Optimizing Metabolic Health

Promoting GLP-1 through foundational lifestyle factors, supplementation, or medications

Developed by Fullscript and OvationLab

Fullscript® | OVATIONLAB

GLP-1 agonists

Glucagon-like peptide-1 (GLP-1) therapies are effective tools for enhancing metabolic flexibility, improving insulin sensitivity, supporting weight loss, and reducing cardiovascular risk. (Gad 2024)(Latif 2024) When implemented as part of a comprehensive strategy that includes foundational aspects of health—nutrition, movement, stress management, and relationships—GLP-1 therapies not only restore metabolic flexibility but also empower patients to achieve lasting improvements in overall well-being.

Developed with OvationLab, this quick-reference guide provides healthcare providers with a concise overview of testing options, dietary ingredients, and lifestyle recommendations. This adaptable protocol features three clinical scenarios to tailor care: one prioritizes fasting strategies, another centers on supplement-based support for patients for whom fasting or GLP-1 therapy may be unsuitable, and the third outlines the lowest effective dose of GLP-1 medications, with structured tapering to minimize side effects.

Foundational testing

Foundational testing includes essential markers for an initial assessment and routine monitoring of metabolic health.

Complete blood count (CBC)
- Neutrophil-to-lymphocyte ratio
- Platelet-to-lymphocyte ratio
- Lymphocyte-to-monocyte ratio

Comprehensive metabolic panel (CMP)
- Alanine aminotransferase (ALT)
- Aspartate transferase (AST)

Glycemic control
- Fasting blood sugar (FBS)
- Insulin, intact, LC/MS/MS
- C-peptide, LC/MS/MS
- Insulin resistance score
- Two-hour glucose/insulin challenge
- Hemoglobin A1c (HbA1C)
- Continuous glucose monitoring (CGM)

Cardiometabolic inflammation
- High-sensitivity C-reactive protein (hs-CRP)
- Homocysteine
- OmegaCheck®

Kidney function
- Albumin, urine
- Albumin/creatinine ratio (urine) (uACR)
- Blood urea nitrogen (BUN)
- BUN/albumin
- Creatine kinase
- Creatinine (serum)
- Creatinine, random urine
- Estimated glomerular filtration rate (eGFR)
- Lactate dehydrogenase (LDH)
- Serum uric acid

Vitamins and minerals
- Folate
- Iron
- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B5
- Vitamin B6
- Vitamin B12
- Vitamin D 25-OH total, D3, D2

Comprehensive testing

Comprehensive testing provides an in-depth analysis of advanced markers.

Advanced lipid panel • Triglyceride (TG)/high-density lipoprotein (HDL) ratio • Cholesterol/HDL ratio • Apolipoprotein B (ApoB) • Lipoprotein(a) (Lp(a)) • Lipoprotein-associated phospholipase A2 (Lp-PLA2) • Myeloperoxidase (MPO) • Oxidized lipids (OxLDL)	**Autoimmune tests** • Islet cell autoantibodies (ICA) • Glutamate decarboxylase 65 (GAD-65) • Thyroid peroxidase antibodies (TPOAb) • Thyroglobulin antibodies (TgAb)
Hormone testing • Adrenal salivary five-point test • Thyroid-stimulating hormone (TSH) • Free thyroxine (fT4) • Free triiodothyronine (fT3)	**Oxidative stress and inflammation** • F2-isoprostane/creatinine ratio • Glycoprotein acetylation (GlycA)

Foundational supplementation

Foundational supplements provide key nutrients that support metabolic health and overall well-being. These include essential proteins, omega-3 fatty acids, glutamine, fiber, vitamins, and minerals, which help maintain muscle mass and support already healthy inflammation levels and nutrient absorption.

Specialty supplements

Specialty supplement ingredients like Amarasate® offer targeted benefits for satiety and metabolic optimization, while creatine and the combination of hydroxymethylbutyrate (HMB), calcium, epicatechin, PurpleForce®, AstraGin®, and Senactiv® support muscle health, recovery, and overall metabolic wellness.

Lifestyle

Lifestyle interventions like balanced nutrition, regular physical activity, and proper sleep are essential for maintaining metabolic health. These foundational habits, along with stress management, support overall wellness and help prevent metabolic dysfunction.

Nutrition

- A lower-glycemic-load diet—such as the Mediterranean diet, which emphasizes healthy fats, fiber-rich carbohydrates, and lean proteins from sources like olive oil, nuts, and fish—can improve metabolic markers and reduce inflammation. (Papadaki 2020)

- Fasting methods, such as intermittent fasting and time-restricted eating, may enhance insulin sensitivity and reduce inflammation. (Soliman 2022)

Movement

- Resistance training, especially when combined with high-intensity aerobic exercise, has been shown to reduce body fat, increase lean muscle mass, and improve metabolic health. (O'Donoghue 2021)(Wewege 2022)

Sleep

- Insufficient or excessive sleep is associated with a higher risk of metabolic syndrome, whereas 7–8 hours of sleep per night appears to support metabolic health.

- Correcting sleep apnea and improving sleep hygiene are key interventions. (Chasens 2021)

Stress

- Psychological stress can increase the risk of metabolic syndrome, as chronic stress impacts metabolic function. (Kuo 2019)

- Managing stress through mindfulness practices, cognitive behavioral therapy (CBT), and physical activities like yoga or aerobic exercise can help reduce stress and improve overall metabolic health. (Deng 2024)

Social

- Social disconnection and loneliness can act as chronic stressors, leading to overactivity of the hypothalamic-pituitary-adrenal (HPA) axis and contributing to metabolic diseases. (Ahmed 2023)

- Enhancing social connectedness through group activities, community involvement, and virtual meetups can mitigate the risks associated with isolation and improve mental and metabolic health. (Yang 2016)

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