Regulating blood sugar levels is key to maintaining a healthy weight, a healthy heart and other organs, and has serious implications in diabetes. Failure to maintain blood glucose in the normal range leads to conditions of persistently high (hyperglycemia) or low (hypoglycemia) blood sugar. Diabetes mellitus, characterized by persistent hyperglycemia from any of several causes, is the most prominent disease related to failure of blood sugar regulation.

Controlling blood sugar levels is a factor in conditions (generally diabetes related) such as retinopathy (eye disease), nephropathy (kidney disease), neuropathy (nerve disease) and cardiovascular disease. By keeping blood sugar levels stable, you significantly reduce your risk of these complications.

Gluco-FX is designed to stabilize blood sugar levels with each ingredient carefully chosen and described as follows.

**R-Alpha-lipoic acid** can lower blood sugar levels and has been used in Europe for over 30 years for diabetic complications caused by overproduction of reactive oxygen species and nitrogen radicals. Similar to insulin, it reduces glycation and enhances the movement of blood sugar into our cells. It functions as a co-factor for a number of vital enzymes responsible for the conversion of glucose fatty acids into adenosine triphosphate (ATP) and reduces the amount of glucose stored as fat. It has also been shown to enhance insulin-stimulated glucose disposal.

One study determined that oral administration of alpha-lipoic acid significantly increases peripheral insulin sensitivity in patients with type 2 diabetes mellitus. It has also been shown to be particularly helpful for conditions arising from the disease.

As a potent antioxidant, it helps reduce peripheral and autonomic neuropathy, painful and debilitating conditions that can result from a blood sugar imbalance. Several studies indicate that this is partly due to its actions as an antioxidant and by improving the circulation to tiny blood vessels supplying nerve tissue.

**Bioavailability of R- and S-lipoic acid** has been studied extensively in humans using single dose administration. After oral intake of the combined mixture, a 60% higher response is found for R-lipoic acid than for the S-form, which is highly significant.

Recent studies have suggested that the S-enantiomer actually has an inhibiting effect on the R-enantiomer, reducing its biological activity substantially and actually adding to oxidative stress rather than reducing it. Furthermore, the S-enantiomer has been found to reduce the expression of GLUT4, the agent responsible for glucose uptake in cells, and thereby reducing insulin sensitivity.

**Chromium Polynicotinate** is an essential trace mineral that plays a significant role in sugar metabolism helping to bring blood sugar levels under control in type 2 diabetes. A 4-month study reported in 1997 followed 180 Chinese men and women with type 2 diabetes, and showed that HbA1c values (a measure of long-term blood sugar control) improved significantly after 2 months and fasting glucose (a measure of short-term blood sugar control) was also lower.

A double-blind, placebo-controlled trial of 78 people with type 2 diabetes compared chromium against placebo. Sixty-seven participants who completed the study showed that chromium significantly improved blood sugar control. Positive results were also seen in other small double-blind, placebo-controlled studies of people with type 2 diabetes.

Another placebo-controlled study of 30 women with gestational diabetes (diabetes during pregnancy) found that supplementation with chromium significantly improved blood sugar control.

**Vanadyl sulfate** has been found to benefit both Type I and Type II diabetes. In humans it appears to have the insulin-mimicking effect that Type I diabetics need, as well as the ability to overcome the insulin resistance that defines Type II diabetes. Based on these findings, studies involving human subjects have been showing promising results. Studies show that vanadyl sulphate increases the rate at which carbohydrate and protein enter muscle cells and diverts sugar away from storage in fat cells, reducing the amount of fat your body stores.

**Banaba Leaf** (Lagerstroemia speciosa L.) contains corosolic acid, a triterpenoid compound that stimulates glucose transport into cells and safely lowers blood glucose levels. Corosolic acid is clinically proven to activate cell glucose-transporter “shuttles” and thus helps balance blood glucose levels. Amazingly, it also shows a memory effect of blood glucose lowering even after the treatment is stopped. (Judy, W., SW Inst. of Biomed. Res., Brandenton 1999). Even at a very small concentration, corosolic acid shows significant glucose transport stimulating activity. Numerous studies, primarily in Japan, indicate that oral administration of corosolic acid results in significant hypoglycemic effects.

In addition, corosolic acid also delivers strong antioxidant activity and prevents cell membrane lipid peroxidation. By controlling blood sugar, it also helps maintain low blood pressure and normal kidney function.

In diabetic mice, rats and rabbits, banaba feeding reduces elevated blood sugar and insulin levels to normal.
Gluco-FX was that Momordica, alongside other plants like Gymnema sylvestre, of the best herbal remedies for fighting the disease. In this study, all of Therapies at Harvard Medical School claimed that Momordica was one plant remedies for treating diabetes, scientists from the Division which assessed the effectiveness of various plant remedies for treating diabetes, scientists from the Division for Research and Education in Comprehensive and Integrative Medical Therapies at Harvard Medical School claimed that Momordica was one of the best herbal remedies for fighting the disease. In this study, all of the available medical literature on plants and supplements for diabetes was reviewed and involved 4,565 diabetic patients. The final conclusion was that Momordica, alongside other plants like Gymnema sylvestre, was extremely beneficial in terms of lowering blood sugar levels and preventing diabetic-related complications. In another study, US scientists from the Natural Standard laboratory, in Cambridge, Massachusetts, reviewed the general actions of Momordica on blood sugar metabolism. They found that certain components of Momordica resemble the chemical structure of insulin, providing valuable insight into exactly how Momordica works. Like insulin, it is able to stimulate the cells to utilize glucose more effectively and also appears to be able to reduce the production of excess glucose from the liver.

Gymnema sylvestre also helps to lower and balance blood sugar levels primarily because it inhibits dietary absorption of glucose. Its active ingredients are a group of oleanane type triterpenoid saponins known as gymnemic acids. Gymnemic acid has a unique shape similar to that of glucose, allowing it to fill cell receptors in the lining the intestines, thereby preventing uptake of sugar molecules. Gymnema can also regenerate insulin-producing beta cells of the pancreas, leading to an enhancement in the production of endogenous insulin, further controlling blood sugar.

The U.S. National Library of Medicine (NLM) and the National Institutes of Health (NIH) find “good scientific evidence” that gymnema sylvestre can be helpful in controlling blood sugar levels in people with type 1 and type 2 diabetes.

**Our Company**

Since 1997, Integra Nutrition Inc. has been the exclusive distributor of Alpha Science products. All our products are 100% natural and contain no additives. Our products are regularly assayed for heavy metal contamination and a complete certificate of analysis verifies the purity and content of each ingredient.

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**Additionalextras**