

## **Potential consumption of probiotics, prebiotics and synbiotics to strengthen the immune system in times of pandemic**

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In recent years, the growing concern with health and the prevention of chronic non-communicable diseases has become the focus of interest as a research and technology public health problem. The consumption of probiotics, prebiotics and synbiotics modulates the immune system by reestablishing the gastrointestinal balance, which implies a better response of the immune system to combat COVID-19, in this framework changes in eating habits and lifestyle are providing a better quality of life and preventing diseases and strengthening the immune system. In this virtue, the concept of functional foods is born designed with components that affect physiological functions of the organism in a specific, positive and intense way. Within the range of functional foods are prebiotics, probiotics and synbiotics. The objective of this work is to analytically review the potentialities of the functional properties in the consumption of probiotics, prebiotics and synbiotics to strengthen the immune system for times of pandemic. A review of case studies, systematic reviews, original articles was carried out through the digital databases of PubMed, Science Direct, Springer, Elsevier and Google Scholar. Probiotics are live microorganisms that, when incorporated as a supplement in the diet, benefit the development of the microbial flora in the intestine. Prebiotics are non-digestible foods that promote the growth of bacteria in the colon. Lastly, synbiotics combine the association of prebiotics and probiotics in their formulations, which allows the benefits of this association to be taken advantage of more. The scientific case literature shows that people with an altered microbiota are more susceptible to COVID-19, therefore, probiotic supplementation improves the ability of the gastrointestinal microbiota to modulate immune activity. It has also been shown that patients who consume foods with a high content of prebiotics have a lower risk of complications from COVID-19 and a better post-illness recovery. Regular consumption of prebiotic, probiotic and synbiotic foods can be used in the treatment and prevention of pathological diseases and the regulation of the function of the body's defense system in times of pandemic.