

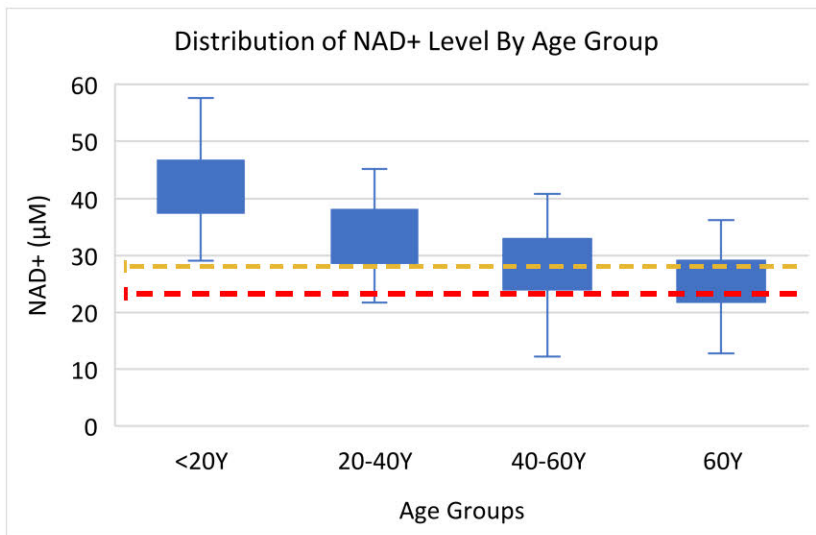
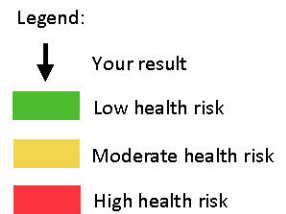
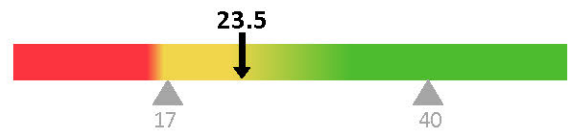
NAD+ Assay Report

Report Info:	
Number:	
Provider:	Govita Laboratory
Clinical Info:	IMI
Others:	NA

Customer Info:	
Name:	
Age:	54
Gender:	M
Customer ID:	

Sample Collection:	
Sample Type:	Blood
Collection Date:	
Samples Arrived:	
Results Reported:	

Name	Abbreviation	Reference Range	Result (µmol/L)
Nicotinamide adenine dinucleotide	NAD+	17 - 40	23.5



Reviewed by:

Signed by:

Note:

Test means assay, no clinical diagnosis is provided by Govita Laboratory.

Reference range is based on 90% of the healthy population.

Always seek the advice of trained health professional for medical advice, diagnosis or treatment.

Govita Laboratory reserves the right to adjust the biological reference range based on regular review.

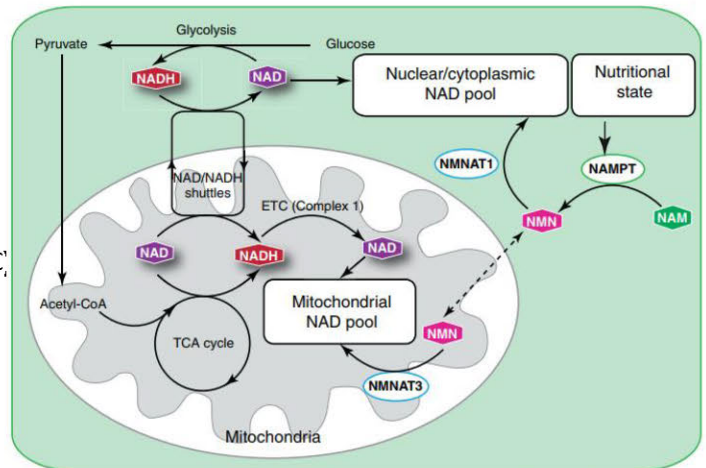
Elevated analytes levels may be influenced by certain supplements and insufficient fasting.

NAD+ Assay Report

What is NAD+?

NAD+, or nicotinamide adenine dinucleotide, is a critical coenzyme found in every cell in your body, and it's involved in hundreds of metabolic processes like cellular energy and mitochondrial health.

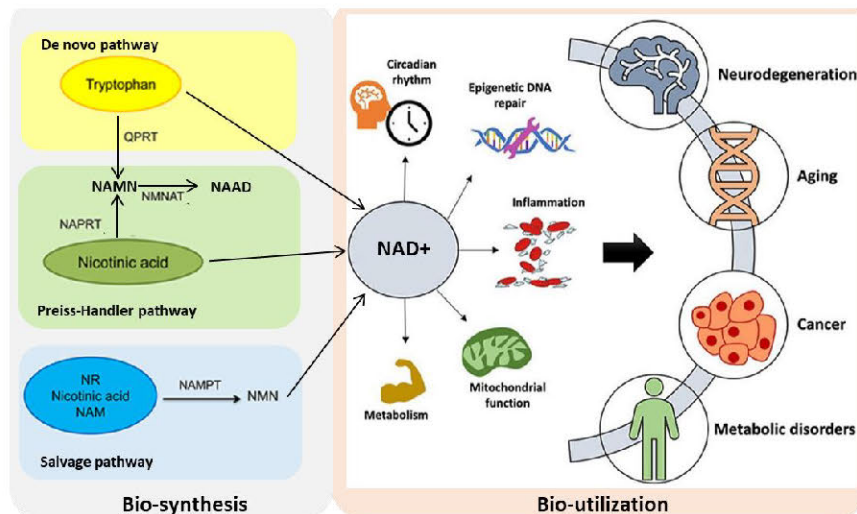
Multiple cellular processes play an important role in maintaining an optimal NAD/NADH ratio between mitochondria and the cytoplasm, including glycolysis, the tricarboxylic acid (TCA) cycle, and oxidative phosphorylation by the electron transport chain (ETC). Mitochondrial and nuclear/cytoplasmic NAD biosynthetic pathways are balanced in response to



TRENDS in Endocrinology & Metabolism

Why NAD+ matters?

NAD+ has two general functions: helping turn nutrients into energy as a key player in metabolism and working as a coenzyme for proteins that regulate other cellular functions. **NAD+ levels decline with age.** SIRTUINS^[2], a crucial deacylases and ADP ribosyltransferases in maintaining and regulating cellular homeostasis, is **NAD+ dependent**. The loss of sirtuins can lead to **mitochondrial dysfunction, which cause redox imbalance, leading to damaged cell proteins, lipids, and DNA.** DNA damage can cause chromosomal aberrations and gene mutations, leading to the development of several chronic diseases, including cancer^[3].



Precursors and role of NAD+ in aging, neurodegeneration, and cancer

NAD+ Assay Report

How to improve NAD+?



Exercise produces energy stress, which increases the consumption of NADH to produce energy. This NADH depletion yields higher levels of NAD+. Interval training is ideal.



Foods rich in NMN (milk, fish such as sardines, salmons, and tuna, yeast, green vegetables (especially peas and asparagus), and mushrooms, etc.) provide around 2 mg of NMN per day, which are believed to naturally boost NAD+ level.



Supplementation of NAD+ precursor (NR, NMN, etc) increases NAD+ levels, and enhances oxidative metabolism.

Recommandation



Seek for your doctors' medical advise and health suggestion about NAD regulation.



Guide and optimize your supplement dosage by regular NAD+ tests. The marketed NMN content varies from 100 mg to 1,000 mg as labelled in multiple brands. **Choose wisely with scientific data evidence.**

Reference:

[1] Zapata-Pérez R, et al., NAD+ homeostasis in human health and disease. EMBO molecular medicine. 2021 Jul 7;13(7):e13943.

[2] Houtkooper RH, et al., Sirtuins as regulators of metabolism and healthspan. Nature reviews Molecular cell biology. 2012 Apr;13(4):225-38.

[3] Zhang M, et al., NAD+ deficiency is a common central pathological factor of a number of diseases and aging: mechanisms and therapeutic implications. Antioxidants & redox signaling. 2019 Feb 1;30(6):890-905.