

# + IMMUNE



## CLINICAL APPLICATIONS

- *Primes and Mobilizes Key Immune Cells*
- *Protects Against Immune Challenges Resulting From Ongoing Stress*
- *Increases Immune Vitality and Mental Clarity*
- *Protects Against Exercise-Induced Stress*

## IMMUNE HEALTH

+ Immune is formulated with Wellmune WGP®, the most well-researched, single beta-glucan, proven in human clinical trials to prepare and protect the immune system from repeated and ongoing stressors. Wellmune® WGP is a highly purified, yeast-free beta glucan extract derived from *Saccharomyces cerevisiae*. It is standardized to contain 75% pure beta-glucan and is considered the most effective single nutrient to naturally prime immune cells.

### Overview

A strong immune system is integral to overall health and well-being. Maintaining a strong immune system can often be a challenge in today's world- high stress levels, poor diet, lack of sleep and environmental pollutants can slow down immune response. WholeMune's primary active ingredient is Wellmune WGP®- a natural beta 1,3/1,6 glucan derived from the cell wall of a proprietary strain of baker's yeast (*Saccharomyces cerevisiae*). Once swallowed, immune cells in the gastrointestinal tract take up Wellmune WGP® and transport it to immune organs throughout the body. Specific immune cells called macrophages digest Wellmune WGP® into smaller fragments and slowly release them over a number of days. The fragments then bind to neutrophils (white blood cells), via complement receptor 3 (CR3). Neutrophils are the most abundant immune cells in the body, accounting for 60-70% of all immune cells. The activation of neutrophils by Wellmune WGP® fragments allows these cells to move faster throughout the body, resulting in a significant boost in immune defense.

### Wellmune WGP® †

Beta-glucan has been recognized for its support of immune system activity for centuries<sup>[1]</sup> and has become the subject

of over 800 scientific studies. Wellmune WGP® has been shown in clinical studies to have a potent effect on immune responsiveness and to defend the system from the effects of recurring stress. Numerous studies have shown beta-glucan also promotes production of antioxidant enzymes and supports immune function against microbes.<sup>[2]</sup> In a study of 54 firefighters given Wellmune WGP® or placebo, those who took Wellmune WGP® experienced better physical health and nearly 25% reported fewer upper respiratory challenges. A 2013 study on healthy women given 250 mg Wellmune WGP® or placebo also found 10% fewer upper respiratory challenges compared to placebo; better well-being and mental and physical energy levels were also reported.<sup>[3]</sup> In another randomized, placebo-controlled, double-blind study on the effects of four weeks of 250 mg Wellmune WGP® or 250 mg per day of rice flour placebo on the physical and psychological health of those with seasonal discomfort symptoms, Wellmune WGP® improved symptoms, overall physical health and emotional well-being, compared to placebo.<sup>[4]</sup> Further research on medical students found a 22% reduction in the total number of days with upper respiratory symptoms in Wellmune WGP® group versus placebo. Finally, a 28-day lifestyle study found that participants taking Wellmune WGP® reported a 34% improvement in health scores after four weeks compared with the control group as well as increased vigor, and lower fatigue, confusion and tension. Wellmune WGP® has also been found to provide post exercise protection, to maintain white cell concentrations/monocytes, improve mucosal immunity, enhance immune responses to a perceived challenge, and improved salivary IgA post exercise.<sup>[5]</sup>

† These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

## Directions

1 capsule per day or as recommended by your health care professional.

## Does Not Contain

Gluten, corn, yeast, artificial colors and flavors.

## Cautions

If you are pregnant or nursing, consult with your health care practitioner before taking this product.

## Supplement Facts<sup>v1</sup>

Serving Size 1 Capsule  
Servings Per Container 30

1 capsule contains	Amount Per Serving	% Daily Value
Bakers Yeast Extract (Wellmune WGP®)(Standardized to contain 75% beta-glucan)	250 mg	*
Larch Arabinogalactan (Fiber Aid™)	85 mg	*

\* Daily Value not established

ID# 499030 30 Capsules

## References

1. Tian J, Ma J, Wang S, et al. Increased expression of mGITRL on D2SC/1 cells by particulate  $\beta$ -glucan impairs the suppressive effect of CD4(+)CD25(+) regulatory T cells and enhances the effector T cell proliferation. *Cell Immunol* 2011; 270(2):183-7.
2. Senoglu N, Yuzbasioglu MF, Aral M, et al. Protective effects of N-acetylcysteine and beta-glucan pretreatment on oxidative stress in cecal ligation and puncture model of sepsis. *J Invest Surg* 2008; 21(5):237-43.
3. Talbott S, Talbott J. Beta 1,3/1,6 glucan decreases upper respiratory tract infection symptoms and improves psychological well-being in moderate to highly-stressed subjects. *Agro FOOD Industry hi-tech* 2010;21(1):21-24.
4. Talbott S, Talbott J. Effect of BETA 1, 3/1, 6 GLUCAN on upper respiratory tract infection symptoms and mood state in marathon athletes. *J Sports Sci Med.* 2009;8: 509-515.
5. K. C. Carpenter, W. L. Breslin, T. Davidson, A. Adams and B. K. McFarlin. Baker's yeast  $\beta$ -glucan supplementation increases monocytes and cytokines post-exercise: implications for infection risk? 21 May 2012 by Wellmune in Clinical Research, Research. *British Journal of Nutrition*, FirstView Article : pp 1-9.