



# THE SOLINGER METHOD

by Root Health L.L.C.

## Metabolic Syndrome

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### FUNCTIONAL WELLNESS SUPPORT PLAN

Adult Metabolic Syndrome

Root Health L.L.C, The Solinger Method

**Dr. Sarah Solinger, PhD, ND, MSc, FCN**

Naturopathic Doctor, Functional Clinical Nutritionist, Master Clinical Herbalist

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## What Is Metabolic Syndrome

Metabolic syndrome is a **cluster of interrelated metabolic dysfunctions** that significantly increase the risk for cardiovascular disease, type 2 diabetes, fatty liver disease, cognitive decline, and chronic inflammation. It is not a single disease, but a **physiologic pattern of insulin resistance and metabolic inflexibility**.

Metabolic syndrome is typically defined by the presence of multiple features:

- Elevated fasting glucose or insulin
- Central adiposity
- Elevated triglycerides
- Low HDL
- Elevated blood pressure

Importantly, metabolic dysfunction often precedes abnormal labs by years. Patients may be told everything looks “normal” while symptoms are already present.

Common symptoms include fatigue, weight resistance, brain fog, cravings, energy crashes, poor exercise tolerance, inflammation, and hormonal disruption.

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## Conventional Medicine Perspective

Conventional medicine defines metabolic syndrome by meeting a set number of diagnostic criteria and focuses on risk reduction through medication management of blood sugar, cholesterol, and blood pressure.

While this approach may reduce acute risk, it often does not address:

- Why insulin signaling is impaired
- Mitochondrial dysfunction driving fatigue
- Inflammatory signaling from adipose tissue
- Liver involvement before overt disease
- Nutrient depletion from long term medication use

Management frequently treats markers rather than mechanisms.

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## Naturopathic Medicine Perspective

Naturopathic medicine views metabolic syndrome as a **reversible state of metabolic signaling failure**, driven by insulin resistance, chronic inflammation, mitochondrial dysfunction, and impaired fuel utilization.

Key systems involved include:

- Insulin receptor signaling
- Hepatic glucose and lipid metabolism
- Mitochondrial energy production
- Adipokine and cytokine signaling
- Gut derived inflammation
- Hormonal regulation

The goal is to **restore metabolic flexibility**, improve insulin sensitivity, and reduce inflammatory burden.

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## Core Pathophysiologic Mechanisms

### Insulin Resistance



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Cells become less responsive to insulin, requiring higher insulin output to manage glucose. Elevated insulin drives fat storage, inflammation, and hormonal disruption.

## **Hepatic Dysfunction**

The liver becomes insulin resistant, increasing glucose output and triglyceride production, contributing to fatty liver and dyslipidemia.

## **Adipose Tissue Inflammation**

Visceral fat releases inflammatory cytokines that worsen insulin resistance and systemic inflammation.

## **Mitochondrial Dysfunction**

Impaired ATP production reduces energy availability and metabolic efficiency, worsening fatigue and exercise intolerance.

## **Gut Driven Inflammation**

Dysbiosis and increased intestinal permeability amplify inflammatory signaling that interferes with insulin action.

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## **Nutritional Strategy**

Nutrition for metabolic syndrome focuses on **improving insulin sensitivity, stabilizing blood sugar, reducing inflammation, and supporting mitochondrial function**, not extreme restriction.

### **Core Nutritional Priorities**

- Regular meals without prolonged fasting
- Adequate protein intake
- Controlled carbohydrate quality and timing
- Anti-inflammatory fat intake
- Micronutrient density



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### **Therapeutic Foods to Emphasize**

Protein at each meal, targeting 30 to 40 grams per meal. Mechanism, improves satiety, stabilizes blood sugar, and supports lean mass.

Complex carbohydrates such as root vegetables and whole grains. Mechanism, provide glucose without excessive insulin spikes.

Healthy fats including olive oil and fatty fish. Mechanism, reduce inflammatory signaling and improve lipid profiles.

Fiber rich vegetables. Mechanism, support gut health and insulin sensitivity.

Fermented foods when tolerated. Mechanism, reduce gut derived inflammation.

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## **Reduce or Avoid**

Refined carbohydrates and sugar. Mechanism, drive insulin spikes and fat storage.

Ultra processed foods. Mechanism, worsen inflammation and insulin resistance.

Liquid calories. Mechanism, bypass satiety signaling.

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## **Targeted Supplement Support**

Therapeutic Adult Dosing

### **Berberine**

Mechanism, improves insulin sensitivity, reduces hepatic glucose output, lowers triglycerides, and supports gut microbial balance.

Dose: 500 mg two to three times daily with meals

### **Magnesium Glycinate**

Mechanism, improves insulin receptor signaling and mitochondrial enzyme activity.

Dose: 400 to 600 mg daily

### **Alpha Lipoic Acid**

Mechanism, improves insulin signaling and reduces oxidative stress.

Dose: 300 to 600 mg daily

### **Chromium (When Indicated)**



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Mechanism, enhances insulin sensitivity and glucose uptake.  
Dose: 200 to 400 mcg daily

### **Omega 3 Fatty Acids**

Mechanism, reduce inflammatory cytokine signaling and improve lipid profiles.  
Dose: 3 to 4 grams daily combined EPA and DHA

### **Vitamin D3 + K2**

Adult dosing, 5,000 IU daily, adjust based on labs.  
Mechanism, improves insulin sensitivity and immune regulation.

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## **Targeted Herbal Support**

### **Cinnamon Extract**

Mechanism, improves insulin sensitivity and glucose uptake.  
Dose: 500 to 1,000 mg daily

### **Gymnema**

Mechanism, reduces glucose absorption and sugar cravings.  
Dose: 400 to 800 mg daily

### **Bitter Melon**

Mechanism, mimics insulin activity and improves glucose control.  
Dose: 500 to 1,000 mg daily

### **Turmeric**

Mechanism, reduces inflammatory signaling driving insulin resistance.  
Dose: 500 to 1,000 mg daily

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## **Celery Juice Support for Metabolic Syndrome**

Celery juice may support metabolic syndrome by improving hydration, mineral balance, and digestive signaling, indirectly supporting insulin sensitivity and inflammation reduction.



Suggested use is 8 oz fresh celery juice daily, taken earlier in the day.

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## Supplement Access

A complete supplement protocol for Adult Metabolic Syndrome is available in Fullscript under Protocols, listed by the matching condition name. Individuals can create a free account to access the full recommended list of professional grade supplements and therapeutic adult dosing.

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## Lifestyle Support That Matters

Strength training improves insulin sensitivity and metabolic rate.

Daily movement improves glucose disposal independent of insulin.

Sleep optimization improves insulin and cortisol signaling.

Stress regulation reduces insulin resistance.

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## When to Dig Deeper

Further evaluation is warranted:

- Fasting insulin
  - A1c
  - Lipid panel
  - Liver enzymes
  - Inflammatory markers
  - Gut health assessment
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