

Women 20–30 — Anti-Aging Stack

Purpose

Even in their twenties, women begin accumulating oxidative stress and subtle DNA damage that set the stage for aging. Mitochondrial efficiency can drift, telomeres shorten, and lifestyle stress can accelerate cellular wear. This stack is designed to:

- Preserve DNA integrity and telomere length
 - Support mitochondrial energy and NAD⁺ balance
 - Reduce systemic inflammation and oxidative stress
 - Protect cognition, skin, and reproductive health
 - Ensure restorative sleep for nightly repair
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System-by-System Optimization

DNA / Cellular Longevity (Score: 10/10)

NMN (Nicotinamide Mononucleotide): Restores NAD⁺ levels, fueling DNA repair enzymes (sirtuins and PARPs) and preserving youthful mitochondrial output. **0.5–0.8 mg/lb/day.**

Resveratrol: A polyphenol that mimics caloric restriction, activating SIRT1 to protect DNA and promote mitochondrial biogenesis. Works synergistically with NMN. **~2 mg/lb/day.**

Pterostilbene: More bioavailable analog of resveratrol with stronger SIRT1 activation and antioxidant properties. **~0.6 mg/lb/day.**

Astragaloside IV: Stimulates telomerase, slowing telomere shortening and supporting genomic stability. **~2 mg/lb/day.**

EGCG (Green Tea Extract): Activates autophagy, clears damaged proteins, and protects DNA from oxidative injury. **2–3 mg/lb/day.**

Endocrine / Hormonal (Score: 10/10)

Vitamin D3 + K2 (MK-7): Supports endocrine rhythm, bone density, and immune resilience. **30–40 IU/lb/day D3 + 100 mcg/day K2.**

Myo-Inositol: Improves ovarian insulin sensitivity and ovulatory quality, helping preserve reproductive health over time. **50–100 mg/lb/day.**

Zinc + Copper: Zinc is critical for ovarian steroidogenesis; copper prevents imbalance and supports antioxidant enzymes. **Zinc 0.15 mg/lb/day + Copper 0.01 mg/lb/day.**

Ashwagandha: Lowers cortisol, supports thyroid function, and prevents stress-driven hormonal disruption. **1.5–2 mg/lb/day.**

Cellular / Mitochondrial (Score: 10/10)

R-Alpha-Lipoic Acid (R-ALA): Cofactor in mitochondrial enzyme complexes, improves insulin sensitivity, and regenerates antioxidants. **0.5–1 mg/lb/day.**

Acetyl-L-Carnitine (ALCAR): Enhances fatty acid transport into mitochondria and supports cognitive energy. **5–6 mg/lb/day.**

Rhodiola Rosea: Adaptogen that stabilizes energy, reduces fatigue, and improves mitochondrial efficiency under stress. **0.8–1 mg/lb/day.**

Neurocognitive / Skin (Score: 10/10)

Lion's Mane Mushroom: Stimulates NGF (nerve growth factor), improving neuroplasticity, memory, and long-term cognitive health. **3–4 mg/lb/day extract.**

CDP-Choline + Alpha-GPC: Boost acetylcholine for concentration, memory consolidation, and mental stamina. **CDP 1 mg/lb/day + Alpha-GPC 1.5 mg/lb/day.**

Astaxanthin: Powerful carotenoid that protects skin against UV photoaging, improves elasticity, and enhances eye health. **0.05 mg/lb/day.**

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

Curcumin (with Piperine): Suppresses NF-κB signaling, reducing systemic inflammation and oxidative stress. **0.8–1 mg/lb/day.**

Quercetin: Potent antioxidant that stabilizes mast cells, reducing allergy-driven inflammation and supporting immune balance. **2–3 mg/lb/day.**

Probiotic (≥25B CFU): Improves gut microbiome diversity, regulates estrogen metabolism, and reduces inflammatory signaling. **Per label.**

Sleep / Recovery (Score: 10/10)

Magnesium L-Threonate: Raises brain magnesium, supporting deeper sleep architecture and long-term memory. **8–10 mg/kg/night.**

Apigenin: Plant flavonoid that gently binds GABA-A receptors to promote sleep onset and reduce anxiety. **50 mg/night.**

Glycine: Lowers core body temperature, increases slow-wave sleep, and contributes to collagen synthesis. **0.02–0.03 g/lb/night.**

Tart Cherry Extract: Provides melatonin and anthocyanins that lengthen sleep cycles and improve muscle recovery. **~5 mg/lb/night.**

Daily Routine

Morning (8 AM): NMN, Resveratrol, Pterostilbene, Omega-3, Vitamin D3/K2, CoQ10, Ashwagandha, Lion's Mane, CDP-Choline, Alpha-GPC.

Midday (12 PM): Myo-Inositol, R-ALA, Acetyl-L-Carnitine, EGCG; optional Collagen + Vitamin C for skin support.

Evening (9 PM): Astragaloside IV, Curcumin, Quercetin, Probiotic, Magnesium L-Threonate, Glycine, Apigenin, Tart Cherry Extract.

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.