

The use of probiotics nowadays

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Introduction

The intestinal microbiota plays an important role in both human health and disease, and the supplementation of the diet with probiotics and prebiotics may ensure an appropriate equilibrium of this microbiota. Probiotics are live microorganisms that, when administered in adequate amounts, confer a health benefit on the host.⁶

Results

Probiotics

Live microorganisms, administered in a adequate amounts, which confer benefits to the health of the host.^{5, 6}

Prebiotics

Simply put, they are food for beneficial microbes that live on or in us.^{5, 6}

Symbiotic

Products containing probiotics and associated prebiotics.^{5, 6}



Suppression of the number of viable cells through the production of compounds with antimicrobial activity, competition for nutrients and competition for adhesion sites

Stimulation of host immunity, by increasing the levels of antibodies and increasing the activity of macrophages. The spectrum of activity of probiotics can be divided into nutritional, physiological and antimicrobial effects.

Alteration of microbial metabolism by increasing or decreasing enzyme activity

Benefits of probiotics^{5, 6}

- ☐ Control of the intestinal microbiota
- ☐ Stabilization of the intestinal microbiota after the use of antibiotics
- ☐ Promotion of gastrointestinal resistance to colonization by pathogens
- ☐ Decrease in the population of pathogens through the production of acetic and lactic acids, bacteriocins and other antimicrobial compounds
- ☐ Promotion of lactose digestion in lactose intolerant individuals
- ☐ Stimulation of the immune system
- ☐ Relief from constipation
- ☐ Increased absorption of minerals and production of vitamins



Clinical applications^{5,6}



Decreases risk of colon cancer



Decreases arteriosclerosis



Decreases osteoporosis



Reduces total cholesterol levels



Modulation of allergic reaction



Improving women's urogenital health

Methods



Main criteria for the selection of probiotics⁶

- Genus to which the bacterium belongs, being of human origin;
- Stability against acid and bile;
- Ability to adhere to the intestinal mucosa and to colonize, at least temporarily, the human gastrointestinal tract;
- Ability to produce antimicrobial compounds;
- Be metabolically active in the intestine.



Sources^{6, 9}



Conclusion

A healthy and balanced intestinal microbiota results in a normal performance of the host's physiological functions, which will ensure improvement in the individual's quality of life. The effect of probiotic microorganisms and prebiotic ingredients can be enhanced, through their association, giving rise to symbiotic functional foods.^{6,9}

References

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