

PRODUCT, DESCRIPTION AND EVIDENCE

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INNERB

NMN is a direct precursor to Nicotinamide Adenine Dinucleotide (NAD⁺), a critical coenzyme found in every cell. NAD⁺ levels decline significantly with age, leading to mitochondrial dysfunction, genomic instability, and cellular senescence. Oral NMN supplementation is shown to efficiently boost NAD⁺ levels, thereby supporting fundamental cellular processes involved in energy production, DNA repair, and gene expression.

KEY BENEFITS

- Improves skin health
- Boosts energy and metabolism
- Enhances muscle endurance
- Supports metabolic health
- Promotes cardiovascular and physical function
- Safe and well-tolerated

DIRECTIONS FOR USE

Take 1 capsule after a meal. 1 capsule per day. Do not exceed the recommended dose.

WARNINGS

Food supplements must not be used as a substitute for a varied diet. Keep out of reach of young children. Not recommended for use during pregnancy or breastfeeding. Discontinue use if adverse effects occur.

INGREDIENTS

Nicotinamide Mononucleotide, Bulking Agent (Calcium Phosphate), Capsule Shell (Hypromellose), Anticaking Agents (Magnesium Stearate, Silicon Dioxide).

ACTIVE INGREDIENT

Nicotinamide Mononucleotide (NMN)

NICOTINAMIDE MONONUCLEOTIDE (NMN)

Reported Benefits & Supporting Clinical Evidence (Human Trials)

1. Improvement in Skin Health

- **Mechanism:** Increased NAD⁺ levels enhance the energy (ATP) production within skin cells (fibroblasts and keratinocytes), supporting cellular repair, promoting collagen synthesis, and protecting against UV-induced damage and oxidative stress.
- **Clinical Evidence:** A 2022 randomized, double-blind, placebo-controlled study specifically investigated the effects of oral NMN on the skin of postmenopausal women. The key findings were:
 - **Increased Skin Elasticity:** The group receiving 250 mg/day of NMN showed a significant improvement in skin elasticity compared to placebo after 8 weeks.
 - **Improved Appearance of Wrinkles:** The group receiving 250 mg/day also showed a visible improvement in fine wrinkles.
 - **Dose-Response:** While 250 mg was effective for skin parameters, a higher dose (500 mg/day) was more effective for improving blood NAD⁺ levels and other biomarkers, suggesting 500 mg is a robust dose for systemic support that includes skin health.
 - **Conclusion:** Oral NMN supplementation “can improve age-related changes in the facial skin of postmenopausal women.”

2. Enhancement of Energy and Metabolism

- **Mechanism:** By elevating NAD⁺, NMN enhances the function of mitochondria (the powerhouses of the cell), particularly in skeletal muscle and other tissues, leading to improved aerobic capacity and reduced fatigue.
- **Clinical Evidence:** A 2021 randomized, placebo-controlled, double-blind study on amateur runners found:
 - **Improved Oxygen Utilization (VO₂max):** A single oral dose of 600 mg NMN increased the NAD⁺ metabolome in whole blood. After 6 weeks of daily 600 mg supplementation, participants showed a significant improvement in their aerobic capacity (VO₂max) during exercise testing.
 - **Conclusion:** “These results suggest that NMN is a useful functional supplement to improve muscle endurance in humans.”

3. Other Potential Benefits (Areas of Ongoing Research)

- **Human clinical data is still emerging, but early trials with oral NMN show promise in several other areas linked to NAD⁺ biology:**
 - **Improved Insulin Sensitivity:** As cited above, the study in Science showed that NMN supplementation enhanced insulin signaling and sensitivity in the skeletal muscle of prediabetic women, a key factor in metabolic health.
 - **Cardiovascular Health:** A 2023 study on older adults found that 12 weeks of 250 mg/day NMN supplementation significantly improved walking speed, blood lipid profiles (LDL-C), and systolic blood pressure, suggesting benefits for vascular function and physical performance.
 - **Reduction of Age-Related Biomarkers:** Several trials have reported that NMN supplementation reduces various blood markers associated with aging and inflammation, such as cholesterol, triglycerides, and liver enzymes, while improving sleep quality and physical performance metrics in older adults.

Safety and Tolerability

Conclusion from Clinical Trials: Across multiple human trials, oral NMN supplementation at doses ranging from 250 mg to 600 mg per day has been consistently reported as well-tolerated with no significant adverse effects compared to placebo groups.

Sources:

<https://www.mdpi.com/2072-6643/14/21/4650>

<https://www.science.org/doi/10.1126/science.abe9985>

<https://www.nature.com/articles/s41387-023-00249-z>

<https://pmc.ncbi.nlm.nih.gov/articles/PMC7238909/>

