Heat will also melt the crystals, but you must use the syrups right away.

NUTRITION FOCUS

Nutritive value of sugars

All sugars contain flavour and aroma producing compounds, natural colours of various shades, and trace amounts of vitamins and minerals. Their nutritive value is essentially the same, i.e., mostly energy from carbohydrate (see table).

Nutritive Value of 5ml/1tsp. of Different Sugars*

| Type of Sugar | Energy | Carbohydrates | Protein | Fat | Vitamins | Minerals |
|--------------------------|--------|---------------|---------|-----|----------|---------------------------------------|
| Granulated sugar | 16 Cal | 4.2 g | 0 g | 0 g | trace | trace |
| Brown sugar | 18 Cal | 4.5 g | 0 g | 0 g | trace | trace |
| Icing sugar | 10 Cal | 2.5 g | 0 g | 0 g | trace | trace |
| Fancy molasses | 21 Cal | 5.3 g | 0 g | 0 g | trace | trace |
| Blackstrap molasses | 16 Cal | 4.2 g | 0 g | 0 g | trace | source of iron, calcium and magnesium |
| Maple syrup | 18 Cal | 4.6 g | 0 g | 0 g | trace | trace |
| High Fructose Corn syrup | 18 Cal | 5.0 g | 0 g | 0 g | trace | trace |
| Honey | 22 Cal | 5.9 g | 0 g | 0 g | trace | trace |

*Values taken from the Canadian Nutrient File, 2007

NATURE’S WAY

A taste of sunshine

When there’s enough rain and the soil is productive, every sunny day is captured in an abundance of crops. You can even taste that sunshine in your veggies! Vegetables like corn and peas indeed taste sweeter when the growing season has been warm. All vegetables and fruits contain natural sugars as a result of photosynthesis, mainly in the form of sucrose and fructose. For maximum sweetness, vegetables should be harvested as soon as fully grown. If left on the vine too long, their membranes harden and their natural sugars turn to starch. It is no wonder that connoisseurs enjoy young, sun-filled vegetables so much! To recreate the sweet taste of “youth” in vegetables, many smart chefs add just a pinch of sugar to the cooking water.



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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MINI-QUIZ

WHAT’S FOR DINNER?

The taste and preference for sweetness is a common trait in all humans; it is, therefore, international! That’s why many dishes from around the world feature a touch of sugar. Can you match the following specialties with their country of origin?



1. Cantonese chicken (chicken fritters in a sweet sauce)
2. Potato and chili soup (spicy sweet potato soup)
3. *Gravlax* (raw salmon marinated in a salt-sweet mixture)
4. *Veal à la normande* (veal scallops served with a cream sauce and caramelized apple slices)
5. *Bobotie* (sweet casserole of fish and fruit)
6. Baked beans (beans oven-baked with brown sugar or molasses)
7. Greens *amaretti* (warm Swiss chard salad garnished with almond cookie crumbs)
8. *Apfelsuppe* (sweet apple and cream soup)
9. *Pastilla* (sweet puff pastry with a meat and almond filling)
10. *Kashmiri* lamb (sweetened lamb curry with fruit)

- a) France b) Italy c) Morocco d) Canada
e) Scandinavia f) India g) China
h) South Africa i) Brazil j) Austria

Check your answers in the box below.

1-g, 2-f, 3-e, 4-a, 5-h, 6-d, 7-b, 8-f, 9-c, 10-f

Answers to the quiz:



Nutrition Information Service