

We have put together this short explanation of the ingredients in our Release supplement. Each one was chosen for their health benefits, and because they are safe and effective. What makes Release unique and unable to be replicated is the patented - proprietary blend our doctors and researchers have created.

In addition to the research papers we cite at the end of this document, there has been additional extensive research behind each ingredient. If you would like more information about Release or any of the ingredients, please contact us directly.



Banaba

Banaba, commonly known as crepe myrtle, grows widely in tropical regions and countries such as the Philippines, India, Malaysia, China, and Australia. Banaba leaf has been used traditionally to address diabetes and metabolic dysfunction. Banaba leaf extract has been shown in human studies to lower fasting and after-meal blood glucose, as well as weight and body mass index (BMI). Banaba leaf works by activating proteins that help transport glucose from the bloodstream into the body's cell, as well as providing protection from the damaging effects of free radicals. Based on trials conducted to date, no adverse effects have been observed or reported in humans supplemented with standardized extracts of banaba leaf.

Rhodiola

Rhodiola rosea, commonly known as "golden root," is a very sturdy plant that grows at high altitudes in Siberia, and is known for its broad health benefits. Rhodiola has been extensively studied as an adaptogen, with various health-promoting effects—specifically mood balance and exercise endurance. Active constituents in rhodiola work by exerting antioxidant activity and stimulating production of substances that help the body cope with stress. Through numerous clinical trials, rhodiola has proven to have a very high safety profile.

Berberine Hydrochloride

Berberine is a compound isolated from various medicinal plants such as *Berberis vulgaris* (barberry) and *Hydrastis canadensis* (goldenseal). Berberine is traditionally used in Chinese and Ayurvedic medicine to address diabetes. Research in humans shows berberine supplementation has powerful, positive impacts on multiple facets of metabolic function including blood sugar regulation, insulin sensitivity, and blood lipid balance. Berberine works by regulating the activity of enzymes and other proteins that promote blood sugar balance and help prevent metabolic dysfunction. Trials of supplementation in humans have shown berberine to be very safe for daily consumption.

Salacia

Salacia reticulata has been used in Ayurvedic medicine for thousands of years to address diabetes and metabolic dysfunction. In clinical trials, supplementation with salacia bark extract led to significant reductions in fasting blood sugar as well as glycosylated hemoglobin (HbA1c) and low-density lipoprotein (LDL) cholesterol. Salacia extract works by decreasing the activity of enzymes that can increase blood sugar and by inhibiting synthesis of glucose in the liver. In both human and animal trials, salacia has been shown to be safe for supplemental use.

Gardenia

Gardenia fruit has been used for centuries in Traditional Chinese Medicine to address inflammation. In one controlled trial, supplementation with gardenia fruit decreased weight, body fat percent, body mass index (BMI), and insulin resistance. Gardenia works by inhibiting the activity of certain enzymes that elevate blood sugar and increase the absorption of fat. Gardenia has a long history of safe use in traditional medicine, and in experimental research the active constituents of gardenia have demonstrated a low toxicity profile at clinical dosages.

Apple Extract

Apple skins contain a high concentration of healthful compounds known as polyphenols that provide a range of benefits including protection against oxidative stress and serving as prebiotic support for a healthy gut microflora. Human research on apple polyphenol supplementation shows a significant decrease in visceral fat and body mass index (BMI) as well as total cholesterol and low density lipoprotein (LDL) cholesterol. Apple extract works by multiple mechanisms including inhibition of intestinal glucose and fat absorption, reduction of a key enzyme involved in cholesterol formation, inhibition of inflammatory substances, and antioxidant activity. In human and animal studies, apple extract has been shown to be very safe for consumption.

Inositol

Inositol belongs to a family of naturally occurring compounds that includes myo-inositol, D-chiro-inositol and several other forms. Inositol is a primary component of cellular membranes and has been found to be essential for healthy insulin function as well as serotonin activity modulation. Clinical research on women with polycystic ovary syndrome (PCOS) shows that inositol supplementation reduces insulin resistance, body mass index (BMI), and waist circumference as well as total cholesterol, triglycerides, and blood pressure. Inositol works through an insulin-like effect on certain metabolic enzymes and by modulating glucose metabolism, which helps keep blood sugar levels steady. Inositol has been shown in human trials to be safe and well tolerated at high dosages.

Chromium

Chromium is widely distributed in foods, but in small quantities. Refining foods such as flour or sugar depletes them of chromium. Human research on chromium supplementation has shown an increase in insulin responsiveness, blood sugar modulation, and support for a healthy inflammatory response. Chromium works in the body by enhancing the binding of insulin to cell receptors, which helps to stabilize blood sugar levels. Chromium is widely regarded as safe and supplementation in humans and animals has resulted in few, if any, side effects.

Zinc

Zinc is an essential trace mineral that plays an important role in healthy pancreatic function and protection from oxidative stress. Zinc is an integral component of the primary antioxidant super oxide dismutase (SOD), a critical player in the body's defense against oxidative damage. Zinc supplementation in humans has been shown to reduce insulin resistance, increase insulin sensitivity, and protect against oxidative stress. In addition to playing a role in the body's antioxidant defense system, zinc works by supporting proper insulin production and function. Zinc has been shown in numerous clinical studies to be safe for human consumption.

Magnesium

Magnesium is an essential macromineral found in a wide variety of foods and beverages, in particular nuts, legumes, grains, seafood, and green leafy vegetables. In spite of this, the Standard American Diet (SAD), high in processed foods, is low in magnesium. Research on magnesium supplementation in humans has shown a lowering of fasting blood sugar and insulin resistance and positive changes in blood lipid balance such as decreased triglycerides and increased high density lipoprotein (HDL), the healthier form of cholesterol. Magnesium works by supporting proper insulin receptor function and plays an important role in healthy glucose metabolism. Magnesium has been shown in numerous clinical trials to be safe for human consumption.

References

- Tsuchibe S, Kataumi S, Mori M, Mori H. An inhibitory effect on the increase in the postprandial glucose by banaba extract capsule enriched corosolic acid. *J Integr Study Diet Habits*. 2006;17:255-9.
- Stohs SJ, Miller H, Kaats GR. A review of the safety and efficacy of banaba (*Lagerstroemia speciosa* L.) and corosolic acid. *Phytother Res*. 2012;26:317-24.
- Bystritsky A, Kerwin L, Feusner J. A pilot study of *Rhodiola rosea* (Rhodax®) for generalized anxiety disorder (GAD). *J Altern Complement Med*. 2008;14:175-80.
- Ishaque S, Shamseer L, Bukutu C, Vohra S. *Rhodiola rosea* for physical and mental fatigue: a systematic review. *BMC Complement Altern Med*. 2012;12:70.
- Perez-Rubio KG, Gonzalez-Oriz M, Martinez-Abundis E, Robles-Cervantes JA, Espinel-Bermudez MC. Effect of berberine administration on metabolic syndrome, insulin sensitivity, and insulin secretion. *Metab Syndr Relat Disord*. 2013;11:366-9.
- Yan Z, Zheng W, Fan J, Sun G. Meta-analysis of the effect and safety of berberine in the treatment of type 2 diabetes mellitus, hyperlipemia and hypertension. *J Ethnopharmacol*. 2015;161:69-81.
- Shivaprasad HN, Bhanumathy M, Sushma G. *Salacia reticulata* improves serum lipid profiles and glycemic control in patients with prediabetes and mild to moderate hyperlipidemia: a double-blind, placebo-controlled, randomized trial. *J Med Food*. 2013;16:564-8.
- Stohs SJ, Ray S. Anti-diabetic and anti-hyperlipidemic effects and safety of *Salacia reticulata* and related species. *Phytother Res*. 2015;29:986-95.
- Shin JS, Huh YS. Effect of intake of gardenia fruits and combined exercise of middle-aged obese women on hormones regulating energy metabolism. *J Exerc Nutrition Biochem*. 2014;18:41-9.
- Akazome Y, Kametani N, Kanda T, Shimasaki, H, Kobayashi S. Evaluation of safety of excessive intake and efficacy of long-term intake of beverages containing apple polyphenols. *J Oleo Sci*. 2010;59:321-38.
- Santamaria A, Giordano D, Corrado F, Pintauro B, Interdonato ML, Vieste GD, Benedetto AD, D'Anna R. One-year effects of myo-inositol supplementation in postmenopausal women with metabolic syndrome. *Climacteric*. 2012;15:490-5.
- Sharma S, Agrawal RP, Choudhary M, Jain S, Goyal S, Agarwal V. Beneficial effect of chromium supplementation on glucose, HbA1C and lipid variables in individuals with newly onset type-2 diabetes. *J Trace Elem Med Biol*. 2011;25:149-53.
- Lamson DW, Plaza SM. The safety and efficacy of high-dose chromium. *Altern Med Rev*. 2002;7:218-35.
- Islam MR, Attia J, Ali L. Zinc supplementation for improving glucose handling in pre-diabetes: a double blind, randomized, placebo controlled pilot study. *Diabetes Res Clin Pract*. 2016;115:39-46.
- Guerrero-Romero F, Simental-Mendia LE, Hernandez-Ronquillo G, Rodriguez-Moran M. Oral magnesium supplementation improves glycaemic status in subjects with prediabetes and hypomagnesaemia: A double-blind placebo-controlled randomized trial. *Diabetes Metab*. 2015;41:202-7.