Standard Process

Nutritional Support Protocol

Support for Healthy GLP-1 Function

Developed and reviewed by the clinical, chiropractic, and naturopathic members of the Standard Process team

GLP-1's Role in the Body's Metabolic Processes

Glucagon-like peptide-1 (GLP-1) plays a key role in glucose metabolism, appetite, and gut function. It is an incretin hormone — a gut peptide secreted after nutrient intake that stimulates insulin secretion. It is made primarily by L-cells in the ileum and colon.

GLP-1 supports glucose metabolism by stimulating insulin secretion, promoting insulin sensitivity, and inhibiting glucagon release. GLP-1 can help regulate appetite by acting on parts of the brain involved in hunger and satiety and slowing gastric emptying, which helps prolong the sense of fullness after a meal. By influencing glucose metabolism, insulin secretion, appetite, and gastric emptying, GLP-1 supports healthy weight management. Some research suggests that GLP-1 may also have cardioprotective and neuroprotective benefits.

Obesity, sleep deprivation, chronic stress, and certain gut conditions can interfere with GLP-1 secretion and signaling. Lifestyle and nutritional interventions can support GLP-1 function by helping to optimize metabolic, endocrine, and gastrointestinal health.

Supportive Lifestyle Practices

- Recommend that patients engage in regular, moderate-intensity physical activity like brisk walking or cycling to support GLP-1 secretion and enhance insulin sensitivity.[1]
- A healthy circadian rhythm supports GLP-1 secretion.[2] Encourage patients to establish a regular sleep-wake cycle and create a sleep-conducive environment. A dark, cool, quiet bedroom supports melatonin production and sleep onset. Exposure to natural light in the morning is also an important tool for a healthy circadian rhythm.
- Encourage the implementation of stress-reduction techniques like movement, deep breathing, guided imagery, and laughter. The experience of stress can rapidly downregulate GLP-1 expression.[3]

Whole Foods Nutritional Recommendations

- Recommend foods rich in soluble fiber such as oats, barley, beans, fruits, and vegetables to slow digestion and modulate GLP-1 secretion. Fiber intake supports healthy gut microbiota and facilitates the production of short-chain fatty acids, which are other mechanisms to modulate GLP-1 release.[2]
- Recommend patients increase their protein intake. High-protein meals increase GLP-1 more than those highest in carbohydrates and fat.[4]
- Encourage patients to consume foods rich in the omega-3 fatty acids EPA and DHA which can modulate the release of GLP-1 from intestinal cells through a receptor called GPR120, which plays a role in glucose regulation. Foods high in EPA and DHA include salmon, tuna, cod liver, and calamari.[5]
- Encourage adding bitter foods and herbs to the diet, such as arugula, Brassica family vegetables, ginger, and citrus. Bitter foods are thought to modulate GLP-1 secretion via several mechanisms including activation of bitter taste receptors, gut motility, interaction with gut microbiota, and vagus nerve stimulation.[6]

Dietary Supplement Regimen

Whole Food Fiber

Suggested Use: **One level tablespoon (approximately 6.9 grams) in a blender drink per day.**

Whole Food Fiber is a good source of dietary fiber from nutrient-rich whole foods.

- Contains both soluble and insoluble fiber
- Promotes regular intestinal motility and elimination*
- Supports healthy epithelial cells in the bowel*
- Provides food for beneficial microorganisms in the lower gastrointestinal (GI) tract*
- Adequate fiber consumption helps maintain healthy blood sugar levels that are already within normal range*
- Can be used as nutritional support in the Standard Process Purification Program*

Glucose Assist™ Chocolate

Suggested Use: **Three slightly rounded scoops in 10-12 ounces water, one to two servings per day**

Glucose Assist™ Chocolate is a low glycemic blood sugar support shake powder that helps support healthy blood sugar levels already in a normal range.*

- Is a uniquely designed, complete nutritional formula with a blend of plant-based proteins and carbohydrates
- Provides a slower and more sustained release of glucose to help minimize acute blood sugar spikes and steady post-meal glucose levels in healthy individuals*^
- Supports energy metabolism, helping cells convert macronutrients into cellular energy*
- Glucose Assist™ Vanilla is also available

Digest Forte

Suggested Use: **1 tablet 3 times daily, or as directed.**

DiGest Forte contains Gentian, Ginger, Tangerine, Wormwood and Feverfew to support healthy digestion.*

These herbs have been traditionally used in herbal preparations to:

- Stimulate gastric juice output and appetite*
- Support healthy digestion and intestinal function*
- Promote healthy gastrointestinal tone*
- Support the body's natural toxin-elimination function*
- Increase bile flow as a cholagogue*
- Promote normal response to environmental stressors*

Tuna Omega-3 Oil

Suggested Use: **Two softgels twice per day with meals.**

Tuna Omega-3 Oil helps bridge the gap in dietary omega-3 intake and supports the body's natural inflammatory response function.*

Assess GLP-1 Function

In Office/Physical Exam

- Weight and body composition analysis
- Assess diet, lifestyle habits, sleep quality, and hunger and satiety levels
- Key Labs: Fasting blood glucose, insulin, HbA1c
- Consider an oral glucose tolerance test (OGTT)

REFERENCES

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6. Wang, Q., et al. (2024). Molecular metabolism, 88, 102002.

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