

# Women 20–30 — Weight Loss Stack

## Purpose

In their twenties, women often attempt weight loss for physique or athletic goals. The challenge is to reduce fat while maintaining lean muscle, stable menstrual cycles, and healthy energy levels. This stack is designed to:

- Improve insulin sensitivity and regulate blood sugar
  - Suppress cravings and stabilize appetite hormones
  - Increase fat oxidation and metabolic flexibility
  - Preserve lean mass during caloric deficit
  - Control inflammation and maintain menstrual regularity
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## System-by-System Optimization

### Glycemic / Appetite Control (Score: 10/10)

**Berberine:** Activates AMPK and mimics insulin, reducing hepatic glucose output, lowering post-meal spikes, and supporting satiety. **~0.4 mg/lb with meals** (typically 500–1000 mg/day split).

**Chromium Picolinate:** Enhances insulin receptor activity, reducing cravings and stabilizing blood sugar. **200–400 mcg/day**.

**Fiber (Psyllium husk or Acacia):** Expands in the stomach, slowing gastric emptying, lowering postprandial glucose, and boosting satiety hormones GLP-1 and PYY. **0.2–0.3 g/lb/day total dietary fiber** (diet + supplement).

**5-HTP (5-Hydroxytryptophan):** Precursor to serotonin; helps suppress evening cravings and late-night snacking, while supporting better sleep. **~1 mg/lb before bed**.

**Probiotics (≥25B CFU):** Support gut microbiome composition associated with satiety and healthy weight management. **Per label**.

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### Metabolic / Mitochondrial (Score: 10/10)

**EGCG (Green Tea Extract):** Polyphenol that increases thermogenesis, fat oxidation, and autophagy; synergizes with caffeine. **2–3 mg/lb/day**.

**Acetyl-L-Carnitine (ALCAR):** Improves fatty acid transport into mitochondria, increasing fat burning and mental clarity in deficit. **5–6 mg/lb/day.**

**Rhodiola Rosea:** Adaptogen that preserves training quality and reduces fatigue when calories are reduced. **0.8–1 mg/lb/day.**

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### **Endocrine / Hormonal (Score: 10/10)**

**Vitamin D3 + K2:** Maintains thyroid function, bone density, and reproductive health under stress. **30–40 IU/lb/day D3 + 100 mcg/day K2.**

**Myo-Inositol:** Improves ovarian insulin sensitivity, preserving regular cycles during caloric restriction. **50–100 mg/lb/day.**

**Ashwagandha:** Lowers cortisol, which often rises in deficit and promotes fat storage; improves sleep and mood. **1.5–2 mg/lb/day.**

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### **Lean Mass Preservation (Score: 10/10)**

**Essential Amino Acids (EAAs):** Provide the indispensable amino acids, especially leucine, to trigger muscle protein synthesis (MPS) when protein intake is reduced. **0.05–0.1 g/lb/day**, split, with peri-workout doses.

**Whey Isolate:** Fast-digesting protein rich in leucine; maximizes MPS post-workout. Daily protein target should remain **0.8–1 g/lb/day** (or more if aggressively dieting).

**Collagen Peptides:** Protect tendons, ligaments, and skin during training. **0.05–0.06 g/lb/day.**

**Vitamin C:** Required for collagen hydroxylation and joint resilience. **2–3 mg/lb/day.**

**Silica (orthosilicic acid/MMST):** Promotes collagen cross-linking and bone support. **0.5–1 mg/lb/day.**

**Omega-3 (EPA/DHA):** Reduces systemic inflammation, supports lipid metabolism, and protects joints. **25–30 mg/lb/day.**

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### **Immunologic / Anti-inflammatory (Score: 10/10)**

**Curcumin (with Piperine):** Lowers systemic inflammation, supporting cycle regularity and joint comfort. **0.8–1 mg/lb/day.**

**Quercetin:** Antioxidant and mast-cell stabilizer that lowers oxidative stress, especially under high training loads. **2–3 mg/lb/day.**

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## **Sleep / Recovery (Score: 10/10)**

**Magnesium L-Threonate:** Improves sleep architecture and cognition. **8–10 mg/kg/night.**

**Apigenin:** Flavonoid that promotes GABAergic relaxation for easier sleep onset. **50 mg/night.**

**Glycine:** Lowers core body temperature and deepens slow-wave sleep while aiding collagen synthesis. **0.02–0.03 g/lb/night.**

**Tart Cherry Extract:** Provides natural melatonin and anthocyanins; extends sleep cycles and reduces soreness. **~5 mg/lb/night.**

**5-HTP (as above):** Improves both satiety and serotonin-driven sleep quality.

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## **Daily Routine**

**Morning (7–8 AM):** Berberine (first dose), Rhodiola, ALCAR, Omega-3, Vitamin D3/K2, CoQ10 (if also supporting cardiac health).

**Pre-Workout (if training):** EAAs or Whey Isolate, optional caffeine + L-theanine for focus.

**Midday (12 PM meal):** EGCG, Fiber (psyllium/acacia), Probiotic, Collagen + Vitamin C + Silica.

**Afternoon (4 PM meal):** Berberine (second dose), R-ALA (optional if higher carb intake).

**Evening (9–10 PM):** Magnesium L-Threonate, Glycine, Apigenin, Tart Cherry, 5-HTP.

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## **Disclaimer**

This guide is for educational purposes only. It does not constitute medical advice, diagnosis, or treatment, and it does not establish a doctor–patient relationship. Supplementation, dosing, and timing should be personalized under the supervision of a qualified healthcare provider. Always consult your physician before beginning any new supplement regimen.