Many nutrients will support our immune defenses and prepare the body for attack by foreign antigens, but what are the “big guns” so to speak? Now that we are headed into the season where cold stresses our defenses and germs abound, it’s time to think about what we have in the arsenal to optimize all of the immune system players.

Let’s look at the biggest guns in the arsenal. When you want the immune system to be ready for attack, you want nutrients that are known to support killer T cells. The generals of the immune system, “Helper T cells”, determine which branch of the immune system is called into action. The helper T cell pathway that releases cytokines to muster these killer T cells into action is known as Th1. So, nutrients which support Th1 or killer T cell production is what we want when we’re looking for building the best defense we can have against foreign invaders.

The Big Guns: Mushroom glycans do exactly that. Glycans are branched complex polysaccharides that occur in nature and are heavily concentrated in mushrooms. Beta-glucans is a good example of a mushroom glycan. Nutri-West offers a powerful blend of mushroom glycans (725 mg) in a formula called “Glycan Renew”.

Each Tablet Contains: Proprietary blend 725 mg* of: Coriolus Versicolor, Reishi Mushroom, Maitake Mushroom, Shiitake Mushroom, Cordyceps Sinensis, Lions Mane Mushroom, 1,3 Beta Glucans, Lentinan.

“Natural immunomodulators are getting more and more popular. The purpose of the present study was to directly compare eleven most commonly used immunomodulators. Through testing both cellular and humoral branches of immune reactions, we found that glucan was consistently the most active molecule strongly stimulating every reaction evaluated” (Vetvicka V. & Vetvickova J. 2014)
Immu-nition Power (cont’d)

When we are looking for additional nutrients to muster killer T cells into action and reinforce the fighting arms of the immune system, there is nothing better than phytonutrient power. Antioxidants and powerful, efficacious plant derived extracts hold the potential to maximize immune defenses. Nutri-West’s Phyto Renew is not only a combination of these powerful plant extracts, it comes in an easy to chew tablet!

Ingredients in Phyto Renew:

Pomegranate (fruit) is an excellent antioxidant; Parker et al. (2014) refer to the “pomegranate-derived immunomodulatory compounds” that contribute to strengthening the immune system. Many scientists have expounded on the health benefits of pomegranate and its ability to improve immune competence (Oliveira RA et al. 2010), enhance immune responses (Harikrishnan, R. et al. 2012; 2010) and augment the human immune system’s antioxidant and immune fighting capacities (Reddy MK et al. 2007).

Additionally researchers in mucosal immunology (Viladomiu M et al. 2013) have named pomegranate derivatives as an innovative nutritional intervention that directly modulates the host immune response. The gut is a huge part of our immune system (gut-associated lymphoid tissue). Aside from the protective physical barrier it provides, the gut is the largest mass of lymphoid tissue in the body and stores the majority of the immune cells in the body; in fact about 60% of the total immunoglobulin produced daily is secreted into the gastrointestinal tract.

Blueberry (fruit), Raspberry (fruit) and Blackberry (fruit): Small berries have long been considered as one of the richest sources of natural antioxidants (Manganaris GA, et al. 2013.) “Blueberries are rich in antioxidants known as anthocyanins, which may exhibit significant health benefits” (Wang et al. 2010). McAnulty LS et al. (2011) reported on the effect of blueberries on natural killer cell counts and oxidative stress in 25 well trained subjects. Natural killer T cells were increased and oxidative stress was decreased.
Cherry (fruit) can increase antioxidant levels in the body, and has even been referred to by Garrido et al. (2013) as a “neutraceutical tool”. Cherry was found to augment humoral and cell mediated immune response, especially with respect to T cell interactions, by Abid et al. (2012).

Lemon Bioflavonoids are best known for supporting capillaries and circulation; they consist of many varieties of phytochemicals, including rutin, hesperidin and hydroxycinnamic acids. Lee YR et al. (2011) demonstrated that hesperidin was able to restore immune function to homeostasis.

Acai (fruit) is full of strong antioxidants. Acai has been described by researchers as exhibiting “quite potent biological activity” (Kinghorn et al. 2011). Acai potentiates the intracellular expression of the cytokines produced by natural killer cells (Skyberg JA et al. 2012).

Glutathione (reduced): (GSH) has been called the body’s most powerful protector. This super antioxidant plays a huge role in maintaining a positive antioxidant status for the best defense. Results from studies indicate that when the antioxidant systems of the body are stressed, that message is communicated to the immune system through glutathione related peptides, affecting T cell recognition. “Collectively, these results suggest that oxidative stress represents a mechanism for modulating the virus-specific T cell response” (Trujillo JA et al. 2014)

Grape Seed Extract (GSE) has a very high concentration of proanthocyanidins. GSE influences the dendritic cell of the immune system, which in turn involved with T cell-mediated responses (Vaid M et al. 2013). Grape seed extract strongly supports delicate thin layers of actively metabolic cells such as capillaries in the lungs (that handle our oxygen/waste exchange) and the endothelium that lines the blood vessels and the heart.

Quercetin is a potent flavonoid that is actually present in many herbs and foods; however it is isolated as a single supplement because of its vast properties. Quercetin stabilizes cell membranes, and when cell membranes are stabilized, including cell membranes of immune cells, they can function more optimally (Margina D et al. 2012).

Elderberry (fruit) is an antioxidant that highly supports cell viability and a healthy cellular environment. Elderberry causes a shift in the immune response towards Th1 and killer T cells (Waknine-Grinberg JH et al. 2009).

Resveratrol is an immunomodulator. Resveratrol is believed to have much of its effects through a “sirtuin” molecular pathway. “A new class of proteins called sirtuins has gained the attention of the scientific community... Interestingly, resveratrol a polyphenol present in grapes, nuts and berries has been shown to activate sirtuins and such activation is able to explain most of the beneficial effects of the Mediterranean diet”. Sirtuins are described as “principal intracellular mediators of the beneficial effects of the Mediterranean diet” (Gupta & Prakash 2014). When Vetvicka V. & Vetvickova J. (2014) determined that glucans were the strongest immunomodulators, they named resveratrol as the next most potent.
References for Plant Flavonoids and Immune Support:


McAnulty LS et al. Effect of blueberry ingestion on natural killer cell counts, oxidative stress, and inflammation prior to and after 2.5 h of running. Appl Physiol Nutr Metab. 2011 Dec;36(6):976-84.


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