

# Men 40–50 — Anti-Aging Stack

## Purpose

The forties mark an acceleration of biological aging: testosterone falls, NAD<sup>+</sup> declines, DNA damage accumulates, and cardiovascular risk rises. This stack focuses on slowing these processes by restoring mitochondrial energy, protecting DNA and telomeres, balancing hormones, and controlling inflammation.

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## System-by-System Optimization

### Cardiovascular (Score: 10/10)

**Omega-3 (EPA/DHA):** Lowers triglycerides, improves endothelial function, reduces vascular inflammation. Dose: 30–35 mg/lb.

**Ubiquinol (CoQ10):** Fuels heart mitochondria and defends against lipid oxidation. Dose: 1 mg/lb.

**Astaxanthin:** Prevents LDL oxidation and reduces arterial stiffness. Dose: 0.05–0.08 mg/lb.

**Magnesium Glycinate:** Maintains vascular tone and blood pressure. Dose: 4–5 mg/lb.

**Tocotrienols:** Protect arteries and reduce lipid peroxidation. Dose: 1 mg/lb.

**Bergamot Extract:** Lowers LDL and triglycerides naturally. Dose: 2–3 mg/lb.

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

**NMN:** Restores NAD<sup>+</sup>, fueling DNA repair and mitochondrial output. Dose: 0.5–1 mg/lb.

**Resveratrol:** Activates sirtuins, mimics caloric restriction, promotes mitochondrial biogenesis. Dose: 2–3 mg/lb.

**Pterostilbene:** More bioavailable than resveratrol; enhances longevity pathways. Dose: 0.6–0.8 mg/lb.

**R-ALA:** Improves insulin sensitivity, regenerates glutathione. Dose: 0.5–1 mg/lb.

**Acetyl-L-Carnitine:** Improves fat transport into mitochondria and cognitive clarity. Dose: 6–8 mg/lb.

**Creatine:** Buffers ATP and preserves muscle strength. Dose: 0.05 g/lb.

**Rhodiola Rosea:** Improves stress resilience and mitochondrial efficiency. Dose: 1 mg/lb.

### DNA / Telomere Integrity (Score: 10/10)

**Astragaloside IV:** Stimulates telomerase, protecting chromosome ends. Dose: 2–3 mg/lb.

**Vitamin D3:** Improves DNA repair enzyme activity. Dose: 40–60 IU/lb.

**Vitamin K2 MK-7:** Prevents vascular calcification and supports DNA stability indirectly. Dose: 100 mcg.

## **Neurocognitive (Score: 10/10)**

**Lion's Mane:** Stimulates NGF, supports repair of neurons. Dose: 3–5 mg/lb extract.

**CDP-Choline:** Provides choline for acetylcholine synthesis. Dose: 1.5 mg/lb.

**Alpha-GPC:** Enhances brain acetylcholine for learning. Dose: 2 mg/lb.

**Uridine Monophosphate:** Supports synaptic membrane phospholipids. Dose: 1 mg/lb.

**SAM-e:** Methyl donor for neurotransmitters and DNA methylation. Dose: 1–1.5 mg/lb.

**L-Theanine:** Balances excitatory signals, reduces stress. Dose: 100–200 mg.

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

**Ashwagandha:** Lowers cortisol, supports thyroid and testosterone. Dose: 2 mg/lb.

**Tongkat Ali:** Stimulates LH, supporting testosterone production. Dose: 1.2 mg/lb.

**Cistanche Tubulosa:** Enhances androgen receptor density. Dose: 3 mg/lb.

**Mucuna Pruriens:** Dopamine precursor that stimulates testosterone indirectly. Dose: 1–1.5 mg/lb.

**Zinc + Copper:** Essential cofactors for hormone synthesis. Dose: 0.2 mg/lb zinc; 0.01 mg/lb copper.

**Boron:** Increases free testosterone. Dose: 0.1 mg/lb.

**DHEA (if indicated by labs):** Supports declining adrenal androgen production. Dose: 5–25 mg.

## **Renal / Hepatic Detox (Score: 10/10)**

**NAC:** Precursor to glutathione, essential for detox. Dose: 3–4 mg/lb BID.

**Milk Thistle:** Shields hepatocytes from toxins. Dose: 3 mg/lb.

**Taurine:** Regulates bile and kidney osmotic balance. Dose: 6–7 mg/lb.

**Sulforaphane:** Induces detoxification enzymes. Dose: 1 mg/lb.

## **Musculoskeletal (Score: 10/10)**

**Collagen Peptides:** Supports tendons, ligaments, joints. Dose: 0.06 g/lb.

**Silica:** Improves collagen crosslinking. Dose: 1 mg/lb.

**Vitamin C:** Required for collagen hydroxylation. Dose: 3 mg/lb.

**EAA:** Stimulate protein synthesis. Dose: 0.05–0.1 g/lb.

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

**Curcumin:** NF-κB inhibitor. Dose: 1 mg/lb.

**Quercetin:** Mast cell stabilizer. Dose: 3–4 mg/lb.

**EGCG:** Promotes autophagy and immune balance. Dose: 2–3 mg/lb.

**Reishi Mushroom:** Supports immune modulation. Dose: 6–7 mg/lb.

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

**Magnesium Glycinate:** Improves deep sleep. Dose: 4–5 mg/lb.

**Magnesium L-Threonate:** Improves cognition and sleep cycles. Dose: 10 mg/kg.

**Glycine:** Deepens REM sleep. Dose: 0.02–0.03 g/lb.

**Apigenin:** Flavonoid calming agent. Dose: 50 mg.

**Tart Cherry Extract:** Provides melatonin and lengthens sleep. Dose: 6 mg/lb.

**Melatonin:** Low dose for circadian rhythm. Dose: 0.3–0.5 mg PRN.

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## Daily Routine

**Morning:** NMN, Resveratrol, Pterostilbene, CoQ10, Omega-3, Vitamin D3/K2, Astaxanthin, Rhodiola, Acetyl-L-Carnitine, Lion's Mane, CDP-Choline, Alpha-GPC, Uridine, SAM-e.

**Midday:** Creatine, Collagen, Vitamin C, Silica, EAAs, Sulforaphane, Curcumin, Quercetin, EGCG.

**Afternoon:** NAC, Ashwagandha, Tongkat, Cistanche, Mucuna, Zinc, Copper, Boron, DHEA (if prescribed).

**Evening:** Magnesium Glycinate, Magnesium L-Threonate, Glycine, Apigenin, Tart Cherry, Melatonin PRN.

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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.