

1

• FERMENTS •

A **ferment** is a group of **living micro-organisms** that are responsible for fermentation.

Fermentation is a natural process.

Fermentation is a metabolic process that breaks down complex organic compounds (lactose, etc...) into simpler compounds (acids, gases, alcohol...), producing energy.

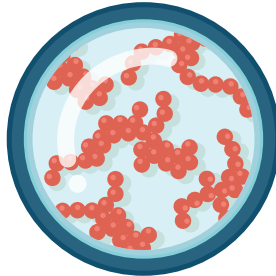


There are different
KINDS OF FERMENTS:

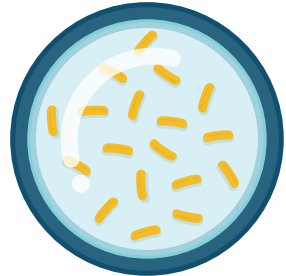
— **MOLDS** —
100 microns



— **YEASTS** —
10 microns



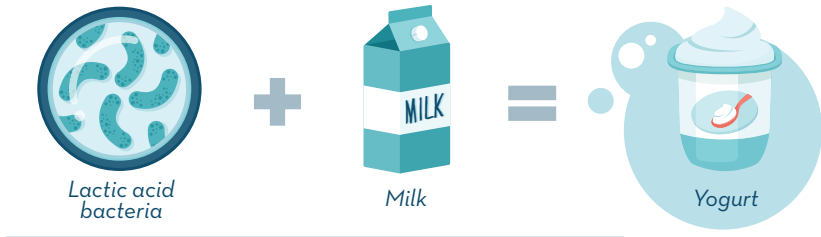
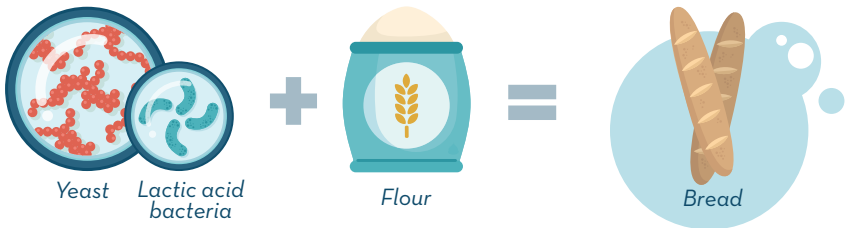
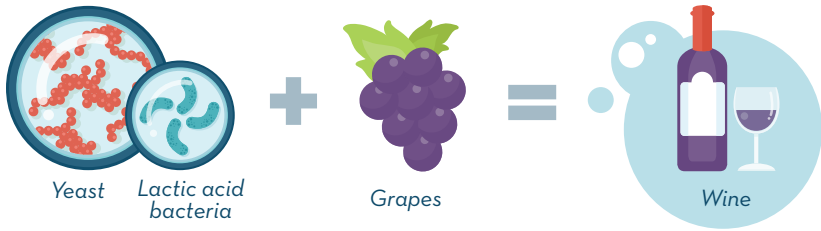
— **BACTERIA** —
1 micron



2

The diversity of • FERMENTED FOOD •

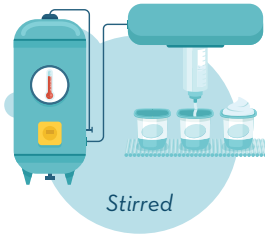
A fermented food is a food product transformed by ferments.



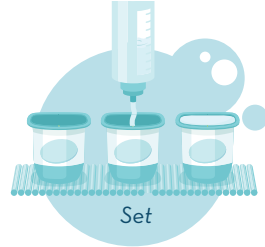
3

The diversity of • FERMENTED MILK •

Thanks to the different process and formulation, fermented milk can have different textures and taste.



Stirred: fermentation takes place in a fermentation tank. Before filling cups, the mixture is stirred to obtain a creamy texture.



Set: fermentation takes place directly in the final cups to obtain a gelified texture.



Greek: milk proteins are concentrated through a process of ultrafiltration/separation. This process requires two times more milk to produce a very thick texture



Kefir: this product is made with Kefir grains (a yeast/bacterial fermentation starter) to obtain an acidic and sparkling taste.



Fresh cheese: the concentration process is the same as for greek yogurts. And ferment cheese is added for the taste.



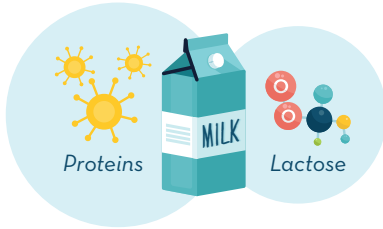
Drink: the process is the same as for stirred yogurts, with fewer proteins and smoothing to obtain a liquid.

4

Lactic

• FERMENTATION •

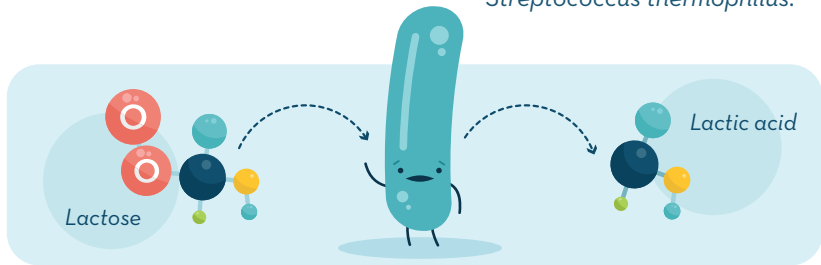
How do ferments manage to transform a liquid substance into a solid one?



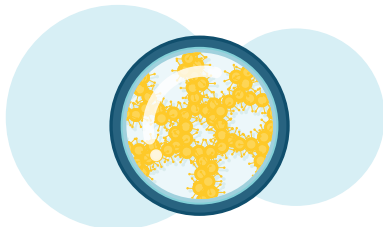
In milk, there are proteins and lactose (natural sugar).



*To make yogurt, milk is heated (pasteurized) and 2 lactic ferments are added: *Lactobacillus bulgaricus* and *Streptococcus thermophilus*.*



To multiply, these 2 bacteria feed on the lactose and secrete lactic acid: pH decreases.



This acidity makes the blocks of protein gradually bind together to form a strong network.



*This incredible transformation produces a new, smooth and creamy texture: **the yogurt.***

5

Goodness of Lactic • FERMENTATION •

SAFETY

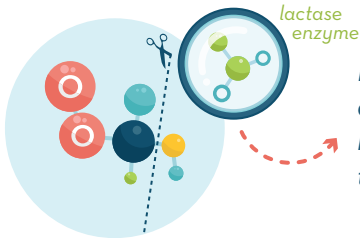
Lactic acid produced during fermentation limits the growth of contaminants that are responsible for the development of rot and mold: the yogurt can be stored **100% naturally!**

TEXTURES & AROMAS

Lactic acid produced during fermentation coagulates the milk protein, forming a certain texture. And there are as many different yogurt **aromas and textures** as there are **varieties of ferment!**

LACTOSE DIGESTION

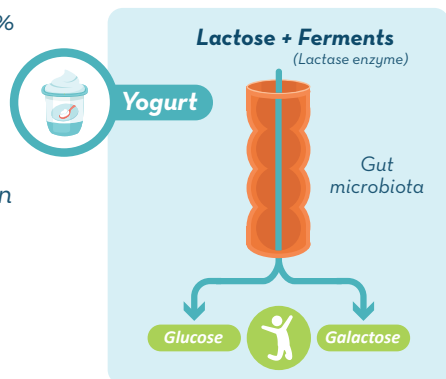
Yogurt helps with lactose digestion:



In the human intestine, lactose has to be broken down by an enzyme called **lactase** in order to be digested. The ferments in yogurt produce this enzyme!

So during fermentation, around 20–30% of the lactose is converted to its digestible components (glucose and galactose). Then, in the gut during digestion, this enzyme continues to be released by the ferments and carries on breaking down lactose.

So the good news is that consuming yogurt helps to digest lactose!

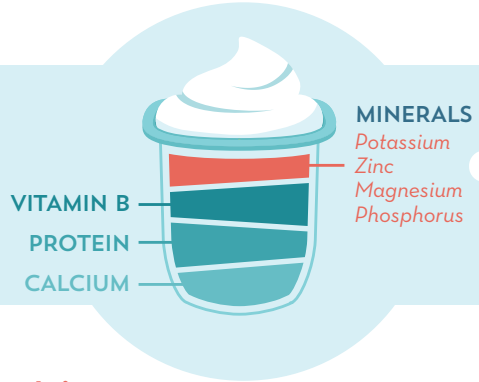


6

The nutrient goodness of • YOGURT •

Yogurt contains **good nutrients!**

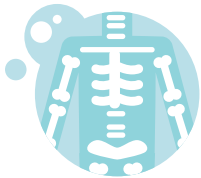
Thanks to milk, yogurt is a source of the **protein, calcium, vitamin B** and **minerals** we need.



Yogurt is a source of very good proteins:

Protein Quality = Digestibility & Essentiality

Yogurt is a source of calcium:



Yogurt and dairy products may represent the **best sources of calcium** due to their high content, high absorptive rate, and relatively low cost.

Calcium is known to **contribute to growth and maintenance of bones**. The European Food Safety Authority (EFSA) has approved the following claim on calcium and bone health: **“Calcium is needed for the maintenance of normal bones”**.

Calcium is also an **important nutrient for other functions** in the body like neurotransmission, muscle function, the work of digestive enzymes...



7

The health benefits of • YOGURT •

Yogurt is good! Great tasting, but also good for health!



Regular yogurt consumption is known to be
ASSOCIATED WITH BENEFITS FOR:

LACTOSE
DIGESTION

HEALTHIER
LIFESTYLE

BETTER CALCIUM
AND OTHER
NUTRIENT
INTAKES



BETTER
CARDIO-METABOLIC
PROFILE

REDUCTION
OF WEIGHT GAIN
OVER TIME

DECREASED RISK
OF TYPE 2 DIABETES

*Yogurt has many benefits
and there are plenty more to discover!*

• THE GUT •

Our Gut is much more than just a tube!
Containing more than 100,000 billion bacteria,
it plays a key role in human health.



MICROBIOTA

100,000 billion bacteria
 = 2 kg

EPITHELIAL CELLS

5 to 7 m
 200 m² (a tennis court!)
 to contain microbiota and
 control external exchanges



Colon

Small intestine

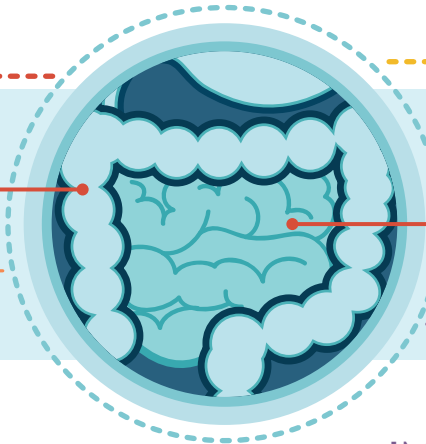


NEURONS

200 million
 70% of nervous
 connection in our gut

IMMUNE CELLS

70% of immune
 system in our gut



9

The

• MICROBIOTA •

Gut Microbiota: also previously called gut flora, the microbiota represents **all the micro-organisms** that live naturally **in the human intestine**, and with higher density in the colon.

These bacteria live together in mutual balance with their host and are necessary for the proper functioning of the gastrointestinal system and the entire body.

DIVERSITY

the microbiota contains about 400 different species of bacteria.

Good and bad bacteria (pathobiont) co-exist.

Relatively stable in human adults and unique to each individual.

Relatively resilient to disruption (diet, antibiotics...).

Produce metabolites such as vitamins and Short Chain Fatty Acids that are beneficial for host.

There are many SOURCES OF DISRUPTION

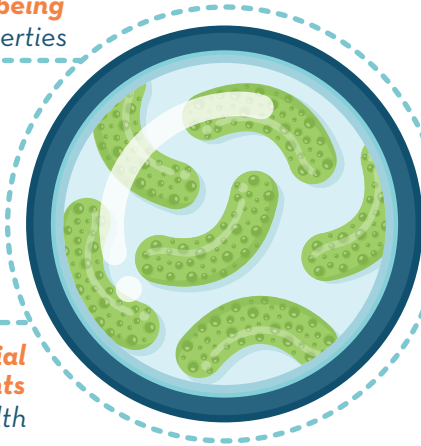
Antibiotics • Infections • Stress • Diseases
Lifestyle • Vitamin deficiencies • Diet

• PROBIOTICS •

In addition to ferments, we can also add other bacteria to the yogurt with the aim of delivering a targeted health benefit, beyond conventional nutritional effects. These bacteria are known as probiotics.

— THE HEALTH BENEFITS OF PROBIOTICS —

Intestinal well-being
Digestive properties



Strengthen the immune system

Produce beneficial micronutrients
for metabolic health

There are many benefits of fermented products containing probiotics.

11

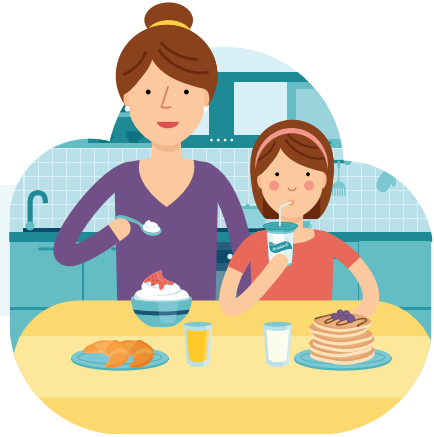
Various types of • YOGURT CONSUMPTION •

Yogurt is often part of national dietary guidelines, but **consumed differently** depending on cultural habits.



USA

As a snack



FRANCE

As a dessert
or during breakfast



NETHERLANDS

As a drink during meals

• SUGARS IN YOGURT •

The *origin* of sugars in the yogurt



All dairy products, plain yogurt, contain some sugar naturally present in milk: **lactose**.



Flavoured yogurts contain **added sugars** or alternatives.

How to identify DIFFERENT TYPES OF SUGARS?

