

# ISOWHEY<sup>®</sup> SPORTS

OPTIMAL  
— PERFORMANCE —  
NUTRITION



➤ **HOW DO PROBIOTICS  
IMPROVE  
PERFORMANCE?**

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## **DID YOU KNOW THAT EXERCISING IN THE HEAT CAUSES DIGESTIVE STRESS? AS A RESULT, THE WALLS OF THE INTESTINES BECOME WEAKER, ALLOWING HARMFUL BACTERIA FROM THE DIGESTIVE TRACT TO LEAK INTO THE BLOODSTREAM.**

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As any athlete with increased energy demands knows, a high protein supplementary sports food is essential for muscle repair and growth. Research is now also pointing to the benefits of probiotic supplementation for digestive balance.

Good bacteria are absolutely essential for health. In fact, if we compare the number of cells in our body to the number of bacteria in our intestines, we are 90% bacteria and only 10% human.

These millions upon millions of tiny organisms carry out many functions. The good ones assist digestion, combat gas and bloating, keep the unfriendly bacteria in balance and regulate the immune system.

New research suggests athletes who exercise, train or compete in the heat may benefit from multistrain probiotics.

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### **EXERCISING IN THE HEAT**

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Impaired performance and fatigue in athletes have often been associated with “overtraining”. Now, compromised gastrointestinal function and increased load on the immune system can be added to the list.

Exercising in the heat causes digestive stress and, as a result, the walls of the gastrointestinal tract become weaker, allowing harmful bacteria from the digestive tract to leak into the bloodstream.

Once bacteria enters the bloodstream it can cause an immune system response which leads to reduced heat tolerance and impaired exercise performance.

The gastrointestinal system provides an important barrier against pathogens. During exercise, this barrier is often compromised. If probiotics can prevent exercise-induced gastrointestinal damage, the overall pathogen load to the athlete could be reduced.

For athletes, this is an amazing breakthrough as many experience colds and flu after intense exercise. Previously, this was thought to be due to suppression of the immune system, but now it would seem that a “leaky” gastrointestinal barrier which allows pathogens to enter the bloodstream is also involved.

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### **ESSENTIALS TO LOOK FOR IN YOUR SUPPLEMENTARY SPORTS FOOD:**

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- › High protein powder, featuring pure whey protein isolate (WPI)
- › Added benefits of vitamins and minerals
- › Branched chain amino acids (BCAAs) to support elevated nutritional needs
- › Probiotics for digestive balance
- › No added fructose

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**WE ARE 90% BACTERIA AND ONLY 10% HUMAN.**

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## RESEARCH SHOWS EXCITING RESULTS

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In a world-first trial, Australian researchers investigated the efficacy of a multistrain probiotic preparation in runners who exercised in 35°C temperature.

The double-blind, placebo-controlled, randomised crossover trial was conducted on 12 male runners, who were each supplemented with a multistrain probiotic or placebo (sucrose) for four weeks. Both before and after supplementation, the runners exercised on a treadmill at 80% of their ventilatory threshold in 35°C heat and 40% humidity. Following a three-week washout period, the runners switched to the other treatment.<sup>1</sup>

During each run, the volunteers were tested to ascertain the effect of the probiotic on gastrointestinal permeability, immune markers and systemic inflammation when exercising in high temperatures.

Results of the study demonstrated that probiotic supplementation reduced gastrointestinal permeability, inflammation and immune system load post-exercise in the heat.

These results are the first in Australia to show a direct link between the role of healthy gut flora in mediating the gastrointestinal tract's barrier function and response to inflammation during intense exercise.

### Reference

1. Shing CM, Peake JM, Briskey D, Lim F, Vitetta F. Response to exercise in the heat following a period of probiotics supplementation. School of Human Life Sciences, University of Tasmania, 2011 (presented at the European College of Sport Science 16th Annual Congress, Liverpool, UK, Jul 2011).

A close-up photograph of a person's arm splashing water, with the hand pointing upwards. The water is white and foamy, creating a dynamic and energetic background.

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