

Type 2 Diabetes Support Protocol

Clinical support for promoting healthy blood glucose and insulin metabolism through evidence-based lifestyle, dietary, and nutrient interventions.*

Pathophysiology

More than **38 million Americans (about 1 in 10)** have diabetes, with **90% to 95% of cases** being type 2 diabetes (T2DM). While T2DM typically develops after age 45, it is increasingly diagnosed in children, teens, and young adults.¹ Additionally, **98 million U.S. adults are prediabetic**, putting them at risk for developing T2DM.² In diabetes, cells become resistant to **insulin**, the hormone that helps glucose enter cells to be used for energy. To compensate, the pancreas increases insulin production; however, over time, the pancreatic beta cells become overworked and begin to fail, resulting in insufficient insulin production and rising blood glucose levels. This **progression** — from insulin resistance to prediabetes and, ultimately, T2DM — primarily affects the body's ability to respond to and produce insulin. Chronically high blood glucose can damage tissues throughout the body, increasing the risk of serious complications, including heart disease, vision loss (diabetic retinopathy), and kidney disease (diabetic nephropathy).¹ **Risk factors** for prediabetes include being overweight (BMI \geq 25), physical inactivity, a family history of diabetes, hypertension, low high-density lipoprotein (HDL) cholesterol, high triglycerides, gestational diabetes, and polycystic ovary syndrome. **Diabetes screening is recommended starting at age 45**, especially for individuals with these risk factors.^{3,4} Healthy **lifestyle and dietary changes**, such as reducing consumption of sugar-sweetened beverages, increasing fiber intake, incorporating probiotic-rich foods, and following a Mediterranean diet, offer considerable long-term benefits in preventing T2DM.³⁻⁵

Diagnostic Biomarkers and Clinical Indicators

- Hemoglobin A1C (HbA1c)⁶
 - Normal: \leq 5.6%
 - Prediabetes: 5.7% to 6.4%
 - Diabetes: \geq 6.5%
- Fasting Glucose⁶
 - Normal: $<$ 100 mg/dL
 - Prediabetes: 100 to 125 mg/dL
 - Diabetes: \geq 126 mg/dL
- Fasting Insulin⁷
 - Normal: 5 to 15 μ U/mL
- Homeostatic Model Assessment of Insulin Resistance (HOMA-IR)⁸
 - Normal: $<$ 1
 - Indicates Insulin Resistance: $>$ 1.9
- Oral glucose tolerance test (OGTT)⁶
 - Normal: $<$ 140 mg/dL
 - Prediabetes: 140 to 200 mg/dL
 - Diabetes: \geq 200 mg/dL
- **Designs for Health Metabolomics Spotlight™** and/or **Designs for Health Genomic Spotlight™** – Metabolic and macronutrient processing and endocrine health reports

Diet and Nutritional Considerations

- Recommend a **Mediterranean-style diet** emphasizing **low-glycemic index foods**, and avoid refined carbohydrates, high glycemic foods, and beverages^{9,10}
- Recommend achieving **at least the adequate intake of dietary fiber** (25 g/day for women and 38 g/day for men aged 19 to 50, and 21 g/day for women and 30 g/day for men over 50) by consuming **fiber-rich foods**:¹¹
 - Non-starchy vegetables such as rainbow chard, kale, bok choy, cauliflower, spinach, cabbage, asparagus, Brussels sprouts, broccoli, and broccoli sprouts
 - Low-glycemic fruits such as berries, plums, apples, peaches, pears, pomegranates, and cherries
 - Legumes such as lentils, chickpeas, black beans, and navy beans
 - Ground flax or chia seeds
- Encourage patients to prioritize daily intake of **lean protein sources**, such as chicken, fish, or legumes, and **health-promoting fats**, such as extra-virgin olive oil and nuts, to support glucose metabolism and support overall metabolic health^{10,12}

Lifestyle Interventions

- Advise incorporating a **resistance exercise regimen** into their routine to promote healthy insulin metabolism and mitochondrial function. Skeletal muscle contraction serves as an insulin-independent mechanism for glucose transport¹³
- Educate on the importance of increasing **non-exercise activity thermogenesis (NEAT)** through activities such as walking, yard work, and other forms of exercise to support healthy weight management and cardiovascular health¹⁴
- Promote **proper hydration** as daily water intake is associated with a reduced risk of T2DM^{15,16}
- Recommend **relaxation and stress management techniques** through daily meditation, yoga, and deep breathing^{17,18}

Supplement Protocol

Supplementation amounts are based on a 150-pound healthy adult and may be adjusted according to body weight. Practitioners should individualize protocol use by selecting some or all listed products, determining timing of introduction (i.e., all at once or staggered), and guiding duration based on clinical judgment, patient presentation, complaints, and biomarkers.

Product	Amount and Duration	Formula Highlights
Progenalen® Pro Peptide	1 capsule per day in the morning 3 months; reevaluate biomarkers, signs, and symptoms	<ul style="list-style-type: none"> Novel bioactive peptides designed to support healthy cellular aging, starting with supporting healthy glucose metabolism* May also help promote cellular health, healthy fat metabolism, and help maintain healthy cholesterol levels already within the normal range* Powered by cutting-edge bioactive polypeptide technology and the next-generation ingredient IMG-1®
Metabolic Synergy™	3 capsules twice per day 3 months; reevaluate biomarkers, signs, and symptoms	<ul style="list-style-type: none"> Comprehensive multivitamin/mineral formula that helps maintain healthy glucose and insulin metabolism; featuring R-lipoic acid, taurine, and carnosine not typically included in standard commercial multivitamins* Supports the conversion of carbohydrates to be used for energy by providing nutrients for the tricarboxylic acid cycle* Contains chelated minerals for maximum absorption and bioavailability
Sensitol™	2 capsules twice per day 3 months; reevaluate biomarkers, signs, and symptoms	<ul style="list-style-type: none"> Supports normal insulin function and cellular metabolism* Features two naturally occurring isomers of inositol — myo-inositol (MI) and D-chiro-inositol (DCI) — along with alpha-lipoic acid The MI and DCI isomers of inositol have been recognized to have important functions in human physiology, such as mediating normal cell signaling from insulin and from sex and thyroid hormones*

Optional Support	
Annatto-E® 300	To promote healthy vitamin E isomer status in order to help support metabolic health and foundational wellness, take 1 softgel per day of Annatto-E® 300.*
GlucoSupreme™ Herbal	For further support in healthy insulin and glucose metabolism, as well as potentially supporting normal GLP-1 secretion, take 2 capsules twice daily with meals (4 caps total per day) of GlucoSupreme™ Herbal.* Warning: Use only under the supervision of a qualified health-care practitioner who can actively monitor your blood sugar levels if you are a diabetic and/or are also using blood sugar-modulating medication or insulin.

This information is provided as a medical and scientific educational resource for the use of physicians and other licensed health-care practitioners ("Practitioners"). This information is intended for Practitioners to use as a basis for determining whether to recommend these products to their patients. All recommendations regarding protocols, dosing, prescribing and/or usage instructions should be tailored to the individual needs of the patient considering their medical history and concomitant therapies. This information is not intended for use by consumers.

For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/api/library-assets/literature-reference---type-2-diabetes-support-protocol-references>

Dosing recommendations are given for typical use based on an average 150-pound healthy adult. Health-care practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage. Any product containing botanical substances has the potential for causing individual sensitivities; appropriate monitoring, including liver function tests (LFT) is recommended.

For considerations regarding herb-drug and nutrient-drug interactions, please refer to reliable, evidence-based resources such as the Natural Medicine Database or Stargrove MB, Treasure J, McKee DL. *Herb, Nutrient, and Drug Interactions: Clinical Implications and Therapeutic Strategies*. Mosby-Elsevier; 2008.

Well World™ and *Designs for Health* and logo are trademarks of Designs for Health, Inc. © 2025 Designs for Health, Inc. All rights reserved.

***These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.**