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# Alternative Support for Weight Management

Template by Fullscript

Updated Jan 10th, 2025

Preview Evidence

#### **Evidence rating**

The following protocols were developed using only a,b,c,d-quality evidence

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#### Overview

This template, developed in partnership with OvationLab, provides a supplement-based approach for supporting metabolic health and weight management.

Certain ingredients are commonly used to support general metabolic function, satiety, and muscle health. Protein and glutamine are associated with GLP-1 secretion, a process involved in appetite regulation, while soluble fiber is known to play a role in maintaining blood sugar levels and supporting gut health. Omega-3 fatty acids, creatine, and other specialty supplements such as beta-hydroxy-beta-methylbutyrate (HMB) and epicatechin may support muscle health and recovery. Multivitamins, omega-3s, and vitamin D3+K2 are often included in regimens that support metabolic and bone health. Together, these nutrients may complement a balanced diet and healthy lifestyle.

#### **Protein**

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Start with a general dose of 10–20 g daily of plant-based or whey protein (although dosages are typically in the 20–40 g range).

- Healthy adults engaging in minimal physical activity should aim for at least 0.8 g of protein per kg of body weight per day to meet the recommended dietary allowance (RDA) of protein to avoid deficiency. This translates to about 10–15% of total daily energy expenditure.
- Daily protein intake should be adjusted depending on age, physical activity, and metabolic health goals. Studies suggest that a high-protein diet consisting of 1.07–1.6 g of protein per kg of body weight daily (27–35% of total daily energy expenditure) provides enhanced weight-loss effects while preserving fat-free mass. (Bray 2024) (Moon 2020)
- GLP-1 secretion is enhanced by all forms of dietary proteins—from whole proteins to peptides and amino acids—each interacting with unique or unknown cellular mechanisms based on their structure. (<u>Hira 2021)(Miguéns-Gómez 2021)(Volpi 2001)</u>

#### Glutamine

#### Glutamine

15-30 g daily.

A 15-30 g dose is required to leverage glutamine's beneficial metabolic effects as a GLP-1 enhancer. (Meek 2016)

A review article summarizing findings from multiple animal, cell model, and human studies investigated the effects of various food factors, such as amino acids, including glutamine, on GLP-1 secretion and their potential impact on glucose metabolism. Glutamine, in particular, was shown to elevate cytosolic calcium and cell adenosine 3',5'-cyclic monophosphate (cAMP) in enteroendocrine L cells, promoting GLP-1 secretion in experiments. This suggests that glutamine could play a role in improving glucose tolerance by stimulating GLP-1 secretion. However, the study also notes that effective doses of glutamine (15–30 g) are needed to achieve beneficial metabolic effects in humans, as lower doses have not consistently led to significant metabolic improvements. (Meek 2016)

#### **Multivitamin Multimineral**

## Multivitamin, multimineral

Dosing may vary depending on the specific product and should be tailored to the individual's nutritional needs and goals, such as nutrient repletion or metabolic support. Healthcare providers should consult product-specific guidelines and adjust the dosage based on the patient's unique requirements and response.

Multivitamin and multimineral supplements can provide essential nutrients that may
be deficient in individuals with metabolic syndrome, potentially improving overall
metabolic health and aiding in managing related conditions such as insulin
resistance, dyslipidemia, and hypertension. Judicious supplementation may support
metabolic functions, enhance antioxidant defense, and promote cardiovascular
health, offering a valuable addition to lifestyle and dietary interventions to help
manage metabolic disorders. (Blumberg 2018)

#### Omega-3 fatty acids (EPA/DHA)

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2 g of combined EPA/DHA daily (adjust dose based on testing)

 Omega-3 fatty acids may offer therapeutic benefits by minimizing muscle loss and inflammation associated with secondary sarcopenia through their ability to modulate proteolytic pathways that result in skeletal muscle regeneration. (Jimenez-Gutierrez 2022) (Smith 2015)

#### Soluble fiber

### Soluble fiber

#### 5–10 g daily

Soluble fibers, including guar gum and larch arabinogalactan, can support metabolic health by moderating energy intake, stabilizing postprandial blood glucose levels, and improving satiety, ultimately addressing risk factors for obesity, hyperglycemia, and hypercholesterolemia. These ingredients are resistant to digestion and promote beneficial gastrointestinal microflora and short-chain fatty acid (SCFA) production, supporting a healthy gut environment that favors comprehensive metabolic health. (den Besten 2015) (Dion 2016) (Kim 2002) (Wu 2023)

#### Vitamin D3+K2

#### Vitamin D3+K2

5,000 IUs (adjust dose based on testing) plus 25–95 mcg daily (depending on dose of vitamin D)

• Vitamin D+K supplementation is linked to improved metabolic health, GLP-1 levels, and bone health. (Kuang 2020)(Pazarci 2019)(Zhang 2021)

#### **Amarasate®**

#### **Amarasate®**

#### 125 mg once daily initially, gradually increasing to 500 mg daily

- Amarasate® has been shown to significantly reduce hunger and food cravings during fasting. In randomized, double-blind, cross-over studies, Amarasate® administered at hours 16 and 20 of a 24-hour water-only fast experienced a 10% reduction in hunger. These findings support its potential to aid individuals in completing intermittent fasting periods more comfortably. (Walker 2019) (Walker 2023)

#### Creatine monohydrate

# Creatine monohydrate

**5 g daily (Kreider 2017)** 

 Creatine can enhance metabolic health by effectively reducing immediate muscle damage within the first 96 hours following exercise, promoting a faster and more effective recovery. (Harmon 2022) (Kreider 2021) (Smith-Ryan 2021) (Wu 2022)

### Strength combination in the Fullscript catalog

# Beta-hydroxy-beta-methylbutyrate (HMB) 2,000 mg daily

HMB is a metabolite of the essential amino acid leucine. It has been shown to
effectively mitigate age-related declines in lean mass, while also enhancing muscle
strength and functionality in older adults. These benefits may be enhanced with
vitamin D3 supplementation. (Flakoll 2003) (Rathmacher 2020) (Wilson 2008)

### **Calcium**

240 mg daily

 An increase of 300 mg daily in calcium intake is associated with a 7% reduction in the relative risk of developing metabolic syndrome, highlighting calcium's potential role in improving metabolic health. Additionally, calcium supports muscle protection by promoting proper muscle function, which is particularly beneficial in managing metabolic diseases. (Eshima 2021)(Han 2019)(Kim 2020)

# Epicatechin (green tea leaf extract) 400 mg daily

Found in dark chocolate, green tea, and certain fruits, this flavonoid has been shown
to promote muscle growth and enhance exercise performance through mechanisms
that include inhibiting myostatin and supporting nitric oxide production. (Mafi 2019)
 (McDonald 2015)(Ramirez-Sanchez 2010)

# PurpleForce® purple tea (*Camellia sinensis*) leaf extract 100 mg daily

 PurpleForce® contains anthocyanins, catechins, flavonoids, and other polyphenols that may improve antioxidant activity, supporting muscle recovery and mitigating muscle damage. (Shimoda 2010)

# AstraGin® (*Astragalus membranaceus* and *Panax notoginseng*) 50 mg daily

• Containing extracts of *Astragalus membranaceus* and *Panax notoginseng*,
AstraGin® supports improved absorption of amino acids, vitamins, and minerals,
while also supporting the integrity of the intestinal barrier. (Chang 2022)

# Senactiv® (*Panax notoginseng* and *Rosa roxburghii* extracts, *Astragalus membranaceus* and *Panax notoginseng* root extracts) 50 mg daily

 Senactiv® supports muscle growth and recovery by enhancing mitochondrial function and reducing oxidative stress. (Wu 2018)(Wu 2019)

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