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17-Mar-26

Collected
13-Mar-26

Enzyme



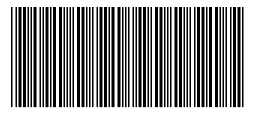
Lab ID
Patient ID P000004
Ext ID 26076-0076

Test Patient

Sex: Female • 18yrs • 20-Sep-07
123 Home Street, Test Suburb VIC 3125

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NAD/NADH						
TEST	RESULT	H/L		REFERENCE	UNITS	
NAD (NAD+)	8.0	L		(20.00-42.00)	nmol/ml	
NADH	4.3	H		(0.60-2.20)	nmol/ml	
NADP	4.8	L		(9.50-21.00)	nmol/ml	
NADPH	23.0	H		(7.50-21.00)	nmol/ml	
FUNCTIONAL RATIOS						
TEST	RESULT	H/L		REFERENCE	UNITS	
NAD/NADH Ratio	1.86	L		(8.00-45.00)	nmol/ml	
NADP/NADPH Ratio	0.21	L		(0.50-2.00)	nmol/ml	
NAD/NADP Index	2	L		(90.00-350.00)	nmol/ml	
NAD PRECURSORS						
TEST	RESULT	H/L		REFERENCE	UNITS	
Nicotinic Acid (NA)	0.10			(0.10-0.70)	nmol/ml	
Nicotinamide (NAM)	0.5	L		(1.90-5.50)	nmol/ml	



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NAD⁺ LOW:

NAD (or nicotinamide adenine dinucleotide) is used extensively in glycolysis and the citric acid cycle of cellular respiration.

The reducing potential stored in NADH can be either converted into ATP through the electron transport chain or used for anabolic metabolism. Altered NAD levels may be associated with age, cancer, obesity and type 2 diabetes, neurological disorders, intestinal inflammation. Many studies point to decreased NAD levels under disturbed nutrient conditions, and aging.

Consider: Foods which can boost NAD levels i.e. milk, fish, mushrooms, green vegetables, grains. May also supplement with 10mg niacin/nicotinic acid for a short period to increase low levels.

Strategies aimed at restoring redox balance, such as modulating NAD⁺ /NADH ratios through metabolic interventions/supplementation hold promise in mitigating oxidative stress and preserving cellular health, in overall physiological well-being.

Moderate NADPH are known to increase antioxidants, help prevent anemia, and protect the immune system. Higher NADPH levels are less common than deficiencies, and are usually not clinically-relevant. Recently however, tumor cells have been shown to maintain higher levels of NADPH, as well as an increase in anxiety and depression.

Consider: Supplementation for a short period with α -ketoglutarate or Vitamin C to lower NADPH levels.

Nicotinamide adenine dinucleotide phosphate (NADP) is a coenzyme composed of ribosylnicotinamide 5'-phosphate coupled with a pyrophosphate linkage to 5'-phosphate adenosine 2',5'-bisphosphate. NADP serves as an electron carrier in a number of reactions, being alternately oxidized (NADP⁺) and reduced (NADPH).

Nicotinamide is a form of vitamin B3 found in food and used as a dietary supplement and medication. Its primary significance is in the prevention and/or cure of blacktonque and pellagra.

Consider: Increasing high-niacin foods i.e. chicken, tuna, turkey, salmon, green vegetables. May supplement with a multivitamin.

A lower ratio favors less energy, and therefore a more unfavourable NAD⁺/NADH ratio. Lower NAD⁺/NADH ratios are known to correlate with diseases of aging and mitochondrial dysfunction, such as metabolic and neurodegenerative diseases.

Consider: Foods which can boost NAD levels i.e. milk, fish, mushrooms, green vegetables, grains. May also supplement with 10mg niacin/nicotinic acid for a short period to increase low levels.

The redox theory of aging suggests that lifespan is regulated by redox changes, including alterations in the NADP⁺/NADPH ratios. Manipulations that lead to a reduction of the NADP⁺/NADPH in the cytoplasm are especially linked with increased longevity.

A niacin number (the ratio of NAD to NADP concentrations in whole blood x 100) below 130 suggests niacin deficiency.

Consider: Foods which can boost NAD levels i.e. milk, fish, mushrooms, green vegetables, grains. May also supplement with 10mg niacin/nicotinic acid if ratio is <130 .



Dr Test Doctor (Test Doctor) Test Clinic. 123 Test Street, Test Suburb Victoria 3125

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Methodology

Liquid Chromatography-Mass Spectrometry (LC-MS/MS/MS)

SAMPLE REPORT