Standard Process
WHOLE FOOD NUTRIENT SOLUTIONS

Nutritional Support Protocol

Support for Cardiometabolic Health

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

The Physiology of Cardiometabolic Health

Cardiometabolic health represents the dynamic integration of cardiovascular and metabolic function. It encompasses the body's capacity to regulate blood pressure, glucose homeostasis, insulin sensitivity, lipid metabolism, and body composition. Cardiometabolic diseases like high blood pressure, type 2 diabetes, and heart disease are closely connected conditions that often share common root causes.

Endothelial function and blood flow are central to cardiometabolic health and are influenced by nitric oxide (NO): a key signaling molecule that promotes vasodilation and reduces platelet aggregation. Adequate NO availability helps maintain arterial flexibility, limits lipid peroxidation, and reduces the risk of plaque formation. Factors such as inflammation, oxidative stress, and insulin resistance can impair NO synthesis, contributing to endothelial dysfunction and hypertension.

Mitochondria play a vital role in cardiometabolic health. In muscle, liver, and endothelial cells, efficient mitochondrial function supports glucose and lipid metabolism and sustains insulin sensitivity. Mitochondrial dysfunction increases reactive oxygen species (ROS), promoting oxidative stress, inflammation, and endothelial damage. Lipid peroxidation resulting from excessive ROS can contribute to atherogenesis and vascular stiffness.

Physical inactivity, chronic inflammation, and diets high in refined carbohydrates contribute to insulin resistance: a condition characterized by impaired insulin signaling and reduced glucose uptake at the cellular level. This can result in elevated levels of glucose, low-density lipoprotein (LDL) cholesterol, and triglycerides — all of which undermine vascular integrity and reflect broader metabolic dysfunction.

Key lifestyle and dietary interventions can target cardiometabolic health by supporting endothelial function and insulin signaling pathways, modulating oxidative activity and inflammation, and preserving mitochondrial health.

Supportive Lifestyle Practices

- Encourage patients to engage in regular strength training to support cardiometabolic health. As a key metabolic organ, skeletal muscle plays a vital role in glucose regulation and insulin sensitivity. Research shows that strength training improves cardiometabolic biomarkers that include HDL cholesterol, triglycerides, C-reactive protein, and total cholesterol.[1]
- Recommend 7-9 hours of sleep per night, as even mild sleep restriction can disrupt cardiometabolic homeostasis. One study found that reducing sleep from 7.5 to 6.2 hours increased insulin resistance by nearly 15%.[2] Inadequate sleep is associated with impaired glucose metabolism, elevated blood pressure, and increased inflammation.

Whole Foods Nutritional Recommendations

- Encourage patients to consume nitrate-rich foods like red beetroot and mountain spinach. Nitrates are converted into nitric oxide, which promotes vasodilation and supports endothelial health. Studies have shown that beetroot juice modulates inflammation and supports the liver's natural detoxification processes.[3]
- Recommend increasing the intake of astaxanthin-rich foods like salmon and shrimp. A potent antioxidant, astaxanthin supports a healthy inflammatory response at the level of the cell membrane.[4]
- Suggest foods rich in chromium, like mountain spinach, broccoli, and brewer's yeast. Research has shown that chromium promotes healthy insulin functioning and supports glucose metabolism.[5] This may be especially beneficial for older adults, as insulin function declines with age.

Dietary Supplement Regimen

SP® Red Food

Suggested Use: **3 capsules per day**

SP® Red Food provides phytonutrients from SP farm grown, organic, whole red beetroots and mountain spinach *(Atriplex hortensis)*, and astaxanthin from whole microalgae that together support metabolic and cardiovascular health.*

- Supports healthy blood flow and blood vessel function*
- Promotes healthy insulin functioning*
- Supports healthy glucose and lipid metabolism*

Olprima™ EPA|DHA

Suggested Use: **2 softgels per day**

Through a 55:45 ratio of omega-3s EPA and DHA, Olprima™ EPA|DHA supports cardiovascular and brain health while supporting the body's healthy inflammatory response.*

- Supports cardiovascular health*
- Supports healthy inflammatory processes*

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.*

- Supports a reduction of post-meal glycemic response in healthy individuals*
- 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*

Metabol Complex

Suggested Use: **1 tablet 3 times per day**

Metabol Complex contains Fenugreek, Black Cumin seed, Bitter Melon, and Cinnamon. These herbs have been traditionally used in Ayurvedic herbal preparations to:

- Support the metabolism of fats and sugars*
- Support normal pancreatic and liver function*

Assessment of Cardiometabolic Health

In Office/Physical Exam

- Vital Signs: blood pressure, heart rate
- Signs/symptoms: fatigue, brain fog, fatty liver, increased thirst, sugar cravings, dizziness, headaches, visceral fat accumulation, exercise intolerance
- Medical history: cardiovascular disease, type 2 diabetes
- Lab Studies: comprehensive metabolic panel, fasting insulin, HOMA-IR, HbA1c, LDL with particle size and number, HDL, triglycerides, apoB, homocysteine, hs-CRP
- Body composition analysis, waist-to-hip ratio

REFERENCES

1. 1. Costa, R.R., et al. (2019). J Phys Act Health 16, 477–491.
2. 2. Sleep Zuraikat, F.M., et al. (2024). Diab Care 47, 117–125.
3. 3. Kujawska, M., et al. (2009). J Agric Food Chem 57, 2570–2575.
4. 4. Yamashita, E., et al. (2013). Funct Foods Health Dis 3, 254–258.
5. 5. Sahin, K., et al. (2007). Metabolism 56, 1233–1240.

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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.

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