

# Lifestyle Modifications & Nutritional Supplements To Manage Type II Diabetes

*“Hyperglycemia and excesses of ineffective insulin cause rampant free-radical activity . . . and increased inflammation. High blood glucose/high insulin levels = accelerated aging and an increased risk of premature death.”*

~ Life Extension Disease Prevention and Treatment

**A**re you one of the 17 million people in this country that has been diagnosed with Type II diabetes (“Type II”)? Or has your doctor warned that you are pre-diabetic or at risk for diabetes because you haven’t addressed your hypoglycemia? If you suspect that high blood sugar is compromising your health or may cause serious future health problems, see your doctor and keep reading to learn some natural ways to manage your condition.

## What Is Type II Diabetes?

The isles of Langerhans in the pancreas secretes the hormone insulin, which regulates glucose, the sugar the body uses for energy. Type II diabetes is marked by elevated blood glucose levels resulting from either the inadequate production of insulin by the pancreas or the cells’ inability to use insulin (the more common cause, called insulin resistance/insensitivity). Insulin resistance is also a component of what Gerald Reaven, M.D., a Stanford University researcher, labeled Syndrome X (now called Metabolic Syndrome), a cluster of disorders that includes obesity, hypertension, elevated triglycerides, low HDL cholesterol, and increased risk of heart disease. According to the American Diabetes Association, normal fasting blood glucose is below 100 mg/dl. A person with prediabetes has a fasting blood sugar level of 100-125 mg/dl, while a diabetic has a blood glucose level of 126 mg/dl or higher.

Signs and symptoms include extreme fatigue (especially 2-4 hours after a meal), blurred vision, slow wound healing, unwarranted hunger, excessive thirst, and frequent urination. Since excess blood glucose attacks cells throughout the body, it can cause numerous health complications, including: (1) Alzheimer’s disease; (2) heart and vascular disease; (3) kidney disease (by damaging the nephrons, its filtration component); (4) neuropathy (nerve damage that can cause decreased muscle control and pain or lost sensation in the hands or feet and); (5) nonalcoholic fatty liver disease (due to the production of excess fatty acids and their conversion to triglycerides, which are stored in the liver, resulting in free-radical damage and inflammation); (6) obesity (insulin is the body’s primary fat-storage hormone, so a high insulin level promotes weight gain); (7) periodontal disease; and (8) eye problems (retinopathy, blood vessel damage in the retina; cataracts, blind spots in

the lens; and glaucoma, abnormal eye pressure caused by an imbalance of production and outflow of eye fluid).

## Prevention as Medicine: Critical Lifestyle Modifications

The risk factors for Type II are age (usually sets in after age 40), ethnicity (African, Asian, and Native Americans, and Latinos, are at highest risk), lifestyle (lack of regular exercise lowers insulin sensitivity), diet, weight, smoking, prescription drugs, and genetics. Julian Whitaker, M.D., author of *Reversing Diabetes* and founder of the Whitaker Wellness Institute in California, maintains that individuals can take various steps to prevent and even reverse this condition.

First, get rid of that belly! Maintaining a healthy weight is the most important therapy to prevent or reverse Type II. Men should aim for a waist circumference of less than 37” while women should target less than 34.5”. Body mass index (BMI), (which is not always an accurate weight evaluation tool) should be 18.5-24.9.

Regular aerobic exercise, resistance training/weight lifting, and a healthy diet, are the keys to long term reduction of excess body fat. Exercise need not be extremely strenuous, and even a 10-minute walk after meals can clear glucose out of your bloodstream. To maximize results, you should exercise 45-60 minutes once daily and your workouts should increase your heart rate and cause you to break a sweat. Consider working with a fitness trainer to obtain direction and motivation for a regular regimen.

A “healthy diet” in this context: (1) excludes saturated, hydrogenated, or trans fats (beef, pork, lamb, or duck); (2) minimizes simple carbohydrates (foods with a high glycemic index: sweets; pasta; bread; potatoes; rice); and (3) includes low-sugar fruits (berries and apples), omega-3 fatty acids (especially in salmon, sardines, tuna, haddock, walnuts and pumpkin seeds), and an abundance of vegetables and legumes. Dr. Whitaker also recommends cinnamon (especially as an encapsulated extract), moderate amounts of high-quality dark chocolate (minimum 70% cocoa), apple cider vinegar (2 TBS, especially before a high-carbohydrate meal), and white tea. Also, don’t skip breakfast. Those who eat breakfast every day are 33-50% less likely to be obese and have insulin resistance.

Stress reduction is also central to blood sugar control. Stress and anxiety can cause both Type II and Metabolic Syndrome and, if not controlled, can shorten lifespan.

## Treatment:

### Drugs vs. Nutritional Supplements

In addition to the lifestyle changes discussed above, there are two avenues for treating your diabetes.

### The Conventional Approach

Traditional doctors generally prescribe one of five classes of diabetes drugs. The drugs either stimulate pancreatic beta cells to release more insulin (thus weakening the beta cells more quickly and raising the risk of degenerative disease), or decrease the liver's production of glucose and make muscle and/or fat tissue more sensitive to insulin (e.g., metformin/ Glucophage, a more tolerated choice, but contraindicated with congestive heart failure, kidney and liver disease, and excessive alcohol use).

All of the diabetic drugs have numerous potential side effects, including: (1) digestive problems such as nausea, vomiting, heartburn, diarrhea, bloating/gas/stomach pain, and appetite loss; (2) joint pain; (3) nervousness and sweating; (4) upper respiratory infections; (5) headaches/sinus irritation; and (6) heart disease and strokes.

### Nutritional Therapies

Many nutritional supplements are indicated in the treatment of the various complications attendant to Type II. The scope of this article permits just a brief discussion of some of those nutrients that help manage blood sugar, which are listed alphabetically for ease of reference rather than in order of importance.

**Bilberry:** Two key flavonoids in this fruit reduce blood glucose levels. Choose a product that is standardized to contain 25% anthocyanidins.

**Chromium (Chromemate/GTF):** This trace mineral combats insulin resistance and facilitates uptake of glucose in the cells and weight loss. Good food sources include brewer's yeast and whole grains.

**Gymnema Sylvestre:** An herb that stimulates pancreatic production of insulin.

**Magnesium:** Type II diabetics frequently suffer a deficiency in magnesium, which increases the number and sensitivity of insulin receptors, helps correct carbohydrate intolerance, and positively impacts ischemic heart disease, retinopathy, and vascular complications.

**Silymarin (Standardized):** An antioxidant flavonoid from the herb milk thistle, silymarin lowers/stabilizes blood glucose levels and protects the liver, the most important tissue involved in insulin utilization.

**Vanadium (As Vanadyl Sulfate):** Found in shellfish and mushrooms, this highly effective trace mineral helps maintain normal blood sugar levels by mimicking insulin.

### Conclusion

Don't ignore your symptoms if you suspect that you may be prediabetic or diabetic, or have been diagnosed with hypoglycemia. If you are overweight, start modifying your lifestyle to lose weight as soon as possible. If you would prefer to manage your blood sugar naturally, seek the guidance of an expert in alternative medicine and discuss your options with your doctor.

*The statements in this article have not been evaluated by the Food and Drug Administration. None of the nutritional supplements discussed herein are intended to diagnose, treat, cure or prevent any disease.*