# THE ROLE OF SUGAR IN OUR FOOD & DIET



The home of Kiwi baking

### WHAT IS SUGAR?

Sugar is a carbohydrate. In fact, sugar is a term that includes all sweet carbohydrates, although the term is most often used to describe sucrose or table sugar.

## **CARBOHYDRATE TYPES**

Sugars vary in their molecular structure or 'shape' and can be broadly grouped into:

## Monosaccharides (Fructose, Glucose, Galactose)

Single sugar units that act as the building blocks for all other sugars and carbohydrates.

**Disaccharides (Lactose, Sucrose, Maltose)** Sugars that are made up of two single sugar units joined together.

Lactose - the main sugar in milk is made up of a galactose and glucose molecule.

Sucrose - table sugar, extracted from sugar cane is made up of a glucose and fructose molecule.

Polysaccharides (Starch, Cellulose, Glycogen) Consist of long chains of monosaccharides bonded together. Starch and glycogen serve as short-term energy stores in plants and animals, respectively.

#### Polyols

Alcohols of sugars. They are found naturally in some fruits and vegetables but are usually made commercially. One example is xylitol, which is added to sugar free chewing gums.



## WHERE CAN SUGAR BE FOUND?

Sugars including table sugar, are naturally made by plants; table sugar for instance, comes from sugar cane. Sugars also occur naturally in some foods, such as fruit and dairy products, and are also added to a wide variety of foods. Sugar can take many different forms, including white, raw or brown sugar, honey or corn syrup.

### **'NATURAL' AND 'ADDED' SUGARS** - WHAT'S THE DIFFERENCE?

The human body cannot tell the difference between sugars that occur naturally in foods and those which are added to manufactured foods and drinks. This means that the body digests both in the same way.



## HOW MUCH SUGAR ARE WE ADVISED TO EAT?

The New Zealand Eating and Activity Guidelines recommend choosing food and drinks with little or no added sugars. To maintain a healthy body weight, eat well by choosing nutritious foods and drinks to meet your energy needs and be physically active.

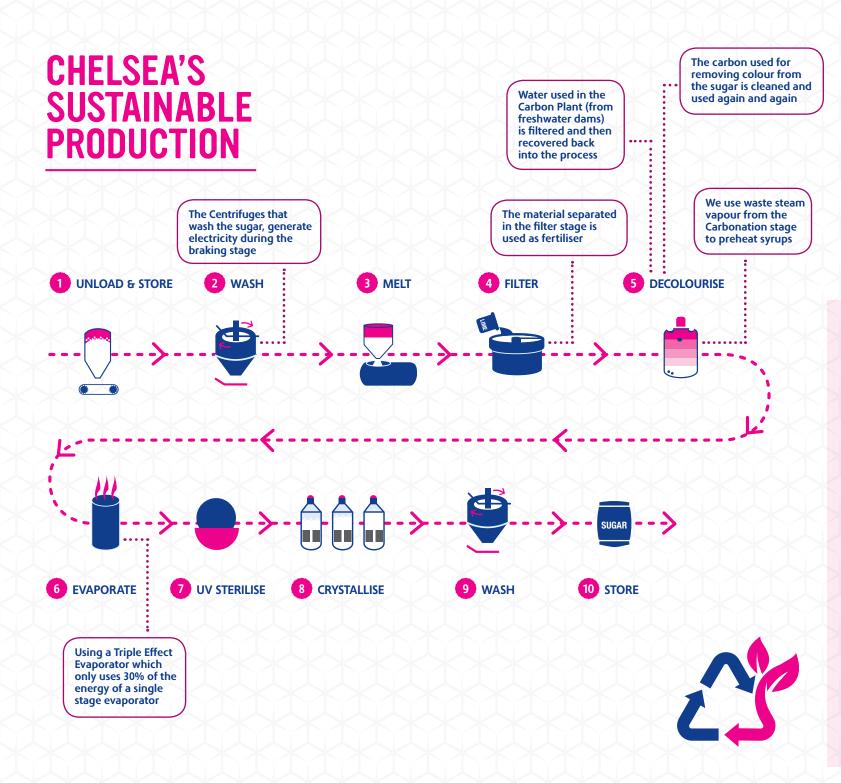
Sugar provides 17 kilojoules of energy per gram versus 37 kilojoules of energy per gram of fat. Sugar does not provide as much energy as fat, however, eating or drinking too much of anything can cause weight gain if not burned off during physical activity.



## WHY IS THERE SUGAR IN MY FOOD?

Sugar is a multitasking ingredient and as well as sweetening things, sugars make our food more tasty and enjoyable by providing flavour (e.g. sauces), texture (e.g. ice-cream and bread), colour (e.g golden crust on bread) and acting as a natural preservative. Sugar also helps with chemical processes such as fermenting foods (e.g. kombucha) and to help bread dough rise.

Adding sugar to nutritious foods and drinks may actually lead to a higher nutrient intake by making some foods more enjoyable to eat. For example, sugar makes flavoured yoghurt, which contains essential nutrients like protein and calcium, more enjoyable by balancing the sour or acidic flavour that results from fermentation of milk.





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## **CHELSEA'S SUSTAINABILITY**

Our company policy is to ensure we use 100% recyclable, reusable or bio-degradable packaging by 2022.

Cane sugar is a natural and sustainable food source.

#### WASTE:

Less than 1% in production of sugar goes to waste:

• Our by-product molasses is sent to farms as animal feed

#### ENERGY:

#### We save energy by:

- Using LED Lighting
- We use waste heat from the air compressors to preheat the air going into the boilers

Chelsea works with the Government on energy reducing projects.

#### **RECYCLE:**

- 100% of the water drawn to cool our machinery is used and returned to source
- We recycle more than 200 tonnes of metal, plastics, paper and cardboard a year