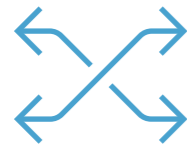


# Humiome® Synbiotics

## Stronger together



What's the value  
in combining  
different biotics?

### More than a simple probiotic-prebiotic mixture

Synbiotics are mixtures comprising of live microorganisms and substrate(s) selectively utilized by host microorganisms that confers a health benefit on the host.



#### Probiotics

##### What are probiotics?

Probiotics are live microorganisms that, when administered in adequate amounts, confer a health benefit on the host.

##### Some health benefits of probiotics<sup>1</sup>:

- 1 Helping the immune system to function normally.
- 2 Aiding in digestion and gastrointestinal homeostasis.
- 3 Keeping harmful microorganisms under control.
- 4 Improving mineral absorption.
- 5 Producing vitamins and helping with nutrient absorption.



#### Prebiotics

##### What are prebiotics?

Prebiotics are a substrate that is selectively utilized by host microorganisms conferring a health benefit.

##### Some health benefits of prebiotics<sup>1</sup>:

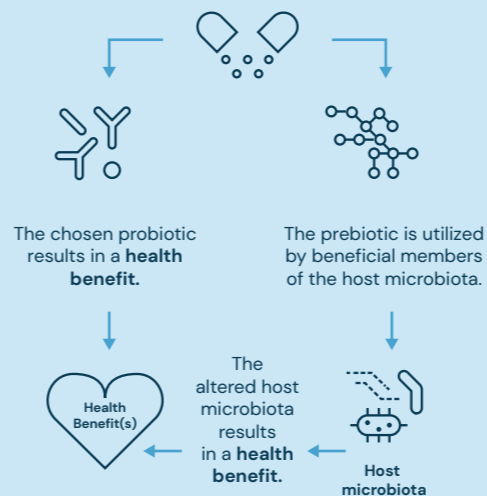
- 1 Altering the composition or function of gut microbiota to provide health benefits.
- 2 Improving digestive function.
- 3 Improving the bodies natural defences.
- 4 Improving mineral absorption.
- 5 Regulating appetite, energy balance and metabolism.

### Synbiotics may be formulated using two approaches:



#### Complementary Synbiotic

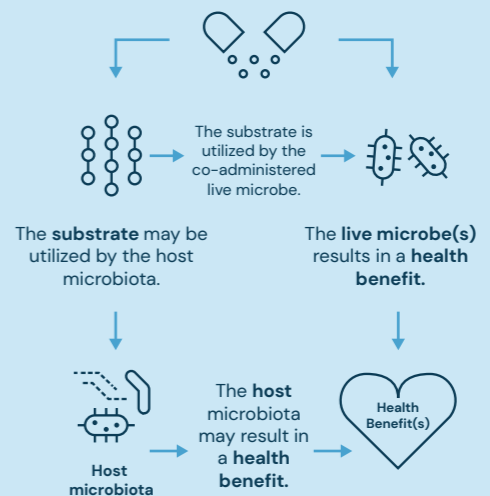
Mixture of probiotics and prebiotics. Each works independently to achieve one or more health benefits.



The probiotic and prebiotic components of a complementary synbiotic must meet the minimum criteria of these substances. The probiotic must have a demonstrated health benefit at the dose in the synbiotic mixture. The prebiotic criteria must have demonstrated health benefit in the same study showing selective utilization by the host microbiota, at the dose in the synbiotic mixture. Demonstration of a health benefit of the synbiotic mixture in the target host is further required, but demonstration of selective utilization of the substrate in the synbiotic mixture is not required.

#### Synergistic Synbiotic

Mixture of a selectively utilised substrate and a live microbe chosen for its ability to deliver a healthy effect. Components comprising synergistic synbiotics work together to bring about resulting health benefits(s).



For a synergistic synbiotic, demonstration of a health benefit and selective utilization of the substrate by the co-administered live microbe in the target host must be shown in the same study.



dsm-firmenich offers a variety of options for biotics and biotic combinations. **Please consult with regional representatives for more information.**

dsm-firmenich

<sup>1</sup>Swan, et al. Nat Rev Gastroenterol Hepatol (2020). <https://doi.org/10.1038/s41575-020-0344-2>

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