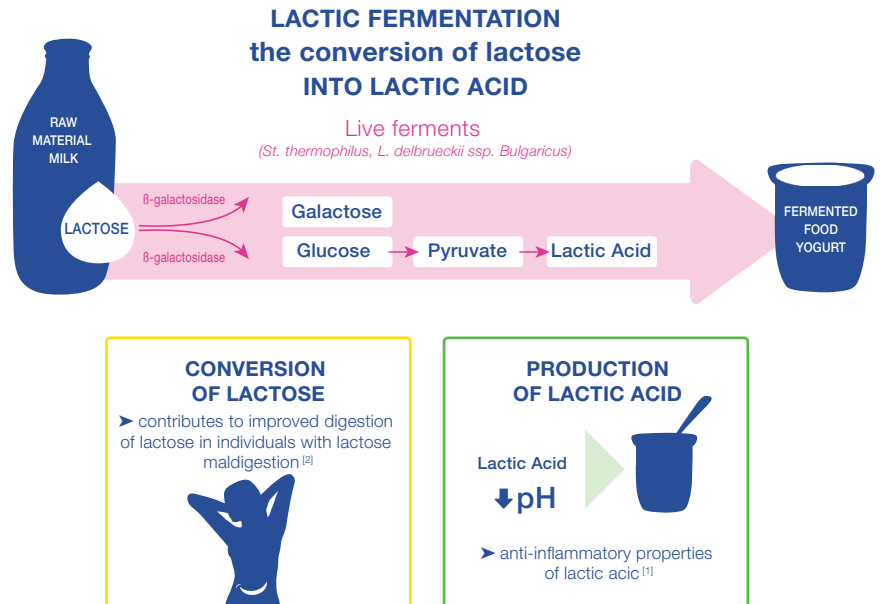


# Live Ferments & Fermentation of Milk into Yogurt

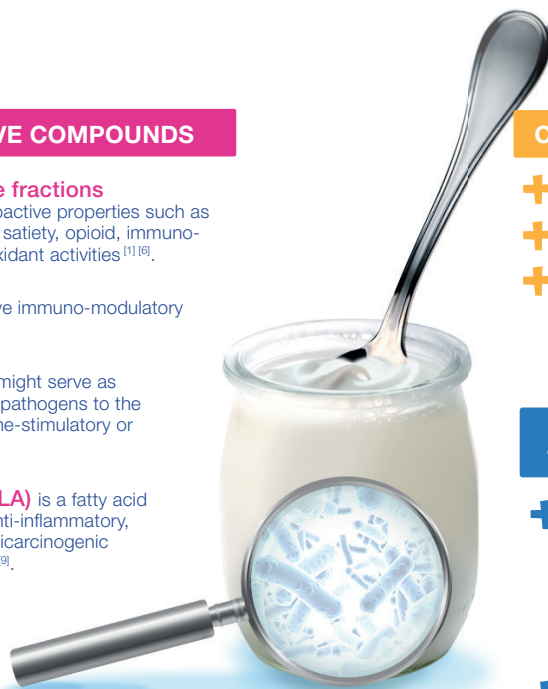
During fermentation, the enzymatic activity of the raw material and the metabolic activity of microorganisms can change the nutritive and bioactive properties of food matrices in a manner that has beneficial consequences for human health <sup>[1]</sup>

As they multiply, the bacteria produce compounds that change the flavor, texture and nutrients in the milk to give us what we know as yogurt.



## PRODUCTION OF BIOACTIVE COMPOUNDS

- ✦ **Several peptides or peptide fractions** have been investigated for their bioactive properties such as anti-hypertensive, anti-thrombotic, satiety, opioid, immuno-modulatory, osteogenic, and antioxidant activities <sup>[1][6]</sup>.
- ✦ **Free amino acids** can also have immuno-modulatory functions <sup>[1]</sup>.
- ✦ **Exopolysaccharides (EPS)** might serve as anti-oxidants, prevent adhesion of pathogens to the intestinal mucosa, or confer immune-stimulatory or hypocholesterolemic activities <sup>[1]</sup>.
- ✦ **Conjugated linoleic acid (CLA)** is a fatty acid with putative atheroprotective <sup>[1]</sup>, anti-inflammatory, immune-modulatory, antibiotic, anticarcinogenic and antiobesogenic properties <sup>[5][8][9]</sup>.



## CHANGES IN YOGURT MATRIX PROPERTIES

- ✦ **Taste:** typical acidic flavor of yogurt.
- ✦ **Texture:** EPS production and increase of viscosity <sup>[3][4]</sup>.
- ✦ **Improved shelf-life** <sup>[7]</sup>.

## DELIVERY OF LIVE FERMENTS TO THE GI TRACT

- ✦ **Microorganisms in the diet**  
The consumption of 'living' fermented foods potentially increases the numbers of microorganisms by up to 10 000-fold <sup>[10]</sup>.  
  
It could be equivalent to introducing new, albeit transient, bacteria into the indigenous, intestinal microbiota <sup>[1]</sup>.
- ✦ **Practical vehicle**  
The delivery of microorganisms to the GI tract is supported by the food matrix, which promotes the long-term survival of microorganisms during distribution and storage <sup>[1]</sup>.  
  
The consumption of "live yogurt cultures in yogurt contributes to improve digestion of lactose in individuals with lactose maldigestion" <sup>[2]</sup>.

## INCREASED CONCENTRATIONS OF VITAMINS

- ✦ **The B vitamins**, including folate, riboflavin, and B12, are synthesized from various non-vitamin precursors by certain bacteria <sup>[1]</sup>.