How Postbiotics Can Support Immunity

Prebiotics and probiotics are often in the spotlight for their potential health benefits. They support digestive, immune, and overall health by nourishing and enriching your gut microbiome. Postbiotics are another closely related member of the "biotics" family, which may provide further advantages. Here's a look at what they are and how postbiotics can benefit your immune system and overall health.

The Difference Between Pre-, Pro-, and Postbiotics

Probiotics are live, active bacteria that contribute to the colony of beneficial bacteria in your gut. As part of your microbiome, gut bacteria support your health in various ways, including keeping harmful bacteria in check and producing desirable metabolites such as vitamins, short-chain fatty acids, and other compounds that support good health.[1] Probiotic bacteria come from cultured or fermented foods such as yogurt, kefir, or fermented vegetables. Probiotic supplements also provide tested species and strains of bacteria that offer known health benefits.

Prebiotics are nutrients that feed probiotics. They are compounds primarily found in fiber-rich foods, such as onions, leeks, asparagus, and green bananas. You can also obtain prebiotics from a supplement. Humans can't digest prebiotics, but gut microbes break them down by fermenting them. Doing so helps stimulate the growth and activity of friendly bacteria. That's important because an active, diverse community of gut bacteria produces more beneficial metabolites.

Postbiotics are the bioactive metabolites formed by probiotics when they digest prebiotics. They are not living organisms but a byproduct of probiotic activity as bacteria ferment fiber. Postbiotics act on various metabolic pathways in the body to provide health benefits.[1] These metabolites are created naturally in your gut but can also come from a supplement. Postbiotics are not meant to replace probiotics or prebiotics — but adding a postbiotic supplement may provide additional benefits for gut and immune health.

Evidence on the Health Benefits of Postbiotics

Ther-Biotic Postbiotic® is powered by EpiCor®, a postbiotic derived from *Saccharomyces cerevisiae*, a naturally occurring yeast that is fermented and dried. The fermentation process creates unique metabolites that include proteins, amino acids, polyphenols (naturally occurring plant compounds with antioxidant and anti-inflammatory properties), vitamins, minerals, starches, beta-glucans (a type of soluble fiber), and other nutrients.

This postbiotic has antioxidant, inflammation, immune system, and gut microbiota-modulating properties. With 15 published studies (eight human clinical trials and seven pre-clinical studies), EpiCor® postbiotic has been shown to help the immune system fight colds, flu, and allergies and support digestive health.

- In two randomized controlled trials that tested its effect on cold and flu symptoms, people who took the postbiotic had significantly fewer cold and flu episodes and shorter duration of symptoms.[2,3]

- In a study on people with seasonal allergy symptoms, including runny nose and congestion, EpiCor® reduced the number of days and duration of allergy symptoms compared to a placebo.[4]

- Its inflammation-balancing properties promoted faster relief of skin irritation in a histamine-induced inflammatory response (skin allergy testing) study.[5]

- In a study on adults with functional constipation (no apparent gastrointestinal abnormalities), the EpiCor® group reported improved symptoms such as bloating, distension, stool consistency, and frequency. Additionally, this postbiotic altered the gut microbial composition, which may account for some of the benefits.[6]

Who Should Take a Postbiotic?

Postbiotics occur naturally in fermented foods such as yogurt, kefir, kombucha, sauerkraut, and fermented vegetables. Eating more of these foods should be the first step in boosting postbiotics directly. You can also help your gut bacteria produce more postbiotic compounds naturally by making diet and lifestyle changes that support your microbiome, including:

- Eating a high-fiber diet. Plant-based foods such as fruits, vegetables, beans/legumes, whole grains, nuts, and seeds provide prebiotics to nourish and stimulate your beneficial bacteria.

- Eliminating or minimizing highly processed, packaged, and fast food and alcohol. When consumed frequently or in large amounts, these can disrupt the microbial balance.

- Getting plenty of exercise. Regular physical activity promotes a healthy weight, improves sleep, and reduces stress. All of these are associated with a more diverse colony of gut bacteria.

- Improving your sleep quality. Inadequate sleep or disruptions in your circadian rhythm are associated with microbiome disturbances.

- Taking a probiotic or synbiotic supplement. A synbiotic contains certain beneficial species of bacteria paired with a synergistic prebiotic.

However, it is challenging for most people to do these things consistently — even more so if you have a digestive health condition that limits your ability to eat many high-fiber foods, or if work or travel affects your exercise or sleep schedule. A postbiotic supplement is an effective and safe way to deliver beneficial metabolites directly to your gut. It may be especially helpful for extra immune system support during cold, flu, or allergy season.

Studies indicate that postbiotic supplements are safe to use as recommended on the product label.[1] Children should follow their healthcare provider's advice for determining serving size. It is important to note that, unlike probiotics that multiply and expand in the gut, postbiotic supplements have a shorter-lasting effect.[1] Therefore, it's essential to take them consistently.

Gut health plays a vital role in immunity and overall health. Ideally, a gut and immune health protocol should include probiotics, prebiotics, and postbiotics for optimal support. Talk to your healthcare provider to see how postbiotics can fit into your immune and gut health support plan.

References

1. Rafique N, Jan SY, Dar AH, Dash KK, Sarkar A, Shams R, Pandey VK, Khan SA, Amin QA, Hussain SZ. Promising bioactivities of postbiotics: A comprehensive review. Journal of agriculture and Food Research. 2023 Jul 11:100708. https://www.sciencedirect.com/science/article/pii/S2666154323002156

2. Moyad MA, Robinson LE, Zawada ET Jr, et al. Effects of a modified yeast supplement on cold/flu symptoms. *Urol Nurs*. 2008;28(1):50-55. https://pubmed.ncbi.nlm.nih.gov/18335698/

3. Moyad MA, Robinson LE, Zawada ET, et al. Immunogenic yeast-based fermentate for cold/flu-like symptoms in nonvaccinated individuals. *J Altern Complement Med*. 2010;16(2):213-218. https://pubmed.ncbi.nlm.nih.gov/20180695/

4. Moyad MA, Robinson LE, Kittelsrud JM, Reeves SG, Weaver SE, Guzman AI, Bubak ME. Immunogenic yeast-based fermentation product reduces allergic rhinitis-induced nasal congestion: a randomized, double-blind, placebo-controlled trial. *Adv Ther*. 2009 Aug;26:795-804. https://pubmed.ncbi.nlm.nih.gov/19672568/

5. Jensen GS, Carter SG, Reeves SG, Robinson LE, Benson KF. Anti-inflammatory properties of a dried fermentate in vitro and in vivo. *J Med Food*. 2015;18(3):378-384.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4350453/

6. Pinheiro I, Robinson L, Verhelst A, et al. A yeast fermentate improves gastrointestinal discomfort and constipation by modulation of the gut microbiome: results from a randomized double-blind placebo-controlled pilot trial. *BMC Complement Altern Med*. 2017;17(1):441. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5584023/