

HOWARU® PROTECT SPORT

Helps Physically Active Adults Stay Healthy for Optimal Sports Performance

Maintaining Immune Defenses in Active Sport Performers

Germs and viruses are everywhere, and can be the cause of respiratory infections. Over the past decade, evidence increasingly suggests that active sport performers can suffer from a higher incidence in infections, due to altered immune functions brought on by increased levels of exercise.

This exercise-induced temporary alteration of natural immune defenses is commonly referred to as the "open window." During this "open window" of decreased protection, viruses and bacteria may gain a foothold, increasing the risk of infection — particularly upper respiratory tract infections (URTI) which are associated with impaired sports performance.

Helping the Active Stay Healthy Around the Globe



Not all probiotics are the same. IFF scientists have developed HOWARU® Protect Sport, a unique proprietary* probiotic formulation designed to help physically active adults stay healthy for optimal sports performance.

Product Attributes

5B CFU

Lactobacillus acidophilus (HOWARU NCFM™)

5B CFU

Bifidobacterium lactis (HOWARU Bi-07™)

- Helps physically active adults stay healthy for optimal sports performance
- Contributes to a significant increase in weekly exercise
- Supports immune health



Immune Health

Proven Benefits of HOWARU® Protect Sport

In a study published in Clinical Nutrition, HOWARU® Protect Sport was shown to delay time to respiratory tract illness & increase physical activity in physically active adults. The study was conducted in Australia by the Griffith Health Institute at Griffith University and the Australian Institute of Sport. The study, "Probiotic supplementation for respiratory and gastrointestinal illness symptoms in healthy physically active individuals," West et al. Clinical Nutrition 2013, measured the effect of daily consumption of the probiotic combination *Bifidobacterium lactis* (HOWARU Bi-07™) and *Lactobacillus acidophilus* (HOWARU NCFM™) (known commercially as HOWARU® Protect Sport) on more than 300 healthy, physically active men and women over a five-month period. A significant delay in the onset of Upper Respiratory Tract illness was observed among the subjects. The most notable finding was a significantly higher level of physical activity compared to other subjects in the trial, who were taking HOWARU® Protect Sport.

Key Findings

- Delayed the onset of respiratory infections
- Promoted a greater level of physical activity
- Significantly extended exercise duration
- Significantly improved training intensity

References

West NP, Horn PL, Pyne DB, Gebski VJ, Lahtinen SJ, Fricker PA, Cripps AW. 2014. Probiotic supplementation for respiratory and
gastrointestinal illness symptoms in healthy physically active individuals. Clin Nutr.33(4):581-7. Results reported are from placebo
and NCFM & Bi-07 combination; Bl-04 results not shown.

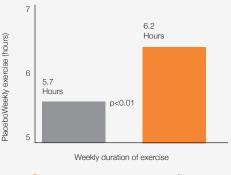
HOWARU® Protect Sport: Bi-07® and NCFM® delays time to experience URTI illness episodes



Time before the onset of symptoms associated withan Upper Respiratory Tract Illness (URTI)

- Bifidobacterium lactis (HOWARU Bi-07[™]) & Lactobacillus acidophilus (HOWARU NCFM[™])
- Placebo

HOWARU® Protect Sport: Bi-07® and NCFM® increases duration of exercise



- Bifidobacterium lactis (HOWARU Bi-07[™]) & Lactobacillus acidophilus (HOWARU NCFM[™])
- Placebo

Figures adapted from West et al. 2014

^{*} Probiotics Patent family: WO 04/052462

OUR HOWARU® PROMISE

As a trusted global leader in probiotic solutions, we offer the broadest range of robust, clinically-studied strains. You can be confident that our extensive portfolio, strong consumer insights, and unmatched global support and services make us your ideal partner in probiotic innovation.

Our Strains Area:

- Backed by Science
- Identified with complete genome. Every strain has been sequenced and fully assembled
- Tested for virulence and toxigenic properties and the absence of antibiotic resistance transfer potential
- Tested for toxicity to confirm safety for human consumption
- Formulated and evaluated to ensure viability through end of shelf life
- Generally Recognized as Safe (GRAS) or FDA notified without objection as a New Dietary Ingredient
- Manufactured in the USA under FDA Good Manufacturing Practices

Exceptional Quality

High Performance

High Stability

High Functionality

Our Areas of Expertise

Women

Weight Management

Immune

Oral

Digestive

Brain





© 2021 by International Flavors & Fragrances Inc. IFF is a Registered Trademark. The information contained herein is based on data known to IFF or its affiliates at the time of preparation of the information and believed by them to be reliable. This is business-to-business information intended for food, beverage and supplement producers, and is not intended for the final consumer of a finished food, beverage or supplement product. The information is provided "as is" and its use is at the recipient's sole discretion and risk. It is the recipient's sole responsibility to determine the suitability and legality of its proposed use of IFF products for its specific purposes. Information and statements herein shall not be construed as licenses to practice, or recommendations to infringe, any patents or other intellectual property rights of IFF or others. IFF HEREBY EXPRESSLY DISCLAIMS (I) ANY AND ALL LIABILITY IN CONNECTION WITH SUCH INFORMATION, INCLUDING, BUT NOT LIMITED TO, ANY LIABILITY RELATING TO THE ACCURACY, COMPLETENESS, OR USEFULNESS OF SUCH INFORMATION, AND (III) ANY AND ALL EXPRESSENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, OR ANY PART THEREOF, INCLUDING ALL REPRESENTATIONS AND WARRANTIES OF TITLE, NONINFRINGEMENT OF COPYRIGHT OR PATENT RIGHTS OF OTHERS, MERCHANTABILITY, FITNESS OR SUITABILITY FOR ANY PURPOSE, AND WARRANTIES ARISING BY LAW, STATUTE, USAGE OF TRADE OR COURSE OF DEALING.