

# NAD+

## Supporting Cellular Energy, Healthy Ageing and Overall Wellbeing

Our bodies rely on billions of microscopic chemical reactions every second to produce energy, repair cells and maintain healthy organ function. At the heart of many of these processes is an essential coenzyme known as **Nicotinamide Adenine Dinucleotide (NAD+)**.

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## What is NAD+?

NAD+ (Nicotinamide Adenine Dinucleotide) is a naturally occurring coenzyme found in every living cell of the human body.

It plays an essential role in converting the food we eat into usable cellular energy and is involved in hundreds of biochemical reactions that support normal cellular function.

Without adequate NAD+, cells cannot efficiently produce the energy required for normal daily function.

As we age, naturally occurring NAD+ levels gradually decline. Researchers continue to investigate how this decline may influence healthy ageing, metabolism and cellular function.

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## Why Is NAD+ Important?

NAD+ is fundamental to many normal physiological processes, including:

- Cellular energy production
- Mitochondrial function
- DNA repair processes
- Healthy cellular ageing
- Enzyme activity
- Normal nervous system function
- Metabolic pathways
- Cellular communication

Because it is involved in so many essential biological functions, NAD+ has become an area of significant scientific interest.

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## The Role of Mitochondria

Often referred to as the “**powerhouses of the cell,**” mitochondria are responsible for generating the energy required by every organ and tissue.

Organs with particularly high energy demands—including the brain, heart and muscles—depend heavily on efficient mitochondrial function.

NAD<sup>+</sup> is an essential component of these energy-producing processes and contributes to normal mitochondrial activity.

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## NAD<sup>+</sup> and Healthy Ageing

Ageing is a natural process influenced by genetics, lifestyle and environmental factors.

Scientists continue to study the relationship between declining NAD<sup>+</sup> levels and healthy ageing. Research has explored how NAD<sup>+</sup>-dependent enzymes are involved in maintaining normal cellular repair mechanisms and responding to everyday physiological stress.

Although this field is evolving rapidly, it is important to note that **current evidence does not support claims that NAD<sup>+</sup> therapy reverses ageing or extends lifespan.**

At ARM Vitality Clinic, we believe it is important to provide honest, balanced information while remaining up to date with emerging scientific research.

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## Energy Production

One of NAD<sup>+</sup>'s best-established roles is supporting the body's natural production of cellular energy.

Every heartbeat, muscle contraction, nerve impulse and thought depends upon energy generated within our cells.

NAD<sup>+</sup> helps facilitate the biochemical reactions involved in converting nutrients into usable energy, making it an essential component of normal metabolism.

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## DNA Repair and Cellular Health

Every day our cells experience normal wear and tear from metabolism, environmental exposure and oxidative stress.

The body has sophisticated repair mechanisms that help maintain healthy DNA and normal cellular function.

Certain enzymes involved in these repair processes require NAD<sup>+</sup> to function effectively.

This has led to considerable scientific interest in the role of NAD<sup>+</sup> within healthy ageing research.

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