

# Lactobacillus



Lactobacillus are great-positive and fermentative bacteria, resulting in the production of lactic acid as the main product. Species of this genus are largely discovered in the human digestive and urogenital tracts.

Currently, research data suggests that lactobacillus, which are used therapeutically or in cosmetics, are considered probiotics that have the ability to improve bioavailability and mineral absorption, reduce the risk of cardiovascular disease, and promote balanced metabolism and weight. In addition, it is also used in cosmetics because it has been shown to have beneficial effects on the skin, such as proper maintenance of the epithelial barrier or even benefits in the treatment of acne.



## Epithelial barrier

Multiple studies have confirmed that lactobacillus play an important role in maintaining the integrity of the epithelial barrier both in vitro and in vivo.

Several mechanisms of this function include modulation of the cytoskeleton, induction of mucus production, and phosphorylation of tight junction protein, resulting in enhancement of tight junction function and immune response, as well as prevention of epithelial cell apoptosis..

## Immunologic effect

The main immunological benefit of lactobacillus is the modulation of host immune responses through interaction with the mucosa of the intestinal tract. Lactobacilli have direct and indirect effects. In epithelial cells, as well as various immune cells, including macrophages, dendritic cells, and regulatory T cells, enhancing immune function.

## Oral health

Taking lactobacillus has been shown to be effective in preventing tooth decay by inhibiting the growth of harmful bacteria and can be helpful in maintaining dental and periodontal health.

Lactobacillus have also been used to treat halitosis by controlling bad oral odors, as well as for gingivitis and periodontitis.

## Application forms

For topical application, these microorganisms are often used in the form of lysates. It can be used even on irritated skin due to its anti-inflammatory effects.

It can also be consumed orally as a probiotic.

## Literature

1. Zhang, Z., Lv, J., Pan, L., & Zhang, Y. (2018). Roles and applications of probiotic Lactobacillus strains. Applied microbiology and biotechnology, 102(19), 8135-8143.
2. Turková, K., Mavrič, A., Narat, M., Rittich, B., Španová, A., Rogelj, I., & Matijašić, B. B. (2013). Evaluation of Lactobacillus strains for selected probiotic properties. Folia microbiologica, 58(4), 261-267.
3. Bowe, W. P., & Logan, A. C. (2011). Acne vulgaris, probiotics and the gut-brain-skin axis-back to the future?. Gut pathogens, 3(1), 1-11.

**Farma- Química Sur SL**  
C/ Carlo Goldoni, 32 Polígono Industrial  
Guadalhorce – Málaga 29004 España ·  
Teléfono: 952 240 988 · Fax: 952 242  
585 · e-Mail:  
farmaquimicasur@farmaquimicasur.com