



BIO C 1000

Vitamin C: the nutrient workhorse. Vitamin C doesn't just fight Colds; it is vital for Cardiovascular health; it makes Collagen and Connective tissue; it's needed during Chronic stress; and it may fight Cancer. **Enerex Bio C 1000** offers a 1:1 ratio of Vitamin C and its absorption-helper nutrients called Bioflavonoids to make these nutrients work most effectively, and help your body gain the full power of Vitamin C. There is 500 mg of each provided in every dose (combining Ascorbic Acid and citrus fruit Bioflavonoids) to total 1000 mg. These nutrients are in the highest quality forms available.

NPN: 80033634

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OVERVIEW

It may be known as a seasonal superhero to fight the flu, but Vitamin C is actually a vital nutrient to keep you healthy all year long. Vitamin C is involved in virtually every biochemical and biological reaction in your body, working hard every minute to keep you alive.

Enerex Bio C 1000 offers an equal ratio of Vitamin C and its absorption-helper nutrients called Bioflavonoids so that you gain the full power of Vitamin C. In each dose, Vitamin C (Ascorbic Acid) is provided in 500 mg, and Bioflavonoids (derived from citrus fruit) is provided in 500 mg to total 1000 mg. Both nutrients are the highest quality forms available: for example, the Bioflavonoids have 22% Hesperidin content, the benchmark for their potency. .

Learn more about these two vital nutrients, Vitamin C and Bioflavonoids:

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Vitamin C

We have all heard that historically, before sailors on long voyages added limes and lemons to their ship's storage, scurvy (one of the earliest recorded diseases) would wipe out entire crews due to their prolonged deficiency of Vitamin C. Although they didn't know the reason, the importance of this nutrient to our health has been known for centuries.

The list of daily duties this workhorse performs is long. Here are just some of the health benefits it provides:

- **Tissue formation**

Vitamin C's major function is to manufacture collagen. Collagen keeps you looking and feeling young. It is the most important protein in the human body and is needed for healthy skin, bone, teeth, gums, connective tissue, tendons and cartilage. Without enough Vitamin C in our diet, our tissues cannot form properly.

- **Stress reduction**

The greatest concentration of Vitamin C is in our adrenal glands where it is used to produce the stress response hormones including adrenaline, cortisol and histamine. Vitamin C is essential to support the adrenals and our ability to handle stress.

- **Anti-aging**

Vitamin C is a potent antioxidant, protecting cells against the destructive effects of free radicals (reactive compounds that can damage cells). Vitamin C also helps to make Vitamin E; and it prevents Vitamins B1, B2 and B5 from oxidation (an imbalance created by oxygen that makes free radicals).

- **Cancer**

Vitamin C stimulates the activities of natural killer cells (a type of white blood cell) and anti-cancer agents. Low blood levels of Vitamin C are correlated with a greater risk of having certain forms of cancer. Some research suggests that it may help prevent lung, prostate, bladder, breast, cervical, intestinal, esophageal, stomach and pancreatic cancers, and leukemia.

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- **Vision**

A combination of antioxidants including Vitamin C has been shown to help slow the progression of age related macular degeneration (AMD).

- **Osteoporosis**

Vitamin C may help to prevent bone loss by reducing the “break-down” activity of the cells that remove calcium from bones. It also helps the body to absorb calcium from foods, which aids in bone development.

- **Cardiovascular health**

Vitamin C, in combination with Vitamin E, has been shown to slow the progression of atherosclerosis (“hardening of the arteries”) in people with high cholesterol levels. It raises HDL (good) and lowers LDL (bad) cholesterol, reduces plaque formation, helps lower high blood pressure, and lowers heart disease risk.

- **Immune function**

Vitamin C stimulates lymphocytes (immune cells that fight infection and disease), and increases other types of white blood cells to enhance the immune system’s effectiveness. And it has broad antiviral effects for all viruses including herpes and HIV. Taken daily as a preventative, it reduces the chance of contracting bacterial infections, too.

- **Detoxification**

Vitamin C may reduce the toxicity of the heavy metals like lead, mercury and arsenic found in the body in addition to aiding elimination of other chemical toxins. It may also reduce the negative side effects of drugs.

- **Wound healing**

Vitamin C speeds up the healing of scrapes, scars and burns, and surgery. Vitamin C may help to protect against negative side effects of radiation and chemotherapy.

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- **Preventing iron deficiency**

Vitamin C, taken at the same time as iron, can help the body absorb iron. It enhances the absorption of dietary iron (iron in foods) by up to 400%. This is helpful for women who have chronic iron deficient anemia.

The easy-come, easy-go vitamin

Vitamin C is water soluble. This means that the vitamin dissolves in water and doesn't require fat for absorption, which makes it easily absorbed and used. But it goes through your system quickly, and 75% is excreted in your urine within 24 hours of consuming it. That means you have to regularly replenish it.

Although Vitamin C is essential for human health, we are one of the only animals that can't make it in our bodies. We must obtain it through diet and/or supplements; and although we need to use it constantly, we can't store a very large quantity of it. It is thought that ancient humans, being constant gatherers of raw fruits for food, didn't need to make it. (Most animals make Vitamin C by converting glucose in the kidneys or liver, and many animals produce over 5,000 mg of Vitamin C a day.)

Are you getting enough?

There is no right answer since varying conditions such as stress, smoking, eating excessive sugar, exposure to UV rays, and certain pharmaceuticals (cortisone, tetracycline, the pill, aspirin) impact Vitamin C in the body. Studies have shown that people under chronic psychological or physical stress have lower levels of Vitamin C since stress increases Vitamin C excretion.

Health Canada has set the recommended daily intake of Vitamin C at a maximum 2000 milligrams for adults, and most guidelines state to get 1000 to 1200 mg of supplemental Vitamin C daily.

Certain segments of the population should get more: the elderly, if they eat mostly cooked fruits and vegetables (Vitamin C is heat sensitive); those with serious infections who may have reduced levels of Vitamin C; athletes, because intense exercise increases the need for more antioxidants; people experiencing severe stress because the adrenal glands use a lot of Vitamin C when they are active during stress; people healing from surgery or serious injuries because it is essential to form collagen required in wound healing.

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Chronically C-deficient?

In data from NHANES*, a nation-wide study done from 2003 through 2006, the population surveyed ate only 37% of the recommended daily amount of Vitamin C in total from all food sources (excluding supplements).

That may sound surprising when you consider how many potential sources of Vitamin C are available to us in fruits and vegetables. Many Canadians and Americans are simply not eating enough of these foods. In addition, Vitamin C is a fragile nutrient, and much of it is lost when foods are:

- a) picked under-ripe
- b) shipped for long periods before being sold
- c) processed and manufactured
- d) cooked

*(Fulgoni VL III, Keast DR, Bailey RL, Dwyer J: Foods, fortificants, and supplements: Where do Americans get their nutrients? J Nutr 2011, 141:1847-1854. and (Fairfield KM, Fletcher RH: Vitamins for chronic disease prevention in adults: scientific review. JAMA 2002, 287:3116-3126.)

To get more of this vital nutrient, eat fruits and vegetables that are rich in Vitamin C including yellow bell peppers, berries (strawberries/blueberries/ cranberries), citrus fruit, kiwi fruit, mango, and green leafy vegetables.

Bioflavonoids

Bioflavonoids are combined with Vitamin C in supplements because they complement each other; Bioflavonoids are needed for the body to absorb and use Vitamin C. In research, Ascorbic Acid by itself does not have the same benefits that natural Vitamin C – the way it is naturally found in fruit – does, with co-factor nutrients including Rutin, “Vitamin P” and other Bioflavonoids. (For example, Ascorbic Acid, which is the only ingredient in many Vitamin C supplements, does not even prevent scurvy when used by itself, according to studies.)

Bioflavonoids are water-soluble nutrients, and are called “flavone derivatives” — flavonoids are a type of antioxidant. Bioflavonoids include Hesperidin, Quercetin, Naringin and Rutin. Bioflavonoids are found along with Vitamin C in foods such as citrus fruits, bell peppers and buckwheat, and in other plants.

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Benefits of Bioflavonoids?

Hesperidin, Quercetin, Naringin and Rutin have been widely studied for their benefits. They offer antioxidant protection especially for the heart and circulatory system; and they also:

- Strengthen the immune system
- Protect the liver
- Help protect blood vessels from rupture or leakage
- Prevent excessive inflammation throughout the body
- Enhance the power of Vitamin C
- Protect cells from oxidative damage (free radicals caused by a chemical reaction with oxygen)

Flavonoids and the French

Bioflavonoids were first discovered and named by Dr. Albert Szent-Gyorgyi, the same researcher who discovered Vitamin C. Studies have been completed on Bioflavonoids since the 1930s (when they were discovered). One interesting study wanted to find out why French people that ate a Mediterranean diet had increased longevity and decreased incidence of heart disease.

The American researchers examined much of the previous research on this diet, and on Bioflavonoids. They found that, indeed, Quercetin and other Bioflavonoids affected the body's inflammation response; they prevented atherosclerotic plaque from forming; and they had antihypertensive (reducing high blood pressure) and antiarrhythmic effects that protect the heart. Those working on the study also concluded that Bioflavonoids have antiviral properties.

(Formical JV, Regelson W. "Review of the biology of Quercetin and related bioflavonoids." *Food Chem Toxicology*, 1995, Dec;33(12):1061-80. Department of Microbiology and Immunology, School of Medicine, Virginia Commonwealth University, Richmond, VA)

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Boosting Bioflavonoids

Just as the “bioavailability” (ability to be absorbed and used) of Vitamin C is increased when enough Bioflavonoids are present, the bioavailability of Bioflavonoids is increased when enough Vitamin C is present.

Bioflavonoids along with Vitamin C keep collagen – which has been called the "intercellular cement" of the body since it keeps everything together – in a healthy state. This is just one of the benefits they collaborate on. Here are 10 more:

As a team, they work together in the following areas to:

- reduce the risk of heart disease in their ability to lower cholesterol and triglycerides (fats which are a marker of heart health);
- help to improve the permeability of veins and tiny blood vessels, and they reduce red blood cell aggregation (when the cells stick together, which is not healthy because oxygen can't be transported as well);
- have anti-allergy and anti-inflammatory benefits, and can reduce swelling and fluid concentration in areas of the body where there is inflammation (such as injuries or infections);
- dilate (make wider) small arteries, which improves circulation;
- stimulate bile production, which increases digestion;
- influence endocrine glands, and therefore have positive effects on hormones. Vitamin C also helps the potent antioxidants in Bioflavonoids keep the hormone adrenalin from being oxidized (which creates destructive free radicals);
- have anti-parasitic and anti-bacterial properties to decrease infections and gastrointestinal issues;
- reduce platelet adhesiveness and studies show that they reduce the incidence of heart disease and stroke;
- be helpful in treating capillary injuries — together they are proven to help minimize bruising in injuries from contact sports;
- be helpful in treating bleeding gums, eczema and hemorrhaging.

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INGREDIENTS

EACH TABLET CONTAINS:

Medicinal Ingredients:

Vitamin C (Ascorbic Acid)	500 mg
Citrus Bioflavonoids* (Methoxyflavones) Lemon Fruit	500 mg

Non-Medicinal Ingredients:

Croscarmellose sodium, vegetable magnesium stearate, microcrystalline cellulose, silicon dioxide, vegetable stearin, carrageenan.

There are no other ingredients added to this formula.

*22% Hesperidin content (the benchmark for Bioflavonoid potency).

Directions:

Take one to three tablets daily, in divided doses with meals, or as directed by a health care professional.

FEATURES

Enerex Bio C 1000 contains the highest quality ingredients available — "C99" Vitamin C and "22% Hesperidin" Bioflavanoids. These quality markers place this immune product above others in this supplement category.

BIO C 1000 tablets contain 500 mg of Vitamin C plus 500 mg of citrus Bioflavonoids. We chose the equal ratio of Vitamin C and Bioflavonoid antioxidants because it is solidly based upon published peer-reviewed human studies showing this to be the optimal approach. Current nutritional knowledge supports the idea first suggested by Dr. Emanuel Cheraskin, one of the great pioneers in Vitamin C research, who said that bioflavonoids and Vitamin C should always be provided together in equal ratio.

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BIO C 1000 uses one of the most potent forms of Bioflavonoids with a Hesperidin content of not less than 22% as measured by High Pressure Liquid Chromatography (HPLC). Many products that contain Bioflavonoids use a less costly and less effective form of raw Bioflavonoids. The only way to determine the quality in a formula is to see if the label indicates the amount of Hesperidin present. If no claim is made for the Hesperidin content, then the product is less likely to contain the higher grade of bioflavonoids.

Taking Bio C 1000

It is suggested that **Enerex BIO C 1000** be taken three times a day, one with each meal. This will ensure adequate levels of Vitamin C and bioflavonoids in the blood stream throughout the whole day. This is far more effective than taking a larger single dose of the Vitamin. Being water soluble, Vitamin C stays in the blood stream for only three to four hours and must be replenished every few hours for maximum benefit. This is because the body uses what it can at that moment and then discards the rest quickly.

In fact, according to research conducted by Dr. Cheraskin, one 500 mg tablet taken every four hours (three per day), provides higher average blood level of Vitamin C than a single dose of 5000 mg.

AILMENTS

Antioxidants

Enerex Bio C 1000 offers an equal ratio of Vitamin C, one of the top antioxidant vitamins, and its absorption-helper nutrients called Bioflavonoids. Along with Vitamins A and E (known as ACE antioxidants), Vitamin C is the most researched for its antioxidant effects on cancer and cardiovascular disease. Bioflavonoids including Hesperidin, Quercetin and Rutin offer antioxidant protection especially for the heart and circulatory system; they protect all cells from oxidative damage; and they enhance the effectiveness of Vitamin C. Both are provided in 500 mg dosages of the highest quality forms available to total 1000 mg.

Immune System

Enerex Bio C 1000 offers an equal ratio of immune-boosting Vitamin C and its absorption-helper nutrients called Bioflavonoids. Vitamin C stimulates lymphocytes (immune cells that fight infection and disease), and increases other white blood cells to enhance the immune system's effectiveness. It has antiviral effects not only for the flu and cold, but all viruses, and

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also bacterial infections. Bioflavonoids Hesperidin, Quercetin and Rutin have been widely studied for their benefits to strengthen the immune system and enhance the power of Vitamin C as an immune booster.

Vitamins and Minerals

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PACKAGING

Why should you care about Enerex Bio C 1000's bottle? We chose this packaging because it protects the product and the planet.

Enerex products are housed in recyclable BPA-free PETE plastic containers to provide the best protection against oxidation, moisture, sunlight, and "chemical migration" from container to product (so the supplements don't acquire toxins from the plastic). In all of these areas, PETE is virtually equal to that of glass but without the larger environmental footprint left by glass packaging (it's very heavy to transport, using more fossil fuel).

PETE plastic is far superior to that of HDPE plastic: HDPE plastic is used for the majority of products on the market, but unlike more costly PETE bottles, HDPE plastic starts to immediately degrade the product inside because it doesn't provide a protective barrier to oxygen or moisture. Studies show high concentrations of chemicals that have migrated from HDPE bottles to the product inside compared to PETE and glass bottles.

ARTICLES

July 18, 2011: Vitamin C shows eyes & brain health potential: Study

November 18, 2010: Vitamin C may prevent and help sepsis

September 24, 2010: Vitamin C may improve mood: Study

September 09, 2010: Omega-3, Vitamins C and E may boost pancreatic health

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TESTIMONIALS

Please leave a testimonial if you like this product.

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