

## Probiotics, Health and Sports

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Probiotics as a live bacteria when ingested, confer mental health benefits through crosstalk of commensal gut bacteria (psychobiotics). Probiotics have shown promising results in improving digestive and immune health of the host. Probiotics have a significant role in the gut system and regulate the adaptation pertaining to exercise. Microbiota-gut-brain axis was revealed many years back and the complex bi-directional relationship between the gastrointestinal tract and the brain is still subjected to research. Studies have proven that gut microbiota can directly affect the psychophysiological conditions of the human. Probiotics may not improve sport performance directly but through their secondary health benefits. The presentation focuses on the effect of using probiotics to improve psychological outcomes and the practical issues of probiotics usage in among sports community pertaining to formulations, dose-response, strains, and timing of supplementation in relation to travel and competition. In summary, albeit the scientific evidence for an ergogenic effect of probiotics is lacking, probiotics may provide athletes with secondary health benefits that could positively affect athletic performance through psychological disorders (anxiety, stress and depression), enhanced recovery from fatigue, improved immune function, and maintenance of a healthy gastrointestinal tract function. More studies are warranted to further explore and establish the mechanism of action for probiotics to aid athletic performance, recovery and overall health.

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