



# IMMUNE CELL SUPPORT FORMULA

## CLINICAL APPLICATIONS

- Boosts Immune Response
- Increases the Body's Natural Killer Cell Activity
- Provides Protection Against Immune Challenges
- Promotes Healthy Microflora in the GI tract

## IMMUNE HEALTH

This product is a targeted formula specifically designed to support the body's immune response by boosting natural killer cell (NK) activity. This product includes a synergistic combination of larch arabinogalactan, oleuropein (the active ingredient found in olive leaf extract), acemannan (the immune-stimulating constituent of Aloe vera concentrate) and chelated zinc. This product's unique preparation supports immune function, boosts NK cell activity, promotes the growth of healthy bacteria (probiotics) in the gut, and helps maintain bacterial balance throughout the body. This product is the ideal preparation for those with immune challenges and gastrointestinal (GI) related concerns.

### Overview

Of all the cells that make up the immune system, NK cells are the most aggressive. They make up nearly 15% of the total circulating lymphocyte (white blood cells) population and are part of the body's innate immune system. NK cells are called natural killer cells because they do not need to recognize specific antibodies before releasing cytokines (strong intracellular signals) to destroy abnormal cells, allowing for a faster immune response. Once target cells are identified, NK cells trigger an immune response and direct other immune cells (dendritic cells, macrophages, and T cells) to take action against a potential threat to the body.<sup>[1]</sup> Enhancing NK cell activity boosts the body's targeted immune response and promotes the normal process of eliminating unhealthy cells.

### Zinc<sup>†</sup>

Zinc is known to play a central role for the proper functioning of the immune system and is a potent booster of host

resistance. Zinc affects multiple aspects of immune response from maintaining the integrity of the physical barriers (skin and mucosal barriers) to activating genes within lymphocytes.<sup>[2]</sup> Zinc is also crucial for the normal development of a multitude of immune cells, including neutrophils, NK cells, T lymphocytes, B lymphocytes and improving IgG antibody response.<sup>[2]</sup> As a key trace mineral required for immune activity and development, supplementation with zinc for a period of one to two months has been shown to stimulate a stronger immune response.<sup>[3]</sup>

### Arabinogalactan Heartwood<sup>†</sup>

Arabinogalactans are a class of polysaccharides that are abundantly found in the larch tree. As a highly long and densely branched polysaccharide, arabinogalactan has been shown to increase the production of short-chain fatty acids (SCFA), including butyrate and propionate.<sup>[4,5]</sup> Since SCFAs are the primary fuel source of beneficial bacteria found in the gut, arabinogalactan has been shown to boost beneficial intestinal flora, including bifidobacteria and lactobacillus.<sup>[6,7]</sup> Supporting the number of beneficial bacteria in the gut can significantly enhance immune function. Additionally, arabinogalactan has been found to stimulate NK cell cytotoxicity, supporting the body's ability to identify and neutralize microbial threats.<sup>[8]</sup>

### Aloe Vera Concentrate 200:1<sup>†</sup>

Aloe vera is a member of the lily family that has been used topically and orally as a traditional remedy for thousands of years. The active ingredient in aloe, acemannan, is a complex carbohydrate that has been found to be the component responsible for the immune boosting properties of Aloe vera. Acemannan has been shown to stimulate a multitude of key components of the immune system including macrophage

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cytokine activity, nitric oxide release, surface molecule expression, and cell morphologic changes, all of which produce a sharper, highly effective immune response.<sup>[9]</sup> The Aloe vera used in this product has had the aloin-like compounds removed. This eliminates the possibility of producing the laxative effect that is normally observed following ingestion of Aloe vera concentrate.

### Olive Leaf Extract†

Oleuropein is the unique polyphenol molecule in olive leaf extract, which has a number of health promoting benefits. The olive tree (*Olea europaea*) produces oleuropein abundantly in its leaves, as well as in the olive fruit itself. Special processing techniques now allow for the extraction of a stable, standardized form of oleuropein. Oleuropein is a potent antioxidant and promotes inflammatory balance. Studies have indicated that oleuropein boosts host immune defense and supports a strong immune response during seasonal and respiratory challenges. It is especially helpful for individuals with immune challenges related to an imbalance of bacteria in the intestines.<sup>[10]</sup>

### Directions

2 capsules two times per day or as recommended by your health care professional.

### Does Not Contain

Does not contain gluten, corn, yeast, animal or dairy products, artificial colors, artificial flavors or preservatives.

### Cautions

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

<b>Supplement Facts</b> <sup>v1</sup>		
Serving Size 2 Capsules		
Servings Per Container 30 & 60		
<b>2 capsules contain</b>	<b>Amount Per Serving</b>	<b>% Daily Value</b>
Zinc (as TRAACS® Zinc Bisglycinate Chelate)	10 mg	67%
Arabinogalactan Heartwood (from Larch Tree)	610 mg	*
Olive Leaf Extract (Standardized to contain 20% Oleuropein)	400 mg	*
Aloe vera Leaf Gel Extract	130 mg	*
* Daily Value not established		

### References

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