

# Glucemboss

The active ingredient contained in “Glucemboss” supplement, can support the characterization “Possible Way for Preventing Diabetes’ Early Appearance”. Every claim listed below is supported by scientific research results.

## **How to take:**

1-3 capsules per day before a main meal.

## **Health Benefits**

### ***Many years of life lost to young-onset type 2 diabetes.***

Years of life lost to diabetes is a metric that is receiving increasing attention given its potential use in health education and advocacy. In the latest issue of “The Lancet Diabetes & Endocrinology” journal, the Emerging Risk Factors Collaboration show, by pooling data from cohorts in high-income countries, that loss of life is considerably greater in people who are diagnosed with type 2 diabetes at a younger age than in those who are diagnosed when older. People with young-onset type 2 diabetes are more insulin-resistant, have less pancreatic reserve, have greater difficulty achieving glycemic control, and have a greater risk of complications than those diagnosed at an older age. Less frequently mentioned is the added risk accruing from the ongoing nutritional transition, including the shift to a greater intake of ultraprocessed food, which is widespread in childhood and, among adults, is more widely adopted by younger generations. Because the findings of the Emerging Risk Factors Collaboration are derived from the follow up of more than 1.5 million participants from multiple countries, young-onset diabetes can now also be characterized as a condition that significantly reduces life expectancy. Apart from making lifestyle changes and reducing intake of ultra-processed foods, traditional medicine offers tools that can help with preventing young-onset diabetes.

### 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.

The extracts of *M. alba* leaves at the phytochemical level improve glucose uptake. Chlorogenic acid, isoquercitrin, and quercitrin, present in the leaves of *Morus alba*, have hypoglycemic properties and an ameliorating effect on diabetic nephropathy. This leaf has pharmacological effects such as glucose absorption, insulin secretion production, antioxidant and anti-inflammatory agent, antihyperglycemic and antihyperlipidemic activities, and obesity management. Additionally, *M. alba* leaves have pharmacological effects on diabetes mellitus that include glucose absorption, production of insulin secretion, antioxidant agent, antihyperglycemic and antihyperlipidemic activities, and obesity control. Phytochemical studies based on the structure–activity relationship, the presence of hydroxyl, resorcinol, and prenyl moieties pointed *M. alba* extracts as important factors in the prevention of diabetes’ pathological mechanisms, and these findings have been further supported by molecular docking analysis.

**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
<i>Morus alba</i> extract	Antioxidant, anti-cholesterol, anti-obesity and hepatoprotective effects, treatment of metabolic disorders	1-7

## Bibliography

1. Morales Ramos JG, Esteves Pairazamán AT, Mocarro Willis MES, Collantes Santisteban S, Caldas Herrera E. Medicinal properties of *Morus alba* for the control of type 2 diabetes mellitus: a systematic review. *F1000Res*. 2021 Oct 8;10:1022. doi: [10.12688/f1000research.55573.1](https://doi.org/10.12688/f1000research.55573.1) PMID: 34912543; PMCID: PMC8593624.
2. Kwon, R.-H.; Thaku, N.; Timalcina, B.; Park, S.-E.; Choi, J.-S.; Jung, H.-A. Inhibition Mechanism of Components Isolated from *Morus alba* Branches on Diabetes and Diabetic Complications via Experimental and Molecular Docking Analyses. *Antioxidants* 2022, 11, 383. DOI: <https://doi.org/10.3390/antiox11020383>
3. Tang, Cheng, et al. "Clinical potential and mechanistic insights of mulberry (*Morus alba* L.) leaves in managing type 2 diabetes mellitus: Focusing on gut microbiota, inflammation, and metabolism." *Journal of Ethnopharmacology* (2023): 116143. DOI: <https://doi.org/10.1016/j.jep.2023.116143>
4. Zhang, Hongxia, et al. "Effects of mulberry fruit (*Morus alba* L.) consumption on health outcomes: A mini-review." *Antioxidants* 7.5 (2018): 69. DOI: <https://doi.org/10.3390/antiox7050069>
5. Batiha, Gaber El-Saber, et al. "Morus alba: a comprehensive phytochemical and pharmacological review." *Naunyn-schmiedeberg's Archives of Pharmacology* (2023): 1-15.
6. Zhang, Ruiyuan, et al. "Mulberry leaf (*Morus alba* L.): A review of its potential influences in mechanisms of action on metabolic diseases." *Pharmacological Research* 175 (2022): 106029
7. Tian, Simin, Mingmin Tang, and Baosheng Zhao. "Current anti-diabetes mechanisms and clinical trials using *Morus alba* L." *Journal of Traditional Chinese Medical Sciences* 3.1 (2016): 3-8.
8. Duncan, Bruce B., and Maria Inês Schmidt. "Many years of life lost to young-onset type 2 diabetes." *The Lancet Diabetes & Endocrinology* (2023). DOI: [https://doi.org/10.1016/S2213-8587\(23\)00255-3](https://doi.org/10.1016/S2213-8587(23)00255-3)

## **Precautions**

Do not take the product in the following cases: 1) Hypersensitivity to any of the ingredients. 2) Chronic digestive disorders (including absorption disorders), chronic inflammatory bowel disease, sub occlusive syndrome antecedents, diseases that may be augmented by intestinal gas production, severe hepatic, or renal disorders. If intestinal occlusion is suspected, cease administration. Do not use concomitantly with antidiabetic medicines. In case of acute hypoglycemia during administration, treatment with sugar is inappropriate. Glucose must be used to restore blood glucose levels. A diet low in sugar and other glucides is recommended during administration of the product. Not recommended for children, pregnant or breast-feeding women. Do not exceed the recommended daily dosage. Food supplements should not be used as a substitute of a balanced diet. Keep away from young children. This product is not intended for the prevention, cure or treatment of a human disease. Consult with your doctor if you are pregnant, breast-feeding, taking pharmaceutical treatment or having health problems.

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

Tsolakou Annia  
MSc in Pharmacognosy and Natural Products Chemistry  
Research Group of Clinical Pharmacology and Pharmacogenomics  
Faculty of Pharmacy, School of Health Sciences  
National and Kapodistrian University of Athens