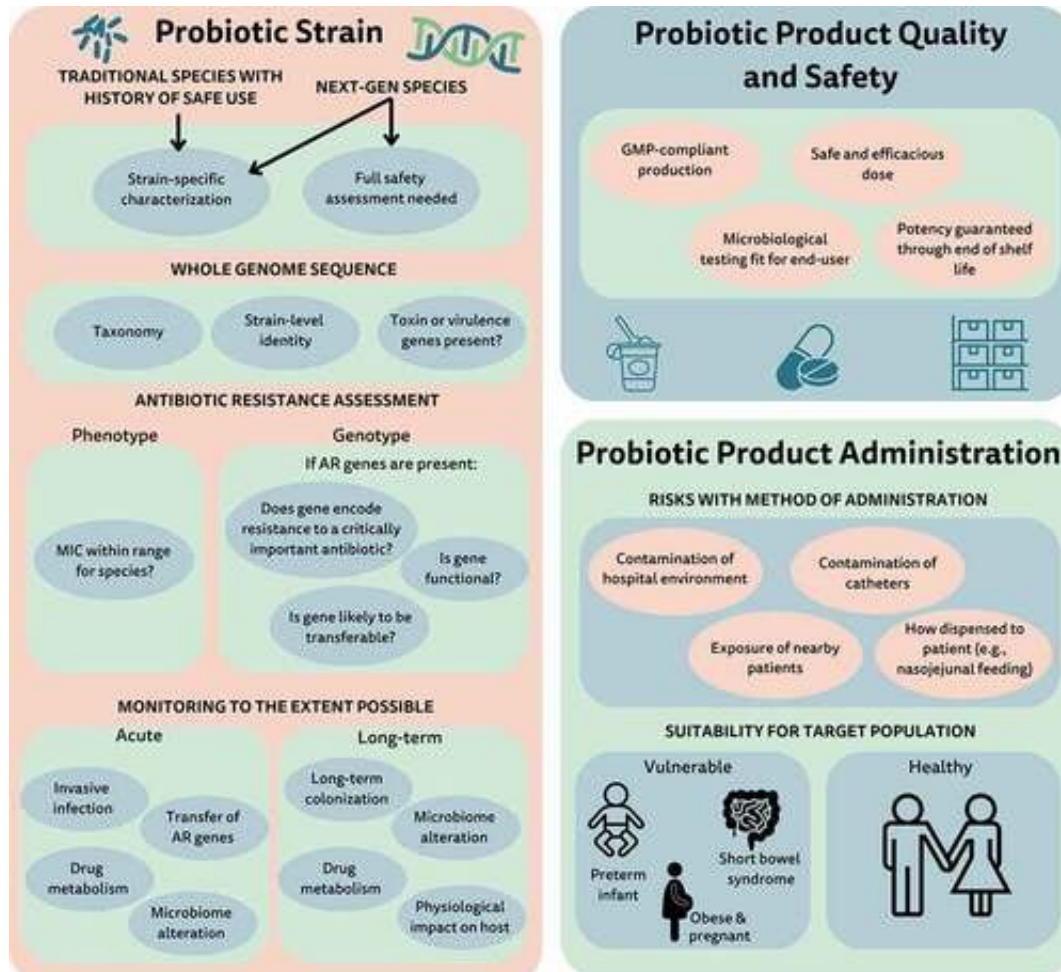


Experts examine the safety of probiotics

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Credit: *Gut Microbes* (2023). DOI: 10.1080/19490976.2023.2185034

Scientific evidence assessing the benefits and risks of probiotics continues to accumulate. With new types of probiotics being introduced on the market and health care professionals recommending probiotic use

in populations other than generally healthy individuals, continual attention to probiotic safety is warranted.

A new review, published in *Gut Microbes* by [experts](#) in [probiotic](#) science, considers whether emerging evidence raises any new safety concerns for probiotics. The review provides a comprehensive list of potential probiotic risks, along with recommendations for assessing whether a given probiotic product is safe. The 17 experts, specialists in microbiology, [food science](#), pediatrics, [family medicine](#) and related fields, were convened by the International Scientific Association for Probiotics and Prebiotics (ISAPP). The experts aimed to provide both scientists and health care professionals with guidance on how to assess probiotic safety—including for strains without a history of safe use.

Corresponding author Dr. Mary Ellen Sanders, Ph.D., says, "While traditional probiotics have a good safety record based on many published [clinical trials](#) and history of safe use, not all uses of probiotics are equally safe. This paper emphasizes that probiotics administered to at-risk populations must be fit-for-purpose, which in some cases requires additional safety scrutiny."

The experts acknowledged in this paper the increased reporting of microbiome data in probiotic studies. A few isolated studies have suggested that certain probiotic preparations may adversely affect the microbiome, through reduction of diversity or hindering microbiome recovery after antibiotics. This review concludes that such observations, while interesting mechanistically, lack evidence of clinical or health-related impact, and therefore do not pose actionable safety concerns.

The authors provide recommendations for addressing possible probiotic risks, including issues specific to probiotic strains, quality of probiotic manufacture, and risks inherent to practices of probiotic administration. Potential concerns about probiotic safety were considered from both

acute and long-term safety perspectives.

First author Prof. Daniel Merenstein, MD, says, "Probiotics have been proven to have efficacy in several indications. But as is the case with every intervention, there is always the potential for harm. Human trials need to do a better job of assessing harm and we hope this article provides current perspective on how to properly do this. Existing literature demonstrates that probiotics have a very good acute safety record. However, like almost all interventions we use in medicine, the long term impact is understudied."

The authors say for novel probiotics, analyzing the entire genetic makeup of a microorganism is a cornerstone for assessing its safety. Not only does this allow precise strain identification, but it can also illuminate any genes of concern, which may confer toxigenicity, pathogenicity or antibiotic resistance.

The review provides important guidance for health care professionals who currently recommend probiotics to their patients, and serves as a call for continued attention to probiotic safety in future scientific studies.

More information: Daniel Merenstein et al, Emerging issues in probiotic safety: 2023 perspectives, *Gut Microbes* (2023). [DOI: 10.1080/19490976.2023.2185034](https://doi.org/10.1080/19490976.2023.2185034)

Provided by International Scientific Association for Probiotics and Prebiotics

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