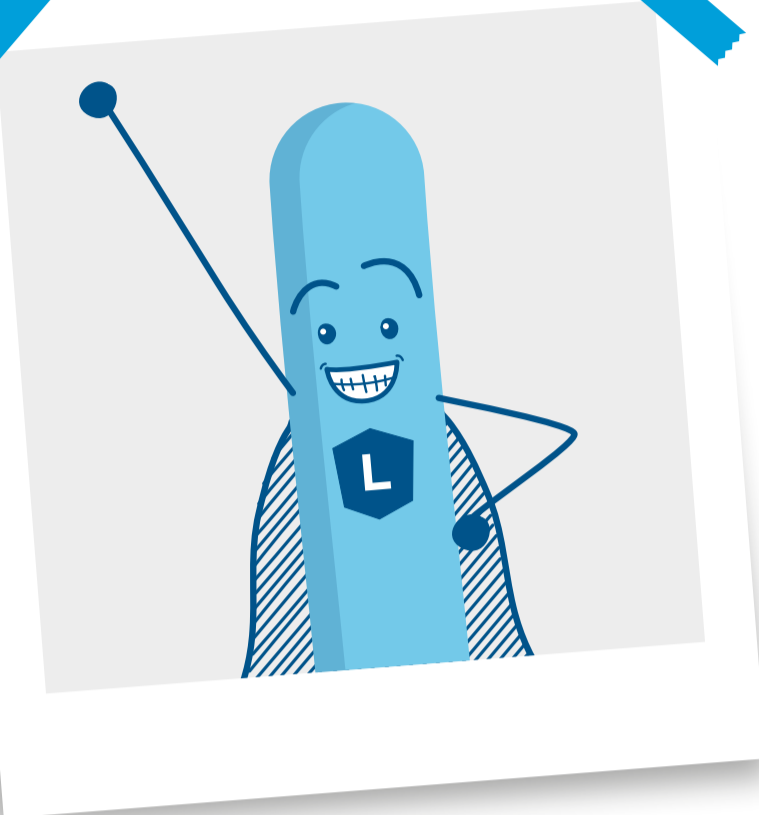


# Lactobacilli

## What are Lactobacilli?



Lactobacilli are the **health-promoting bacteria** also involved in fermentation process.

The genus *Lactobacillus* was first described in **1901** by the Dutch microbiologist **Martinus Beijerinck**, considered one of the founders of virology and environmental microbiology.

In **1905**, **Dr. Stamen Grigorov** identified the bacteria *Lactobacillus bulgaricus*, a strain at the origin of yogurt production thanks to its role in milk fermentation.



In **2020**, scientists **re-classified the *Lactobacillus* genus**<sup>(19)</sup> in order to bring more clarity and organisation into this probiotic group.

There now exists **25 genera (including 23 novel genera)** and certain genus names have changed such as:

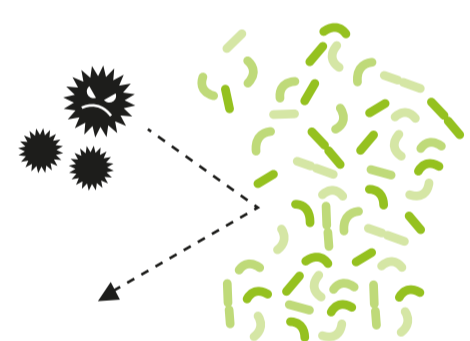
*Lactobacillus rhamnosus* → *Lactiseibacillus rhamnosus*  
*Lactobacillus plantarum* → *Lactiplantibacillus plantarum*

## What can Lactobacilli do for you?

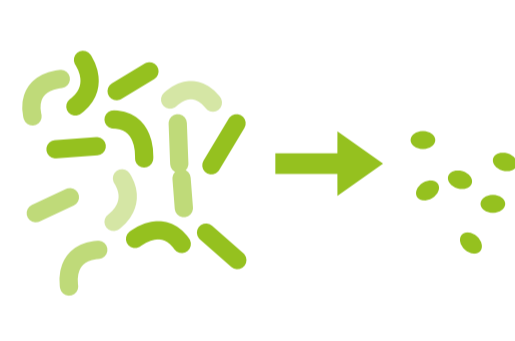
Specific strains of Lactobacilli have been shown to:



**Help maintain the health** of the gastrointestinal tract (GI) and immune system.<sup>(1)</sup>

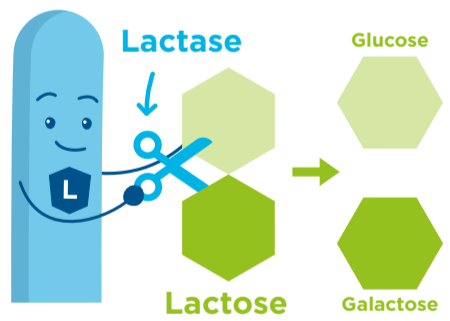


**Prevent bad bacteria** invading the body through the gut.<sup>(2)</sup>

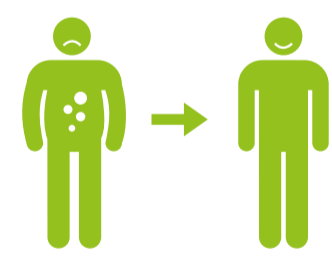


Inhibit the growth of bad bacteria by **producing anti-bacterial compounds called bacteriocins** and reducing gut pH.<sup>(1)(3)</sup>

Other strain-specific talents include:



**Aiding lactose breakdown:** live cultures in yogurt improve lactose digestion.<sup>(4)</sup>



**Helping** reduce gas, bloating, abdominal pain and stool shape in **people with IBS**.<sup>(5)</sup>



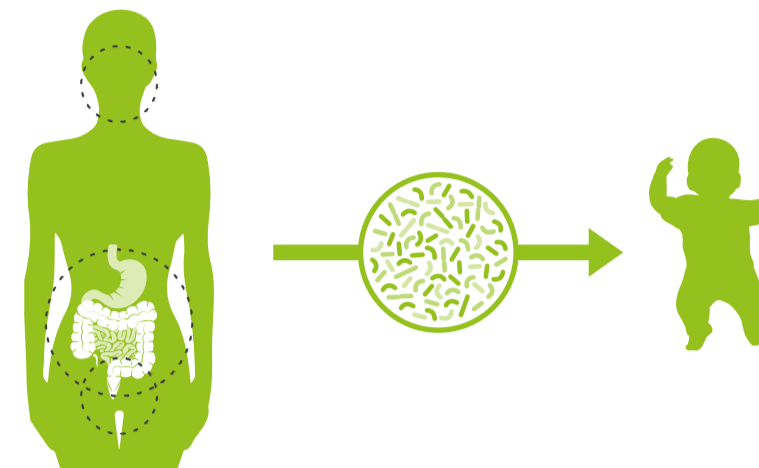
**Reducing** the occurrence and duration of **diarrhea** caused by antibiotics or illness.<sup>(6)(7)</sup>



**Digesting prebiotic fibers** to produce beneficial compounds, including lactate and short chain fatty acid acetate, which both help maintain a healthy gut barrier.<sup>(8)</sup>

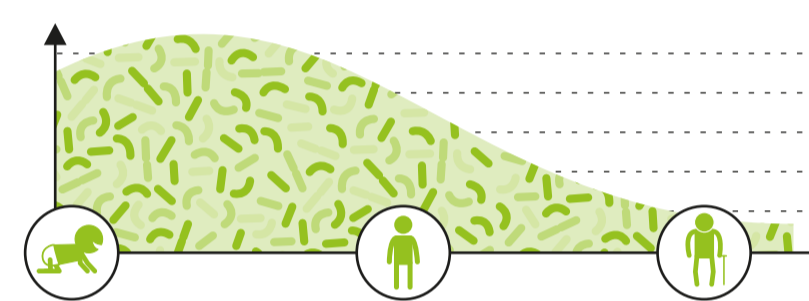
## Where can you find Lactobacilli?

Lactobacilli are primarily found in the **lower GI tract** (small intestine and colon). They are also found in other parts of the body, such as the **vagina, mouth** and **stomach**.



Lactobacilli transfers **from mom to baby both at birth and through breastfeeding**, helping to colonize the gut.<sup>(3)(9)</sup>

Lactobacilli populations **decrease as we age or become unwell**. Maintaining levels of these good bacteria helps ensure healthy aging.<sup>(10)</sup>



## How can you increase your Lactobacilli?

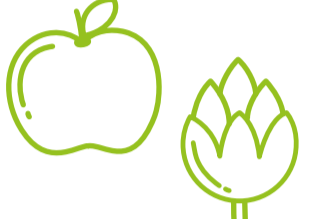
The species can be found in different food and is most often consumed via **fermented milk products or probiotic foods**, such as yogurt.



It is also possible to increase your Lactobacilli by consuming:



**Probiotic** supplementation.



More **prebiotic fibers**, such as the ones found in plant-based foods (fruit, vegetables, pulses).

**Wellness Tip:** Eat fermented foods containing live probiotic bacteria, such as yogurt or kefir, every day!



## There are many strains of Lactobacilli that are beneficial for our health. Not all Lactobacilli strains are the same:



### *L. rhamnosus GG*

- Reduces antibiotic-associated diarrhea.
- May reduce abdominal pain in children with IBS.<sup>(11)(12)</sup>



### *L. rhamnosus CNCM I-3690*

- Shown to have anti-inflammatory action in the gut.
- Can reduce permeability in an impaired gut barrier.<sup>(13)(14)</sup>



### *L. casei*

- Certain strains such as *L. casei* CNCM I-1518 (previously named *L. casei* DN 114 001) have been shown to reduce antibiotic-associated diarrhea and *C. difficile*-associated diarrhea.<sup>(7)(15)</sup>



### *L. plantarum 299v DSM 9843*

- Reduces abdominal pain associated with IBS.
- Improves stool consistency.<sup>(16)</sup>



### *L. reuteri DSM 17938*

- Can help reduce infant colic.<sup>(17)</sup>



### *L. delbrueckii subsp. bulgaricus*

- Helps break down lactose.
- Yogurt cultures help improve lactose maldigestion.<sup>(18)</sup>

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