

System	Type	Benefit (R)/Risk (R)	NAD+ inferior	NAD+ not inferior	NAD+ superior
Skin	↑ risk of non-melanoma skin cancer	B			1
Skin	↓ UV immune suppression	B			1
Cellular energetics	↑ mitochondrial respiration/function	B			1
Skin	↓ actinic keratosis	B			1
Tumorigenesis	↑ cancer risk	R	2, 5		2, 5
Tumorigenesis	↑ rate of growth of cancer	R	2, 5		2, 5
Buildup of metabolites	↑ neurodegeneration	R	2, 5		2, 5
Buildup of metabolites	↑ skin neoplasia	R	2, 5		2, 5
Skin	↑ thickness stratum corneum	B			2
Skin	↓ transepidermal water loss	B			2
Skin	↓ erythema, infiltration, and desquamation of psoriatic plaques	B			2
Skin	↓ reductions in loss and wrinkles, hyperpigmentation, sallowness, elasticity	B			2
Skin	↓ acne severity	B			2
Skin	↓ pigmentation, solar elastosis, mast cell infiltrate in melanoma	B			2
Skin	↑ improvement in rosacea	B			2
CVS	↑ cardiac function/contractility	B			2
CVS	↓ infarct size	B			2
CVS	↑ survival in cardiac arrest	B			2
CVS	↓ maximum heart rate	B			2
Muscle	↑ exercise performance/tolerance/amount	B			2
Eyes	↓ glaucoma	B			2
Ears	↓ noise-induced hearing loss	B			2
Gene expression	↑ SIRT1 activity	B			2
Nervous system	↓ cognitive impairment/difficulties	B			2
Nervous system	↓ progression of cognitive deterioration	B			2
Buildup of metabolites	↑ worsens motor phenotype in Huntington's model	R	2		2
Sensory cells	↑ SASP of sensory cells	R	2		2
Skin	↑ improvement in contact dermatitis	B			2, 5
Rejuvenation	↑ healthspan	B			2, 5
Metabolism	↓ weight gain/body weight	B			2, 5
Metabolism	↓ NAD+/NADH	B			2, 5
Nervous system	↓ neuron death from glutamate toxicity/oxygen-glucose deprivation	B			2, 5
Nervous system	↓ damage after I/R injury of the spinal cord	B			2, 5
Nervous system	↓ damage of I/R injury following a stroke, infarct size, edema	B			2, 5
Skin	↑ epidermal thickness	B			2, 5
Rejuvenation	↓ aging defects in gut	B			2, 5
Rejuvenation	↑ lifespan	B			2, 5
Rejuvenation	↑ gut stem cells	B			2, 5
Rejuvenation	↑ hematopoietic stem cells	B			2, 5
Kidney	↓ reverse established AKI	B			2, 5
Metabolism	↓ AST / ALT	B			2, 5
Metabolism	↑ protein and increases hepatic tumors	R			2, 5
Cellular energetics	↑ NAD(P)H levels	B			2, 5
Cellular energetics	↑ ATP levels	B			2, 5
Cellular energetics	↓ oxidative stress markers/inflammatory cytokines	B			2, 5
Nervous system	↓ anxiety	B			2, 5
Nervous system	↓ sleep disturbances	B			2, 5
Nervous system	↓ peripheral neuropathy	B			2, 5
Nervous system	↑ headaches	R			2, 5
Nervous system	↑ age-related cognitive difficulties and sleepiness	R			2, 5
Immune system	↑ oxidative burst	B			2, 5
Buildup of metabolites	↑ NAM, MeNAM, NMN, 2-PY, NAAD	R	2, 5		2, 5
Buildup of metabolites	↑ diabetes insulin resistance	R	2, 5		2, 5
Buildup of metabolites	↑ NAD/NADH ratio	R	2, 5		2, 5
Muscle	↓ exercise performance	R	2, 5		2, 5
Inflammatory conditions	↑ aggregation of RA	R	2, 5		2, 5
Muscle	↑ muscle function	B			2, 5
Muscle	↓ myalgia symptoms	B			2, 5
Muscle	↑ muscle mass	B			2, 5
Rejuvenation	↑ DNA repair activity	B			2, 5
Kidney	↓ hypertension, arteriosclerosis, glomerulosclerosis CKD	B			2, 5
Metabolism	↓ triglycerides	B			2, 5
Metabolism	↑ insulin sensitivity/glucose tolerance	B			2, 5
Nervous system	↑ memory	B			2, 5
Nervous system	↑ neuroinflammation, apoptosis, DNA damage, cell death	R			2, 5
Immune system	↓ lymphadenopathy	B			2, 5
Acute adverse drug effects	↑ thrombocytopenia/bruising	R	2, 5		2, 5
Acute adverse drug effects	↑ diarrhea/changes in stool consistency	R	2, 5		2, 5
Acute adverse drug effects	↑ nausea + vomiting	R	2, 5		2, 5
Acute adverse drug effects	↑ erythema, pruritis, burning skin	R	2, 5		2, 5
Acute adverse drug effects	↑ abdominal discomfort/dyspepsia	R	2, 5		2, 5
Buildup of metabolites	↑ weight gain	R	2, 5		2, 5
Metabolism	↓ potassium	R	2, 5		2, 5
Skin	↑ rates of epidermal renewal	B			2, 5
Skin	↓ sebum excretion	B			2, 5
Skin	↑ improvement in skin barrier diseases	B			2, 5
Skin	↑ enhanced repair of DNA damage	B			2, 5
Skin	↑ wound healing	B			2, 5
Skin	↑ enhanced production of ceramides and free fatty acids	B			2, 5
CVS	↓ vascular dysfunction	B			2, 5
CVS	↓ oxidative stress	B			2, 5
CVS	↓ arrhythmias	B			2, 5
CVS	↑ hypoxia and reoxygenation injury	R			2, 5
CVS	↓ blood pressure	B			2, 5
CVS	↓ arterial stiffness	B			2, 5
CVS	↓ cardiac injury markers after surgery	B			2, 5
CVS	↑ ATP in cardiomyocytes	B			2, 5
CVS	↓ inflammatory markers	B			2, 5
CVS	↓ cardiac cell death	B			2, 5
CVS	↑ increase sodium channel conduction velocity in heart failure	B			2, 5
CVS	↑ increased survival following hemorrhagic shock	B			2, 5
CVS	↓ I/R injury in acute lung injury	B			2, 5
Muscle	↓ postvertical malaise	B			2, 5
Muscle	↓ muscle weakness	B			2, 5
Muscle	↑ antralgia	R			2, 5
Muscle	↓ muscle fiber degeneration	B			2, 5
Muscle	↓ myopathy	B			2, 5
Ears	↑ ear function	B			2, 5
Kidney	↓ acute kidney injury	B			2, 5
Kidney	↓ fibrosis	B			2, 5
Metabolism	↑ HDL	B			2, 5
Metabolism	↓ LDL	B			2, 5
Metabolism	↓ visceral fat deposits, adiposity	B			2, 5
Metabolism	↑ oxygen consumption	B			2, 5
Metabolism	↑ body temperature	B			2, 5
Metabolism	↓ β-cell apoptosis	B			2, 5
Gene expression	↑ mitochondrial gene expression	B			2, 5
Cellular energetics	↑ activation of mitochondrial unfolded protein response	B			2, 5
Gene expression	↑ SIRT1 and SIRT6	B			2, 5
Gene expression	↑ gene expression related to cell adhesion, actin cytoskeleton organization, and cell motility	B			2, 5
Gene expression	↑ gene expression to improve oxidative stress, inflammatory response, circadian rhythm	B			2, 5
Nervous system	↑ learning ability in old age	B			2, 5
Nervous system	↑ tau pathology	R			2, 5
Nervous system	↓ AB pathology	B			2, 5
Nervous system	↑ neurovascular coupling responses via NO-mediated vasodilation	B			2, 5
Nervous system	↓ dopaminergic neurodegeneration and deficits	B			2, 5
Nervous system	↑ mitochondrial function in Parkinson's model	B			2, 5
Nervous system	↑ mitochondrial function and revert toxicity in ALS model	B			2, 5
Nervous system	↑ circadian rhythm	B			2, 5
Nervous system	↑ increased retinal lumen and visual-constructural ability	B			2, 5
Nervous system	↑ sensory processing	B			2, 5
Nervous system	↑ post stroke remyelination	B			2, 5
Nervous system	↑ gait coordination	B			2, 5
Nervous system	↑ increase neural stem cell activation after stroke	B			2, 5
Nervous system	↑ increased integrity of BBB, protect against side effects of tPA treatment	B			2, 5
Nervous system	↓ survival of neuroblastoma and other brain tumor cells	B			2, 5
Nervous system	↑ angiogenesis	B			2, 5
Nervous system	↓ neuro death and edema after trauma	B			2, 5
Reproduction	↑ quality of oocytes	B			2, 5
Reproduction	↑ improved development of offspring	B			2, 5
Reproduction	↓ congenital malformation	B			2, 5
Reproduction	↑ increased lactation and transmission of nutrients in milk	B			2, 5
Immune system	↓ allergies	B			2, 5
Immune system	↑ lymphocyte proliferation	B			2, 5
Immune system	↓ CD4 and MHC-1	R			2, 5
Immune system	↓ CD40 and CD40-L	R			2, 5
Immune system	↓ DNA damage-induced cell death of mononuclear cells	B			2, 5
Immune system	↓ secretion of TNFα	B			2, 5
Immune system	↓ cancer cell survival	B			2, 5
Acute adverse drug effects	↑ skin rash	R	2, 5		2, 5
Acute adverse drug effects	↑ flushing	R	2, 5		2, 5
Acute adverse drug effects	↑ ting cramps	R	2, 5		2, 5
Acute adverse drug effects	↑ sweating	R	2, 5		2, 5
Acute adverse drug effects	↑ fatigue	R	2, 5		2, 5
Acute adverse drug effects	↑ headache	R	2, 5		2, 5
Acute adverse drug effects	↑ shortness of breath	R	2, 5		2, 5
Buildup of metabolites	↑ thrombocytopenia	R	2, 5		2, 5
Buildup of metabolites	↑ oxidative stress	R	2, 5		2, 5
Buildup of metabolites	↓ replicative lifespan	R	2, 5		2, 5
Buildup of metabolites	↓ telomeres	R	2, 5		2, 5
Buildup of metabolites	↑ dysregulation of serotonin and histamine	R	2, 5		2, 5
Buildup of metabolites	↓ methylation-mediated degradation of catecholamines	R	2, 5		2, 5
Metabolism	↑ impaired glucose tolerance	R	2, 5		2, 5
Metabolism	↑ lipid peroxidation	R	2, 5		2, 5
Metabolism	↓ Hematocrit, Hb, platelet count	R	2, 5		2, 5
Metabolism	↑ LDL	R	2, 5		2, 5
Feedback suppression	↓ gene sets associated with energy metabolism in skeletal muscle	R	2, 5		2, 5
Immune system	↑ T-cell apoptosis	R	2, 5		2, 5