

NAD⁺ AND NADH: THE CELLULAR ENERGY DUO POWERING THE NEXT WAVE OF LONGEVITY AND PERFORMANCE PRODUCTS

In the race to develop the next standout ingredient in nutraceuticals and functional foods, manufacturers are increasingly turning to cellular health and metabolic optimisation. Two molecules quietly sitting at the centre of this conversation are **NAD⁺ (Nicotinamide Adenine Dinucleotide – oxidised form)** and **NADH (reduced form)**.

These coenzymes are not new to science, but they are rapidly becoming one of the most commercially relevant ingredients in longevity, energy metabolism, and healthy ageing formulations.

For product developers and purchasing teams looking for ingredients with real science, strong consumer narratives, and expanding market demand, NAD⁺ and NADH deserve serious attention.

WHY NAD⁺ AND NADH ARE GETTING SO MUCH ATTENTION

At their core, **NAD⁺ and NADH** are essential coenzymes involved in cellular energy production. They play a critical role in:

- ATP production within mitochondria
- Redox reactions that support metabolism
- DNA repair mechanisms
- Activation of sirtuins linked to longevity pathways

The balance between **NAD⁺ and NADH** is fundamental to how efficiently our cells produce energy.

As we age, NAD⁺ levels naturally decline, which has been linked in research to reduced metabolic efficiency, fatigue, and age-related cellular stress. This decline has made NAD metabolism one of the hottest areas in longevity research, driving demand for ingredients that can support these pathways.



THE COMMERCIAL OPPORTUNITY FOR NUTRACEUTICAL BRANDS

For manufacturers developing supplements or functional foods, NAD-related ingredients offer a clear and compelling consumer story.

Key product positioning opportunities

Healthy ageing & longevity

Consumers increasingly want solutions that support cellular health and vitality as they age.

Energy & fatigue support

NADH has been studied for its role in cellular energy generation, making it relevant for energy, focus, and performance formulations.

Cognitive health

Energy metabolism in brain cells is a growing area of interest, opening potential applications in cognitive support products.

Metabolic health

NAD pathways are linked to metabolic regulation and mitochondrial function.

WHERE NAD+ AND NADH FIT IN MODERN FORMULATIONS

Supplements

- Capsules and tablets
- Advanced liposomal delivery systems
- Combination longevity stacks

Functional Food & Beverage

- Energy beverages with cellular metabolism positioning
- Healthy ageing functional shots
- Performance nutrition blends

SYNERGISTIC INGREDIENT PAIRINGS

NAD-related ingredients are frequently combined with:

- Resveratrol
- CoQ10
- B vitamins
- NMN or NR precursors
- Adaptogenic botanicals

This allows brands to build complete mitochondrial health or longevity formulations rather than single-ingredient products.

For samples, technical details, or more information
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