

## What is food processing?



**Food processing** is a general term that captures all processes that are applied to food ingredients to produce the food and drink products that are consumed each day. For example, simply heating and cooking ingredients is a form of food processing.

Commercially, the main reasons to process food is to destroy micro-organisms, which may cause food spoilage and disease, and to extend shelf life which is the time when a product is made and packaged to when it becomes unfit for consuming. These important processes ensure food safety and quality.

**Basically, a food is considered processed when its raw form has been changed.**

### How old is food processing?

Food has been processed in various forms for centuries. From the first hunters cooking raw meat over a fire; the first gatherers pulping and mixing fruits; or the first farming communities milling grain, food processing is our oldest innovation and a staple of our diet throughout history.

### Who benefits from food processing?

All consumers/people benefit from food processing as it provides a large range of choice of food and drinks, which are safe, sometimes out-of-season, or not locally grown.

The food processing industry supports jobs and communities, both rural and urban, across the supply chain.

#### Is the level of processing linked to lower nutritional value?

The level of processing a food undergoes is not linked to the nutritional value of the food. Many foods are processed to make them edible, palatable, safe and sometimes to make them more nutritious.

### What are some examples of food processing?

Food processing is used to describe a number of preparation and cooking techniques that are applied to food and can also include methods of packaging and preservation.

Food processing includes:

- » Baking
- » Blanching
- » Boiling
- » Canning
- » Chopping
- » Cooking/heat treatment
- » Curing
- » Drying/dehydrating
- » Extruding
- » Fermenting
- » Freezing
- » Mashing
- » Melting
- » Milling/grinding
- » Mixing
- » Pasteurising
- » Pickling
- » Smoking
- » Soaking/hydrating
- » Steaming
- » Washing



## Why are foods processed?



Foods are processed when cooking at home, in restaurants, and in food companies for many reasons:

**Access:** to make foods and drinks that can be easily transported and stored without spoiling, available to people/consumers (living in urban, rural, and remote communities) to enable a variety of safe and nutritious food when fresh produce might be limited. This is important when foods and drinks are transported over long distances or in extreme temperatures.

**Choice:** to provide people/consumers with a diverse range of food choices from local and overseas sources that may not otherwise be available in their local area or may be out of season.

**Convenience:** to provide food choices to people/consumers that can be quickly and easily prepared and consumed.

**Health:** to provide food choices suitable for certain health conditions, including allergies, infant nutrition, medical nutrition, and other nutritional reasons such as gluten free for people with coeliac disease.

**Preservation:** to extend the shelf-life of food products.

**Nutrition:**

- » to add nutrients to food and drinks (known as fortification) where these have been depleted or there is a community need, e.g. iodised salt, folic acid and thiamin in bread.
- » to reduce nutrients in foods and drinks (known as reformulation) to provide healthier choices e.g. sodium or sugar using ingredient tools and technologies, for consumers that require diets lower in these nutrients.
- » to improve the Health Star Rating (HSR) of foods to provide healthier choices.
- » to improve the bioavailability of nutrients (the amount of nutrients which is able to be absorbed by the gut and enter into the blood stream) in food e.g. canned tomatoes have higher levels of the phytochemical (antioxidant) lycopene than raw tomatoes, and canned legumes have lower levels of lectin and phytic acid which bind to minerals (e.g. iron, zinc, calcium) and reduce the absorption in the body than raw legumes.

**Safety:** to remove or destroy bacteria, yeasts and moulds to prevent spoilage and make food safe.

**Sustainability:** to help reduce food waste by providing people/consumers with the ability to choose the amount to be consumed and/or stored for later use, for example, frozen vegetables in a meal can be used and the remainder stored in the freezer for later use, thus avoiding fresh vegetables spoiling and/or not available for purchase.

**Taste:** to improve the taste of foods that would otherwise be largely inedible in their raw forms (e.g. coffee, cocoa beans or grains).

## What is the difference between processed food and ultra-processed food?

Processing methods used in foods can differ from basic and traditional types such as canning to more technical ones such as fractionation, hydrogenation, hydrolysis, extrusion, moulding and pre-frying.

The **NOVA classification system** assesses foods and drink based on the extent of processing. Some foods are classified as ultra-processed due to the type and number of processing methods and use of certain ingredients. Some of these foods and drinks are everyday or core foods, while others are sometimes or discretionary foods that can be high in added sugar, sodium and saturated fats and low in dietary fibre. Overeating these discretionary foods and drinks may lead to extra intake of energy/kilojoules, which may lead to weight gain over time.

