ACTIVAGE

CONTRIBUTE TO THE GENERAL HEALTH OF THE BODY

Younger Than Before

Contains 300 mg Nicotinamide Riboside (NR)

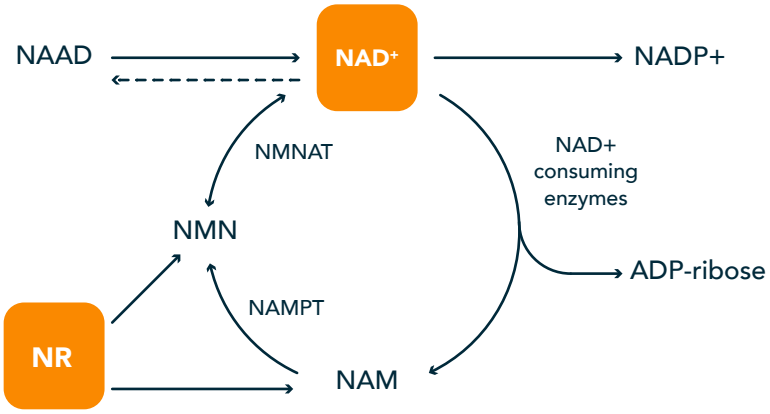
A Next-generation Vitamin B3 with a Unique Metabolism

NR increases NAD^+ (nicotinamide adenine dinucleotide) far more efficiently than other forms of vitamin B3, nicotinamide, and nicotinic acid. [1, 2]

NAD^+

A vital resource for

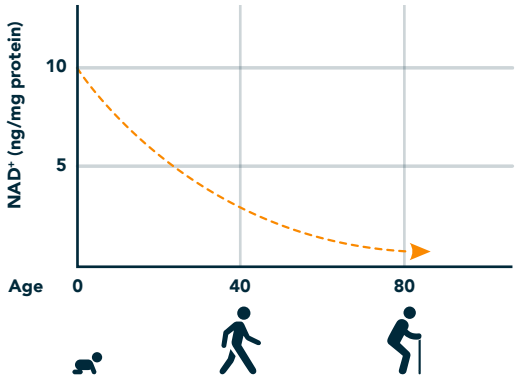
Cellular Energy and Repair



NAM: nicotinamide **NAAD:** nicotinic acid adenine dinucleotide **NADP:** nicotinamide adenine dinucleotide phosphate
NMNAT: nicotinamide mononucleotide adenyltransferase **NMN:** nicotinamide mononucleotide **NAMPT:** nicotinamide phosphoribosyltransferase

NAD^+ declines with aging and metabolic stress [3]

NAD^+ declines up to 50% between ages 40-60



References:

1- Trammell S.A., et al. Nicotinamide riboside is uniquely and orally bioavailable in mice and humans. Nature Communications , 2016.

2- Martens CR, et al. Chronic nicotinamide riboside supplementation is well-tolerated and elevates NAD^+ in healthy middle-aged and older adults. Nature Communications , 2018.

3- Massudi H, et al. Age-associated changes in oxidative stress and NAD^+ metabolism in human tissue. Plos One, 2012.

Orchid Pharmed
Sky's the Limit

Arvand Pharmed

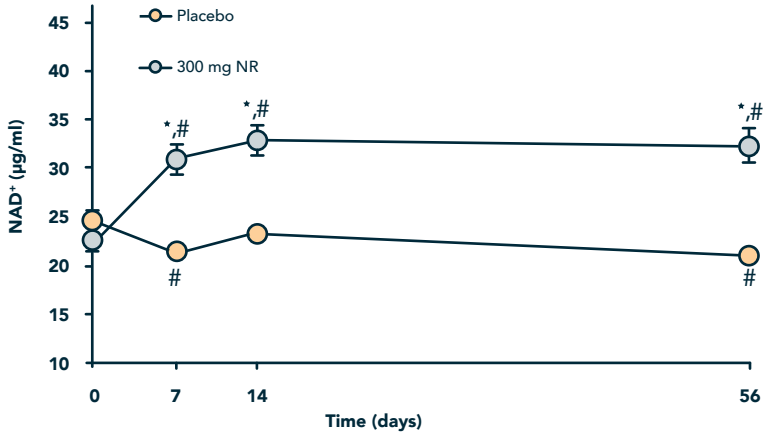
ACTIVAGE

CONTRIBUTE TO THE GENERAL HEALTH OF THE BODY

Younger Than Before

In an 8-week randomized, double-blind, placebo-controlled clinical trial on healthy 40-60 years of age men and women: [1]

- **300** mg **NR** significantly increased whole blood NAD^+ up to **51%** within 2 weeks.
- There were **no serious adverse events** or reports of **flushing**.



p-value<0.05 relative to baseline, * p-value<0.05 relative to placebo

NAD^+ promotes Healthy Aging and Longevity.[2]

Benefits of NAD^+ for the skin:

- Prevention of skin aging:
  - ✓ Increase of collagen synthesis [3]
  - ✓ Decrease of transepidermal water loss (TEWL) [4]
  - ✓ Protection against skin photo-aging and cancer [5,6]
- **Inhibition of the pigmentation process due to its antioxidant effect [3]**
- **Treatment of acne due to its anti-inflammatory properties [7]**

US Federal Food, Drug, and Cosmetic Act:
Oral NR is Generally Recognized as Safe (GRAS) [8]

References:

1- Conze, D, et al. Safety and metabolism of long-term administration of NIAGEN (nicotinamide riboside chloride) in a randomized, double-blind, placebo-controlled clinical trial of healthy overweight adults. Scientific Reports, 2019.

2- Keisuke Yaku, et al. NAD metabolism: Implications in aging and longevity. Ageing Research Reviews, 2018.

3- Boo YC, et al. Mechanistic basis and clinical evidence for the applications of nicotinamide (niacinamide) to control skin aging and pigmentation. Antioxidants, 2021.

4- Chen AC, et al. Oral nicotinamide reduces transepidermal water loss: a randomized controlled trial. British Journal of Dermatology, 2016.

5- Philips, N, et al. Stimulation of the fibrillar collagen and heat shock proteins by nicotinamide or its derivatives in non-irradiated or UVA radiated fibroblasts, and direct anti-oxidant activity of nicotinamide derivatives. Cosmetics, 2015.

6- Fania L, et al. Role of nicotinamide in genomic stability and skin cancer chemoprevention. International Journal of Molecular Sciences, 2019.

7- Walocko FM, et al. The role of nicotinamide in acne treatment. Dermatologic Therapy, 2017.

8- www.fda.gov/files/food/published/GRAS-Notice-000635--Nicotinamide-riboside-chloride.pdf.

Orchid Pharmed
Sky's the Limit

Arvand Pharmed