

Synbiotic was a term originally proposed in 1995 to refer to a combination of a probiotic and a prebiotic. In 2019, a group of scientists met to discuss specifics of this class of substances and to propose a new definition.

Synbiotics:

A mixture comprising live microorganisms and substrate(s) selectively utilized by host microorganisms* that confers a health benefit on the host.**

Initially, the idea of synbiotics was to add a probiotic and a prebiotic together. This approach would require that each component meet the criteria for either probiotic or prebiotic.

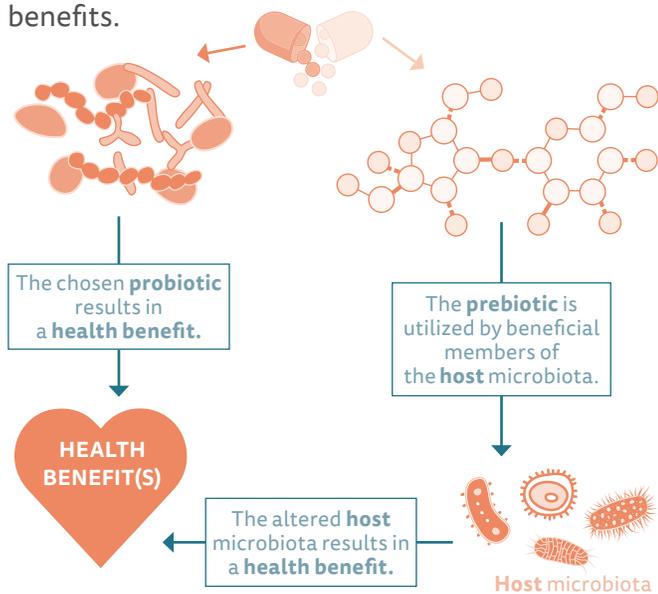


When defining synbiotics, scientists wanted to be sure that innovative products could use this designation. They realized that it would be possible to design a combination of a live microbe and a prebiotic-like substance that could work together – the substance feeding the live microbe – but neither on its own would necessarily meet the definitions of “probiotic” and “prebiotic” (dose and evidence of health benefit). **Hence the definition is not simply a probiotic + prebiotic.**

Synbiotics may be formulated using two approaches:

COMPLEMENTARY SYNBIOTIC

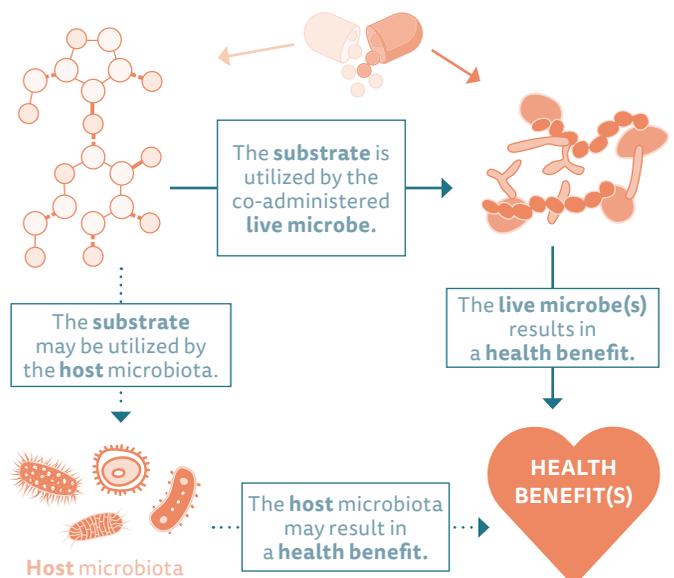
Mixture of probiotic(s) + prebiotics(s). Each works independently to achieve one or more health benefits.



The probiotic and prebiotic components of the complementary synbiotic must meet the minimum criteria of both a probiotic and prebiotic.

SYNERGISTIC SYNBIOTIC

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



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



A synbiotic may target the gut or non-gut microbial ecosystems in the body and may be formulated into products fitting an array of regulatory categories (such as foods, non-foods, cosmetics, drugs, or nutritional supplements).

Beneficial effect(s) of both complementary and synergistic synbiotics on health must be confirmed in the target host.

A study must demonstrate both selective utilization of the substrate and a health benefit.

* Within this definition, ‘host’ microorganisms refer to both resident microbes and externally applied (such as probiotics) microorganisms, either of which can be targets for the substrate contained in the synbiotic.

** Implied in the definition is that safety of the synbiotic for its intended use is established.

‘Synbiotic’ is not a synonym of synbiotic and is incorrect in this context.

