

Pancreas+

The active ingredient of this nutritional supplement can “**Support the Natural Self-Healing Capabilities of Pancreas and Renewal of Pancreas B-Cells**”. The conclusion occurs from scientific research data overview.

How to take:

1 capsule per day.

Health Benefits

Alpha lipoic acid

Alpha lipoic acid (LA) was first used therapeutically in 1959 in Germany to successfully treat acute liver poisoning, and also has been used to treat other liver pathologies. Berkson was the first to report the successful clinical use of LA in the United States, when he used it in 1977 to treat liver failure associated with mushroom poisoning following ingestion of *Amanita phalloides*. It possesses various pharmacological effects, including antidiabetic, antiobesity, hypotensive, and hypolipidemia actions. It exhibits reactive oxygen species scavenger properties against oxidation and age-related inflammation and refines metabolic syndrome components. In its natural role, LA is a key component of several mitochondrial enzyme complexes responsible for oxidative glucose metabolism and cellular energy production. When used pharmacologically, LA and DHLA function as unique and effective antioxidants, recycling vitamins C and E and elevating glutathione levels. It is likely that increased cellular glutathione levels maintain intracellular redox balance, thereby offering a protective effective against free radical attack. Consequently, this provides a formidable barrier to the deleterious effects of stress-induced modulation of cellular signaling enzymes, alteration of gene expression, and ultimately might facilitate the preservation of mitochondrial function.

Morus alba extract

Morus alba (Moraceae), also known as mulberry, is a deciduous tree that is widely distributed in Asia including Korea. All parts of this tree including roots, fruits, twigs and

leaves are of great significance in traditional medicine. Among them, the leaves of *M. alba* have been used in traditional medicine for the treatment of metabolic disorders such as diabetes, hyperlipidemia and high blood pressure. Anti-allergic and anti-melanogenesis activity of *M. alba* leaves also have been reported. Phenolic compounds of *M. alba* exert collaborative effects of diverse activities for the treatment of metabolic disorders, with the most important result being the pancreatic lipase inhibition.

Momordica charantia extract

Momordica charantia, known as bitter melon, bitter gourd, bitter squash, or balsam-pear, is a tropical and subtropical vine of the family Cucurbitaceae, widely grown in Asia, Africa, and the Caribbean for its edible fruit. Its many varieties differ substantially in the shape and bitterness of the fruit.

Bitter melon has been used in various Asian and African herbal medicine systems for a long time. In Turkey, it has been used as a folk remedy for a variety of ailments, particularly stomach complaints. In traditional medicine of India different parts of the plant are used as claimed treatments for diabetes (particularly Polypeptide-p, an insulin analogue), and as a stomachic, laxative, antibilious, emetic, anthelmintic agent, for the treatment of cough, respiratory diseases, skin diseases, wounds, ulcer, gout, and rheumatism. Modern science is researching for years the possible ability of *Momordica charantia* extract in decelerating toxicity induced cell damage, with many promising results, validating the folk medicine practices.

Vaccinium macrocarpon (Cranberry) extract

Vaccinium macrocarpon (also called large cranberry, American cranberry and bearberry) is a North American species of cranberry of the subgenus *Oxycoccus* and genus *Vaccinium*. Raw cranberries have moderate levels of vitamin C, dietary fiber and the essential dietary mineral, manganese (each nutrient having more than 10% of the Daily Value per 100 g serving, as well as other essential micronutrients in minor amounts. Raw cranberries, cranberry juice and cranberry extracts are a source of polyphenols - including proanthocyanidins, flavonols and quercetin. These compounds are being studied in vivo and in vitro for possible effects on the cardiovascular system, immune system and cancer. Due to the antioxidant properties, cranberries prevent illnesses that are a result of the

damage of free radicals. They increase the HDL – cholesterol (good cholesterol fraction), lowering the risk of heart diseases by 40%.

The health claims of the product can be summarized in the table below, including a few indicative bibliography sources. Please note that the sources cited are only a fraction of the research results that corroborate the potential health benefits.

Active Ingredient	Health Protective Claim	Sources
Alpha lipoic acid (LA)	antidiabetic, antiobesity, hypotensive, and hypolipidemia actions	1-2
<i>Morus alba</i> extract	treatment of metabolic disorders	3-5
<i>Momordica charantia</i> extract	antidiabetic and reparative effects	6-7
Cranberry extract	natural antioxidant, protect organism from oxidative damage, natural way to avoid risks caused by oxidation and peroxidation process	8

Bibliography

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4. Ha, Manh Tuan, et al. "Potential pancreatic lipase inhibitory activity of phenolic constituents from the root bark of *Morus alba* L." *Bioorganic & medicinal chemistry letters* 26.12 (2016): 2788-2794.
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6. Tahira, S., and F. Hussain. "Antidiabetic evaluation of *Momordica charantia* L fruit extracts." *The West Indian Medical Journal* 63.4 (2014): 294.
7. Xiang, Leiwen, et al. "The reparative effects of *Momordica Charantia* Linn. extract on HIT-T15 pancreatic beta-cells." *Asia Pac J Clin Nutr* 16.1 (2007): 249-252.
8. EFSA, Scientific Opinion on the substantiation of health claims related to various food(s)/food constituent(s) and protection of cells from premature ageing. EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA). DOI: <https://efsa.onlinelibrary.wiley.com/doi/10.2903/j.efsa.2010.1752>

Data on the toxicity of the product

Alpha lipoic acid

Alpha-lipoic acid (ALA) (CAS RN 1077-28-7), also referred to as thioctic acid, has been demonstrated to exhibit strong antioxidant properties. In order to test the long-term toxicity of ALA, 180 mg/kg body weight (bw)/day ALA for 24 months was administered. The only notable finding at 180 mg/kg bw daily dosage was a reduction in food intake relative to the controls and a concomitant decrease in body weight. The no-observed-adverse-effect level (NOAEL) is considered to be 60 mg/kg bw/day.

Momordica charantia extract

Reported side effects include diarrhea, abdominal pain, fever, hypoglycemia, urinary incontinence, and chest pain. Symptoms are generally mild, do not require treatment, and resolve with rest.

Bitter melon is contraindicated in pregnant women because it can induce bleeding, contractions, and miscarriage.

Vaccinium macrocarpon extract

The anticoagulant effects of warfarin may be increased by consuming cranberry juice, resulting in adverse effects such as increased incidence of bleeding and bruising. Other safety concerns from consuming large quantities of cranberry juice or using cranberry supplements include potential for nausea, increasing stomach inflammation, sugar intake or kidney stone formation.

This literature overview has been compiled upon request of SAPPARI HEALTH CARE COMPANY[®], regarding specific nutritional supplements health claims. The sources used for this bibliography research are peer-reviewed published scientific data, for each ingredient.

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