



Empowering You Organically - Season 13 - Episode 122

Title: Immunity 3 - Essential Nutrients for Fighting Viruses

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Description: Join us this week as we talk about a proactive approach to supporting our immunity naturally. Learn about the three powerhouses in our new Immunity 3 blend; camu camu, zinc, and elderberry.

FEATURED PRODUCTS



- 3 powerhouse immune system support nutrients in one convenient daily formula: organic camu camu (vitamin C), organic elderberry & zinc
- Natural immune support aids your body's defense against harmful viruses & bacteria, including the common cold, influenza, and sinusitis
- 110 mg of whole food (not synthetic) vitamin C per serving from organic camu camu grown in the Amazon rainforest
- 200 mg of organic elderberry extract which has potent antiviral and antimicrobial properties
- 15 mg of zinc from two forms (zinc arginate & zinc glycinate) for better absorption and higher tolerability
- Rich in antioxidants which are anti-inflammatory and help fight aging and chronic disease
- Non-GMO; No fillers, additives, artificial flavors, preservatives, colors, yeast, soy, sodium, or starch

Immunity Refresher

The immune system has complex ways of fighting viruses, but viruses have complex ways of fooling the immune system and invading cells. That is why we need our immune systems ready for whatever floats our way!

Things to remember:

- Nutrition may be the most vital component in maintaining — or gaining — a healthy immune system. It makes all the difference in the way your body fights off germs, but just as importantly, plays an important role in more minute functions like helping tissues repair and rebuild themselves and how your body reclaims flagging energy.
- To keep your immune system functioning at its best, some of the most effective strategies include avoiding sugar, sleeping well, minimizing stress and including fiber and probiotics in your meal regimens
- Not just vitamins and minerals, but proteins like collagen and free radical-fighting antioxidants can be introduced to your body through the foods you eat, and play vital roles in helping to keep your body functioning at its best. As the Chicago Tribune observes:
 - *“Collagen and its amino acids are essential to healing because they build tissues such as skin, muscles, tendons, ligaments, cartilage, blood vessels, bones and more. Antioxidants remove the harmful free radicals from the bloodstream that can impair the immune system, and vitamins and minerals play specialized roles in healing.”*
- Chronic stress can make you more susceptible to colds and the flu, as well as more serious health problems like heart disease, diabetes and other diseases. By practicing stress-reducing activities like yoga, meditation and laughter, you can keep your body from going into chronic stress mode.

INGREDIENTS in Immunity³

Organic Camu Camu

Camu camu (*Myrciaria dubia*) is a berry native to the Amazon rainforest. That sounds remote, but this so-called superfood has long been used to improve health and has become increasingly popular. Camu

camu's purported health benefits include reducing the risk of chronic diseases thanks to its anti-inflammatory and antimicrobial properties.

Similar to tart cranberries, the camu camu berry is too acidic for most people to enjoy its natural state. It's generally processed as an ingredient in blended juices or freeze-dried into a powder that can be taken as a supplement, added to smoothies, or blended into other foods.

Camu Camu is High in Vitamin C

- Nutritionally, camu camu is one of the most concentrated natural food sources of vitamin C.
- Camu camu is rich in vitamin C, a vitamin that acts as a powerful antioxidant in your body and is vital for the health of your skin and immune system.
- The fruit's pulp provides about 2,400 to 3,000 grams (or 2,400,000 milligrams) per 3.5-ounce or so serving. For context, the recommended dietary intake (RDI) for vitamin C is 60 milligrams a day.
- Because of its high vitamin C content, camu camu is also rich in antioxidants, which have anti-inflammatory properties.

Not JUST Vitamin C

- Beyond vitamin C, camu camu provides smaller amounts of potassium, calcium, zinc, magnesium, manganese, and copper.
- Like most colorful berries, camu camu is a good source of polyphenols.
- Camu camu also has antimicrobial properties, and researchers have identified compounds in the fruit that have strong antimicrobial benefits.

Supports Gut Health

- The dense punch of nutrients from camu can also support gut health and block free radicals and other pathogens from entering the body, according to studies, thus providing protection against bacterial infections, viruses and other issues. Remember your immunity is built in the gut!
- Additionally, a 2018 animal study even found that camu may help prevent obesity by positively altering the gut microbiota (highly tied to immune function) and by increasing energy expenditure. Several studies found that camu could lead to lowered fat accumulation and blunted metabolic inflammation, leading to improved glucose tolerance and insulin sensitivity.

Improves Liver Health

As a powerful cocktail of antioxidants and phytochemicals, camu camu benefits the liver in several ways. The high vitamin C content is especially central to its ability to improve liver health.

- Research in 2010 showed that animals given camu camu powder showed significant signs of liver injury suppression.
- Specifically, an active compound called 1-methylmalate was isolated from *Myrciaria dubia* juice. This study concluded that the 1-methylmalate in camu is one of the reasons why it can aid liver health.

Enhances Mood

Camu camu berries' high levels of vitamin C may help your brain to produce more serotonin, which will enhance your mood — which explains why it may act as a potential remedy for depression. In fact, research suggests people who have a deficiency in vitamin C often feel more depressed and lackadaisical.

- Vitamin C is an important cofactor required for the conversion of tryptophan to 5-hydroxytryptophan in serotonin production. It's therefore possible that vitamin C from camu camu benefits patients with depression that is associated with low levels of serotonin.
- For example, in one study conducted at Montreal's Jewish General Hospital, it was shown that many of the patients who had decreased levels of vitamin C reported signs of sluggishness and depression. When given doses of vitamin C, they all responded with rapid and clinically significant improvement in mood.

There is some concern that camu camu can interfere with some chemotherapy medications—you should always let your doctor know about the supplements you are taking, but especially so if you are receiving chemo, for example.

Zinc

Your immune system is your first line of defense against all disease, especially infectious disease, and there are many different ways to boost your immune system and improve its function. One nutrient that plays a very important role in your immune system's ability to ward off viral infections is zinc.

Zinc is also a nutrient that plays many vital roles in your body. BUT...Because your body doesn't naturally produce zinc, you must obtain it through food or supplements.

- zinc is the second-most-abundant trace mineral in your body — after iron — and is present in every cell
- it's critical for the development and function of immune cells
- fundamental to skin health, DNA synthesis and protein production
- body growth and development relies on zinc because of its role in cell growth and division
- Zinc is also needed for your senses of taste and smell. Because one of the enzymes crucial for proper taste and smell is dependent on this nutrient, a zinc deficiency can reduce your ability to taste or smell
- Zinc lozenges were found to shorten the duration of common cold episodes by up to 40 percent in a study published in the Open Respiratory Medicine Journal.

Those at risk of zinc deficiency include:

- People with gastrointestinal diseases like Crohn's disease
- Vegetarians and vegans
- Pregnant and breastfeeding women
- Older infants who are exclusively breastfed
- People with sickle cell anemia
- People who are malnourished, including those with anorexia or bulimia
- People with chronic kidney disease
- Those who abuse alcohol

Elderberry

Elderberry is one of the most commonly used medicinal plants in the world.

- Traditionally, Native Americans used it to treat infections, while the ancient Egyptians used it to improve their complexions and heal burns. It's still gathered and used in folk medicine across many parts of Europe.
- Elderberry refers to several varieties of the *Sambucus* tree, which has clusters of white flowers and black or blue-black berries. The most common variety is *Sambucus nigra*, also known as European elderberry or black elderberry.
- Today, elderberry is most often taken as a supplement to treat cold and flu symptoms.

Health Benefits of Elderberry

There are many reported benefits of elderberries. Not only are they nutritious, but they may also fight cold and flu symptoms, support heart health and fight inflammation and infections, among other benefits.

- May improve cold and flu symptoms
 - One study of 60 people with influenza found that those who took 15 ml of elderberry syrup four times per day showed symptom improvement in two to four days, while the control group took seven to eight days to improve.
 - Another study of 64 people found that taking 175-mg elderberry extract lozenges for two days resulted in significant improvement in flu symptoms, including fever, headache, muscle aches and nasal congestion, after just 24 hours.
 - Furthermore, a study of 312 air travelers taking capsules containing 300 mg of elderberry extract three times per day found that those who got sick experienced a shorter duration of illness and less severe symptoms.
- High In Antioxidants

- Antioxidants are natural components of foods, including some vitamins, phenolic acids and flavonoids, that are able to remove these reactive molecules. Research suggests that diets high in antioxidants may help prevent chronic disease
- Anthocyanins found in the berries have 3.5 times the antioxidant power of vitamin E
- Studies have shown elderberry juice may reduce the level of fat in the blood and decrease cholesterol.
- A study found that elderberry flowers inhibit the enzyme α -glucosidase, which may help lower blood sugar levels. Also, research on diabetic rats given elderberry showed improved blood sugar control
- Fights harmful bacteria: Elderberry has been found to inhibit the growth of bacteria like *Helicobacter pylori* and may improve symptoms of sinusitis and bronchitis
- May support the immune system: In rats, elderberry polyphenols were found to support immune defense by increasing the number of white blood cells

RESOURCES

Everything You Wanted to Know About Your Immune System

<https://articles.mercola.com/sites/articles/archive/2020/06/22/immune-system.aspx>

Top Tips to Boost Your Immunity

<https://articles.mercola.com/sites/articles/archive/2018/02/01/boost-immune-system.aspx>

Keep seasonal sickness at bay with these foods that boost immunity

<https://www.chicagotribune.com/lifestyles/health/ct-foods-that-boost-immunity-20171207-story.html>

11 things that can weaken your immune system

<https://www.rediff.com/getahead/slide-show/slide-show-1-health-11-things-that-weaken-immune-system/20110104.htm#1>

Antimicrobial constituents of peel and seeds of camu-camu (*Myrciaria dubia*)

<https://pubmed.ncbi.nlm.nih.gov/28475419/>

Antimicrobial constituents of peel and seeds of camu-camu (*Myrciaria dubia*).

<https://pubmed.ncbi.nlm.nih.gov/?term=antibacterial+activity+camu+camu>

Treatment with camu camu (*Myrciaria dubia*) prevents obesity by altering the gut microbiota and increasing energy expenditure in diet-induced obese mice

<https://pubmed.ncbi.nlm.nih.gov/30064988/>

Effects of diet supplementation with Camu-camu (*Myrciaria dubia* HBK McVaugh) fruit in a rat model of diet-induced obesity

<https://pubmed.ncbi.nlm.nih.gov/23460435/>

1-methylmalate from camu-camu (*Myrciaria dubia*) suppressed D-galactosamine-induced liver injury in rats

<https://pubmed.ncbi.nlm.nih.gov/20208347/>

Vitamin C rapidly improves emotional state of acutely hospitalized patients, study suggests

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Relationship Between Depression and Vitamin C Status: A Study on Rural Patients From Western Uttar Pradesh in India

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Zinc Is Key for COVID-19 Treatment and Prevention

<https://articles.mercola.com/sites/articles/archive/2020/10/26/zinc-for-covid.aspx>

Zinc – NIH Fact Sheet

<https://ods.od.nih.gov/factsheets/Zinc-Consumer/>

Zn²⁺ Inhibits Coronavirus and Arterivirus RNA Polymerase Activity In Vitro and Zinc Ionophores Block the Replication of These Viruses in Cell Culture

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COVID-19: Poor outcomes in patients with zinc deficiency

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7482607/>

Iron and Zinc Nutrition in the Economically-Developed World: A Review

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3775249/>

Zinc in Human Health: Effect of Zinc on Immune Cells

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2277319/>

Zinc and its importance for human health: An integrative review

<https://pubmed.ncbi.nlm.nih.gov/23914218/>

A Randomized, Placebo Controlled Trial of Oral Zinc for Chemotherapy-Related Taste and Smell Disorders

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4042409/>

Zinc Lozenges May Shorten the Duration of Colds: A Systematic Review

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3136969/>

Randomized study of the efficacy and safety of oral elderberry extract in the treatment of influenza A and B virus infections

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Elderberry Supplementation Reduces Cold Duration and Symptoms in Air-Travellers: A Randomized, Double-Blind Placebo-Controlled Clinical Trial

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4848651/>

A Review of the Antiviral Properties of Black Elder (*Sambucus nigra* L.) Products

<https://pubmed.ncbi.nlm.nih.gov/28198157/>

Phenolics in Human Health

<http://www.ijcea.org/papers/416-N0002.pdf>

Antioxidants and prevention of chronic disease

<https://pubmed.ncbi.nlm.nih.gov/15462130/>

Edible Flowers: A Rich Source of Phytochemicals with Antioxidant and Hypoglycemic Properties

<https://pubmed.ncbi.nlm.nih.gov/26270801/>

Advanced research on the antioxidant and health benefit of elderberry (*Sambucus nigra*) in food – a review

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<https://onlinelibrary.wiley.com/doi/abs/10.1002/ptr.2729>

Flavonoid intake and risk of CVD: a systematic review and meta-analysis of prospective cohort studies

<https://pubmed.ncbi.nlm.nih.gov/23953879/>

The Traditional Plant Treatment, *Sambucus nigra* (elder), Exhibits Insulin-Like and Insulin-Releasing Actions In Vitro

<https://academic.oup.com/jn/article/130/1/15/4686073>

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<https://pubmed.ncbi.nlm.nih.gov/28198157/>

Evaluation of the immune defense in diabetes mellitus using an experimental model

<https://www.rombio.eu/rbl1vol16/17%20Badescu.pdf>