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Health & Nutrition Sciences



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Digesting the Definitions of Probiotics and Prebiotics

Breaking down the scientific definitions into more digestible terms to help you better understand these biotic buzzwords.

FOR FITNESS PROFESSIONALS

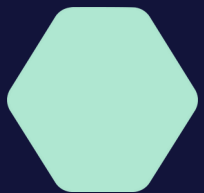
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PRObiotics

Scientific Definition

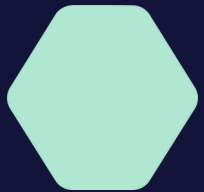
“**Live** microorganisms that, when administered in **adequate amounts**, confer a **health benefit** on the **host**.” ¹

Digested Definition



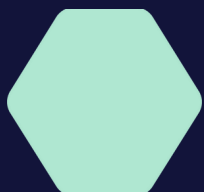
Live

Present & active (able to provide benefits) in the gut



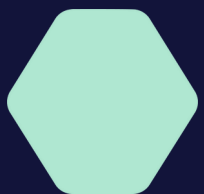
Adequate amounts

Probiotics are measured in Colony Forming Units (CFUs), which represent the number of bacteria able to divide. Each probiotic strain has its own CFU amount needed to work effectively.



Health benefit

Bacteria is only considered to be probiotic if there is scientific evidence to support a specific health benefit. Benefits depend on probiotic strain, but generally, probiotics help with food breakdown, healthy immune support, & reducing inflammation. ²



Host

This is you (humans)

TRANSLATION:

Probiotics are live, beneficial bacteria in our gut that contribute to a healthy digestive system by balancing the levels of harmful bacteria.

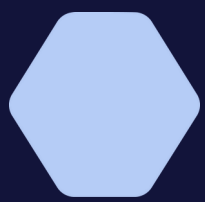


PREbiotics

Scientific Definition

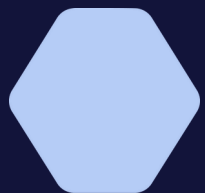
“A **substrate** that is **selectively utilized** by the **host microorganisms** **conferring a health benefit.**”²

Digested Definition



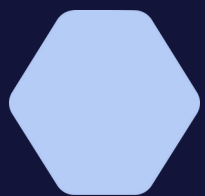
Substrate

Often, prebiotics are fibers (but not always) that the human body cannot digest.



Selectively utilized

Not all bacteria in your gut microbiota can use the prebiotic.



Host microorgaisms conferring a health benefit

Beneficial bacteria that already live in your colon make by-products from digesting the prebiotics that benefit our health.

TRANSLATION:

Prebiotics are non-digestible food components that serve as food for the beneficial bacteria in our gut to promote their growth and function.



Tip for Distinguishing PRObiotics from PREbiotics

P

R

Organism

B

Live, beneficial
bacteria

I

O

T

I

C

P

R

Energy

B

Food for
beneficial
bacteria

I

O

T

I

C





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References:

1. Food and Agricultural Organization of the United Nations and World Health Organization. Health & nutritional properties of probiotics in food including powder milk with live lactic acid bacteria. WHO, (2001).
2. Cleveland Clinic. Prebiotics vs. Probiotics: What's the Difference? Updated Mar 21, 2025. Accessed Apr 25, 2025. <https://health.clevelandclinic.org/prebiotics-vs-probiotics-whats-the-difference>
3. Gibson, G., Hutkins, R., Sanders, M. et al. Expert consensus document: The International Scientific Association for Probiotics and Prebiotics (ISAPP) consensus statement on the definition and scope of prebiotics. Nat Rev Gastroenterol Hepatol 14, 491–502 (2017). <https://doi.org/10.1038/nrgastro.2017.75>

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