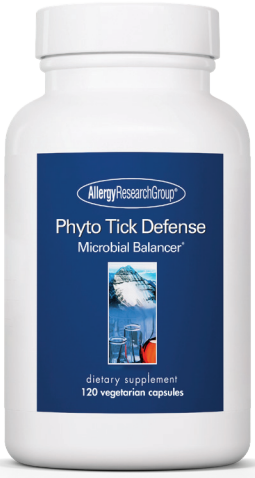
Phyto Tick Defense

Microbial Balancer*

People who enjoy outdoor activities, such as hiking or camping, are often exposed to ticks and mosquitoes. Under optimal conditions, the body can address these threats by launching an appropriate immune response.*

For hundreds if not thousands of years, in traditional medicine cultures, mixtures of herbs, along with yeast beta-glucans, have been used to stimulate an immune response.* In modern times, scientists have been able to identify medicinal plants that support a healthy immune response to insect-borne microbes.* The combined ingredients in Phyto Tick Defense are designed to strengthen the immune system and to support cellular health throughout the body, based upon traditional use, and modern science.*



Item #78280
120 vegetarian capsules

Key Features

- Supports rapid immune responses throughout the body*
- Strengthens mucosal and endothelial barriers*
- Protects cells and tissues from oxidative stress*
- Encourages the growth of beneficial gut bacteria*

Suggested Use: As a dietary supplement, 2 capsules one or two times daily with or without food, or as directed by a healthcare practitioner.

Supplement Facts

Serving Size	2 Capsules
Servings Per Container	60

Amount Per Serving		% Daily Value
Organic Cordyceps Powder (*Cordyceps sinesis*) (Mycelium)	250 mg	†
Organic Lion's Mane (*Hericium erinaceus*) (Fruiting body)	250 mg	†
Sweet Wormwood Powder (*Artemisia annua*) (Leaf and Stem)	150 mg	†
Coptis Extract 4:1 (*Coptis chinensis*) (Rhizome)	150 mg	†
Houttuynia Powder (*Houttuynia cordata*) (Whole Plant)	125 mg	†
Cat's Claw 4:1 Extract (*Uncaria tomentosa*) (Inner Bark)	125 mg	†
Beta Glucan 1,3/1,6 (from *Saccharomyces cerevisiae*) (Standardized to 85%)	125 mg	†

† Daily Value not established.

Other ingredients: Hydroxypropyl methylcellulose, stearic acid, silicon dioxide.

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Artemisia annua (sweet wormwood or *Artemisia*) is a botanical that has been used in traditional Chinese medicine for 2000 years and is now cultivated around the world.* The use of *Artemisia* is common in regions where insect-borne microbes pose major challenges, including Africa.* The bioactive substances in Artemisia include artemisinin and its derivatives, along with flavonoids and polyphenols. Artemisia supports innate immune responses as well as immunological memory.* This enables the immune system to respond quickly to threats that have been encountered in the past.* Artemisia also has potential neuroprotective effects.*

Houttuynia cordata (chameleon plant or *Houttuynia*) is well known in the traditional medicine systems of China, Southeast Asia and Northeast India.* Traditional healers use Houttuynia as a component of blood-building decoctions, particularly where insect-borne microbes are common.* Houttuynia contains several bioactive compounds that act in concert to support health, including houttuynin (decanoyl acetaldehyde), flavonoids (quercetin, hyperin, rutin), and myrcene, along with polysaccharides that support the microbiota and immune system.* Houttuynia extracts were shown to have immune-enhancing and antioxidant effects, with potential benefits for the spleen, lungs, oral cavity, and skin.*

Uncaria tomentosa (Cat's Claw) is a woody vine that is native to the Amazon and Central American rainforests.* It is prized by the indigenous people, and is commonly used for immune support in regions where mosquitoes are prevalent.* In response to immune challenges, cat's claw stimulates the production of white blood cells in bone marrow and increases their ability to engulf potential invaders.* Cat's claw contains alkaloids such as mitraphylline, along with antioxidants such as polyphenols and proanthocyanidins.* The alkaloid fractions help strengthen the endothelial lining of blood vessels, as evidenced by a reduction in paracellular permeability.* A healthy endothelial barrier reduces the leakage of foreign substances from the bloodstream into tissues.*

Coptis chinensis (Chinese goldthread) has long been used in traditional Chinese and Japanese medicines to support respiratory, digestive, and nervous system health.* The rhizome is valued for its antioxidant and immune-supportive properties.* With respect to insect-borne microbes, a survey of Japanese herbal medicines reported that *Coptis* was one of the most effective herbs.* *Coptis* is an excellent source of berberine, which may improve the intestinal barrier while providing anti-microbial benefits.* It also contains coptisine, which has neuroprotective effects.* Research suggests that the rhizome extracts may protect brain and nerve cells from oxidative stress by strengthening cellular antioxidant systems.* This feature may be particularly helpful for individuals exposed to insect-borne microorganisms.*

Cordyceps sinensis (Cordyceps) is a type of fungus that serves as a natural regulator of insect populations in its native habitat.* Found in the alpine grasslands of the Tibetan Plateau, Cordyceps feeds on caterpillars and mature insects.* Cordyceps has been used for centuries as a traditional Chinese medicine with a reputation for maintaining vitality and immunity.* The constituents of Cordyceps include ergosterol (a vitamin D2 precursor) and cordycepin (3'-deoxyadenosine), a nucleoside that modulates cellular signaling pathways.* In mammalian cells, Cordyceps induces significant immune responses of macrophages.* At the same time, Cordyceps may protect the brain, lungs, and kidneys from cellular damage.* Cordyceps also contains polysaccharides that can improve the gut microbiota composition and function.*

Hericium erinaceus (Lion's Mane) is an edible and medicinal mushroom that supports mucosal, cellular, and humoral immunity.* It contains erinacines, hericenones, ergothioneine, beta-glucan, and other bioactive molecules.* Lion's Mane has been shown to improve microbial balance and modulate inflammation-related signaling pathways in the intestine.* Additionally, Lion's Mane increased the production of secretory immunoglobulin (SIgA), which constitutes the first line of defense in the intestinal epithelium.* SIgA forms a protective barrier between the outside environment and the interior of the body.* Lions' Mane also promotes the growth and myelination of neurons, and protects microglia from damage.* Microglia play an active role in host defense and tissue repair in the brain.* Supplementation with Lion's Mane has been shown to enhance sleep quality and mood in healthy adults.*

Beta-glucan (1,3-1,6) is a nutritional polysaccharide derived from yeast. Fungal (yeast and mushroom) beta-glucans are polymers with beta-1,3-1,6-linkages, and this specific structure is important for their immunomodulatory activities.* Yeast beta-glucans have been shown to boost immune responses to a variety of challenges.* They stimulate the activity of macrophages, granulocytes, monocytes and dendritic cells, all of which participate in immune surveillance and defense.* Additionally, yeast beta-glucans increase the production of cathelicidin and ß-defensin, which are bioactive peptides that help recognize potential invaders.* As a further benefit, beta-glucan serves as a prebiotic (fermentable) fiber that improves gut microbial balance, a process associated with overall health.*

References available online on our product page.

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