



Beta Glucan: Nature's Immune Booster

By Jennifer May, RN, MSN, CCRA

Natural products marketing agency **IMC** contracted **Spiritus Creative, LLC** to oversee production of this publication. For more information, please contact: anika@spirituscreative.com

PAGE 3 – EXCERPT

Germs don't make you sick

Surprised? At least germs are not the whole story. When we get sick, we often say we've "caught a bug." Hoping to prevent illness, we wash our hands and keep our distance from people who have the sniffles or a bad cough, just so those "bugs" don't get into our systems. But whether a loved one is ill and needs our care or we're traveling or working in close spaces, coming in contact with viruses and bacteria is inevitable. Why do some of us seem to get sick all the time while other people seem to stay healthy no matter what?

The answer is as complex and multilayered as the immune system itself. Yes, due to a myriad of factors, from stress level to genetics, some people do have a stronger immune response than others. But there is a scientifically proven natural supplement that can strengthen anyone's immune response and make it more effective, even if you have had a hard time fighting off illness.

Many common immune system enhancers work by addressing a deficiency state in the body. For instance, vitamin C is necessary for good health, and supplementation can be very helpful – but only for someone who is *deficient* in that vitamin. If the body is sick but *not deficient* in that vitamin, supplementing won't help.

Beta glucan, on the other hand, enhances the immune response regardless of whether or not there is any deficiency state in the body. It is a powerful natural polysaccharide that travels directly to immune system cells and calls them to action to keep the body healthy.

Beta glucan is becoming increasingly well known, especially as people experience the benefits of taking it and then share their stories by word of mouth. These health-changing stories range from families with young children experiencing far fewer sick days or a dramatic improvement in their allergies to people receiving increased support in preventing and fighting cancer.

Health threats are around us every day. Staying healthy is not solely a matter of avoiding germ exposure.

Sustained good health depends even more on keeping your immune response in good working order.

PAGE 6-8 – EXCERPT

Beta glucan – calling the immune response to action

Once a pathogenic threat makes it into the body, the components of the **innate** and **adaptive immune system** work together to destroy and eliminate the intruder. To better understand how beta glucan enhances the activity of the immune system, let's learn a little about how it works on a cellular level.

Beta glucan: Glucans are naturally occurring, glucose-based complex carbohydrates (polysaccharides) found in the cell walls of grains, fungi, mushrooms, and yeast. Beta glucans are **insoluble fibers defined by beta linkages that connect glucose subunits**, hence the name *beta glucan*. There are various sources and forms of beta glucan. The type most beneficial for enhancing immune response is called **beta 1,3/1,6 glucan**. The 1,3 and 1,6 refer to the linkages that are the most effective in boosting immune function. The most impressive immune system studies on beta glucan have used beta 1,3/1,6 glucan derived from the cell walls of baker's yeast.

Immune system cells: Neutrophils are the most abundant immune system cells and have evolved to be the body's adept protector against yeast and molds. When neutrophils come across yeast and fungal cells in the body, special receptors on the neutrophils remove a beta glucan component from the surface of the intruder and recognize it as **non-self** (foreign). There are also specific proteins within blood plasma called *blood complement*. Complement coat the pathogen and prep it for antigen-antibody processing.

Here is where beta glucan becomes so important. When the neutrophil notices that *both* beta glucan and blood complement are present, this acts like a key and triggers the neutrophil's "killing mechanism." The neutrophil then efficiently recognizes the invader for what it is and destroys it.

Under normal conditions, neutrophils only kill yeast and fungal cells. But when supplementing with beta glucan, the immune system cells pick up the beta glucan fragments. Part one of this two-part key is now already present and has primed the immune system cells to destroy any threat—including bacteria, viruses, and even cancerous cells—as soon as they come into contact with them.

Effects of supplementing:

Beta glucan **acts as a switch** for immune system cells, flipping them into an "active" state and making them more likely to dispose of any threat they come across. When taken as a supplement, macrophages consume and process the yeast-derived beta glucan and then distribute the fragments to neutrophils. This **activates and also mobilizes** the neutrophils to any site within the body where there is a health challenge. Additionally, beta glucan enhances the ability of immune system cells to phagocytize, or eat, pathogens.

Relying on beta glucan supplementation instead of other approaches to immune system support has several advantages:

→ Beta glucan supplementation begins supporting the immune system immediately—you can take it daily for preventative health or take it as an immune system boost at the onset of symptoms.

→ Unlike antibiotics, which are effective only against bacteria (and wind up harming both your own immune cells along with the bacteria), beta glucan enhances the immune response against the full array of immune system threats, including viruses, fungi, and parasites. Antibiotics can't do that.

→ In addition, overuse and inappropriate use of antibiotics (prescriptions given for viral infections, etc.) can result in “superbugs” that are now antibiotic resistant. Strengthening the immune system is a better answer than developing stronger antibiotics. With beta glucan, there is no risk of creating a resistant organism.

→ Beta glucan delivers additional immune function benefits including apparent support for wound healing and cancer treatment and prevention.

→ Beta 1,3/1,6 glucan is thought of as a “biological response modifier.” It enhances the activity of the immune system, *but it does NOT overstimulate it*. This is vital for those who struggle with autoimmune conditions, allergies, or yeast overgrowth.