

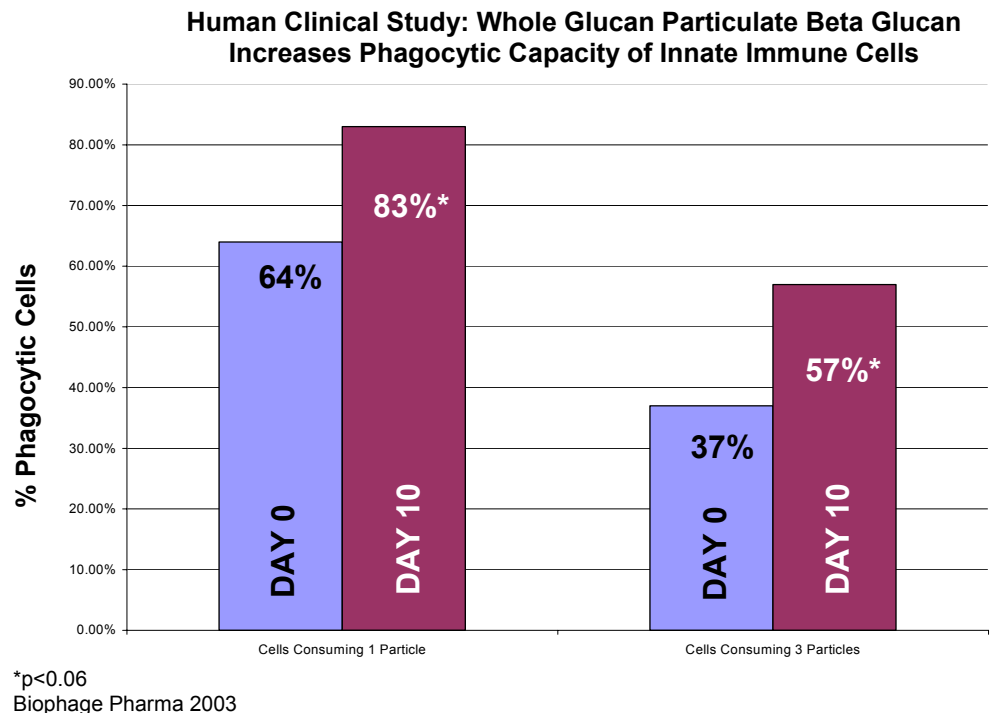
Immune Boosting

New Research Supports Ability of Beta 1,3-D Glucan to Safely Enhance Human Immune Function

Beta Immune's Beta 1,3-D whole glucan particulate is the Only yeast Beta 1,3/1,6 glucan supported by a Human Phase I Clinical Study.

An apple a day may keep the doctor away, but results of a recent human clinical study suggest far better results may be obtained with a dietary supplement and functional food ingredient called Beta Glucan.

In an recent independent study conducted by a Canadian biopharmaceutical company, normal human volunteers were dosed for 10 consecutive days with one 250 milligram-capsule containing Whole Glucan Particulate Beta 1,3-D Glucan. The subjects were monitored for 30 days.



The Whole Glucan Particulate Beta 1,3-D Glucan, made available from beta-glucan-info.com was safe and well tolerated, as evidenced by the lack of significant changes in key blood and liver enzymes. It also significantly increased phagocytic capacity-the ability of the innate immune cells to eat and destroy foreign intruders.

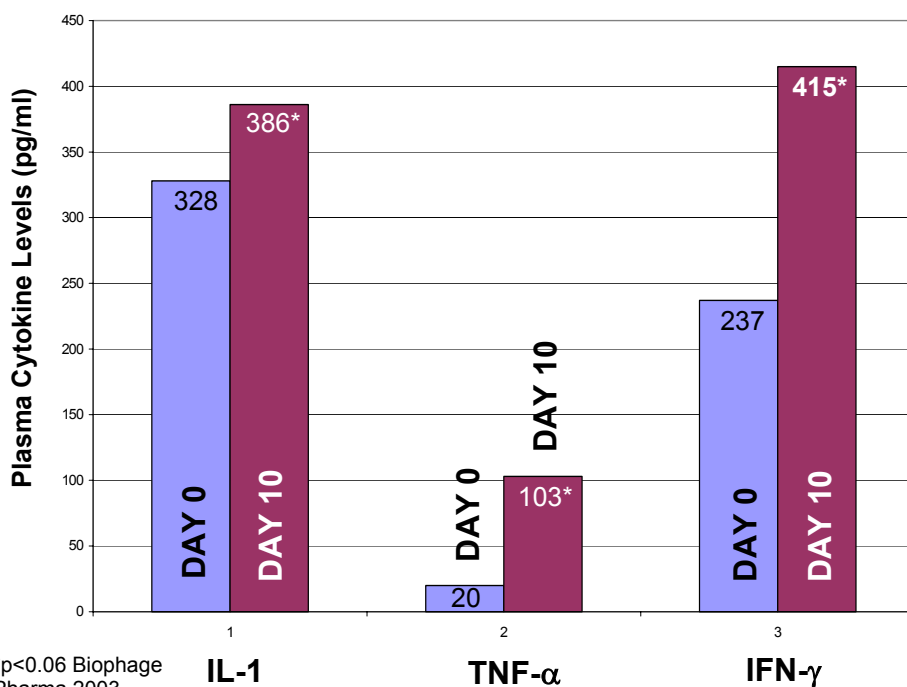
After 10 days of treatment Whole Glucan Particulate Beta 1,3-D Glucan had increased the percentage of immune cells able to phagocytose one particle from 63.8% to 83.2% ($P < .05$). The number of highly phagocytic cells -those consuming at least three particles -increased from 37.3% to more than 50% ($P < .05$). These results show that taking Whole Glucan Particulate Beta 1,3-D Glucan enhanced the human immune system to defend the body against a challenge.

Beta Immune's Beta Glucan products are considered by many people, including health care practitioners, to be the highest quality, lowest cost immune enhancing products available anywhere. Independent 3rd party tests have been carried out to verify the quality and safety of our products. This Whole Glucan Particulate material is so effective 10 major universities and/or medical centers worldwide are involved in testing them. The prestigious Harvard Medical School, Massachusetts Institute of Technology, Purdue University and Tufts University are among them. Our material is also being tested by government agencies, including the US Armed Forces Radiobiology Research Institute. The results have been amazing.

Beta glucan, properly extracted, has been shown to be completely safe and non-toxic. This substance is extracted from the cell walls of bakers yeast (*Saccharomyces cerevisiae*), a food source. Bakers yeast, and their extracts, have been given a GRAS rating. This is one of the highest, if not the highest safety rating a substance can achieve. The specifications for this rating can be found in 21CFR184.1983 -- Sec. 184.1983.

Beta glucan is considered an external immunomodulator. External immunomodulators are substances that have been shown to modify the immune systems response to a threat upon it. It is an all-natural, food source derived dietary supplement. It modulates and potentiates the macrophage (white blood cells), keeping them in a highly prepared state for any threat our immune system may encounter. With this balancing effect, all subsequent immune responses improve. When your immune system is in this highly prepared state, the invading organisms do not have the time to build up force and strength before the immune system attacks, destroys and/or weakens the invader.

Human Clinical Study: Beta Glucan Increases Innate Immune Cell Production of Protective Cytokines without Over-Stimulating the Immune System



*p<0.06 Biophage Pharma 2003

Whole Glucan Particulate Beta 1,3-D Glucan is the only yeast-based beta glucan that has been shown scientifically to enhance immune function in humans.

"The results are consistent with the biological activity of Whole Glucan Particulate Beta 1,3-D Glucan observed in numerous animal studies," said Rosemonde Mandeville, M.B. ChB. Ph.D., President and Chief Scientific Officer of Biophage Pharma. α

In addition, researchers also found that Whole Glucan Particulate Beta 1,3-D Glucan increased plasma cytokines INF - γ and TNF - α , which play an important role in regulating the body's immune response. There was no significant increase in cytokine IL-1 which can cause fever, chills and muscle aches associated with other immune- enhancing supplements.

These results are similar to those obtained from a 1999 study published in the American Journal of Clinical Nutrition in which men consumed 15 grams of Whole Glucan Particulate Beta 1,3-D Glucan-60 times the recommended daily dosage for 12 weeks without adverse effects.

MORE INFORMATION

- **“Wheat vs Chaff, Sifting Through the Field of Dietary Supplements.”** A review of the procedures educated researchers use to locate and identify effective, high quality supplements. Also reviews the marketing ploy's used by supplement manufactures/retailers to increase or acquire sales. To review and download; <http://www.beta-glucan-info.com/pdf/wheatvschaff.pdf>
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