

# WHOLEMUNE



## RECOMMENDED USE

- Source of yeast beta-glucans with immunomodulating properties

## IMMUNE HEALTH

WholeMune is formulated with Wellmune®, the most well-researched, yeast beta-glucan ingredient available. Yeast beta-glucans are insoluble polysaccharides with immunomodulating properties, particularly in the activation of digestive tract 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, poor diet, lack of sleep and environmental pollutants can slow down immune response. Although the mechanism of action of yeast beta-glucans is not well-understood, a study by McFarlin et al suspects that yeast beta-glucans activate the immune system by increasing T-cell activation.<sup>1</sup> Once swallowed, immune cells in the gastrointestinal tract take up Wellmune® and transport it to immune organs throughout the body. Specific immune cells called macrophages digest Wellmune® 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.

### Wellmune®

Insoluble beta-glucan has been recognized for its immune modulation properties for centuries<sup>2</sup> and has become the subject of over 800 human clinical studies.<sup>3,4,5</sup>

### Recommended Dose

**Adults:** Take 1 capsule per day.

### Medicinal Ingredients (per capsule)

Baker's yeast (*Saccharomyces cerevisiae*, Yeast cell wall) (Wellmune®) ..... 250 mg (75% beta-1,3/1,6-Glucan)

### Non-Medicinal Ingredients

Hypromellose, Arabinogalactan (Fiber Aid®), Microcrystalline cellulose, Stearic acid, Magnesium stearate, Silicon dioxide.

To be sure this product is right for you always read and follow the label.

## References

1. McFarlin BK, et al. Oral supplementation with baker's yeast beta glucan is associated with altered monocytes, T cells and cytokines following a bout of strenuous exercise. *Frontiers in Physiology* 2017; <https://doi.org/10.3389/fphys.2017.00786>.
2. 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.
3. 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.
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.