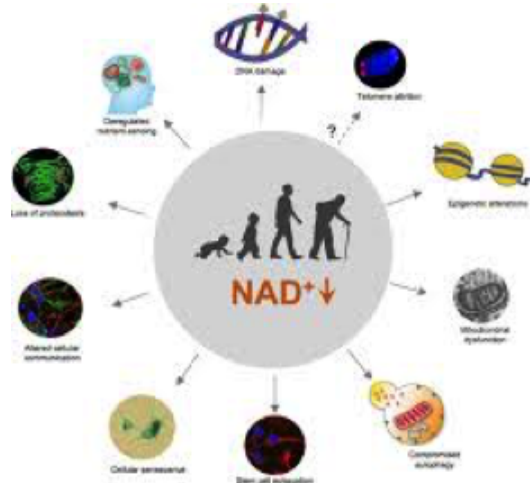


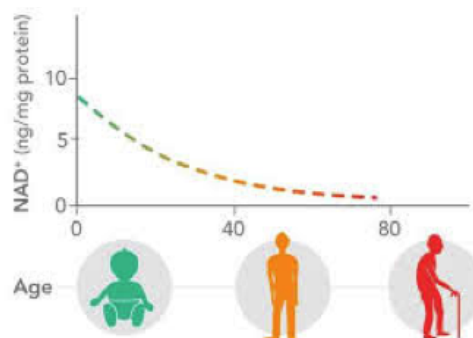
NAD + Anti-Ageing

The answer to feeling better is redefining how you age!



What if there was a compound that could turn back time, restore energy, improve athletic performance, bring back clarity of thought, reverse depression and help cure cravings for alcohol and drugs even in the most addicted individuals?

So, what current research is suggesting is there is such a substance. It is called NAD+, and it occurs naturally in every cell in your body. However, as we age it naturally declines



Over the last 10 years compelling research has shown that supplementing with NAD+ may help you withdraw from addictive substances safely, overcome anxiety and depression, handle acute and chronic stress more effectively, and cope better with PTSD.

What's exciting is Dr. David Sinclair and his colleagues at Harvard have a place in anti-ageing. They discovered that NAD levels decline as we age and this also has an effect on other processes that rely on NAD. A class of enzymes, known as sirtuins, play a large role in how the body ages by regulating inflammation and DNA protection. Sirtuins depend on NAD to start and stop protective pathways that are linked to pathologies of age-related diseases. In other words, sirtuins are able to "turn on" and "turn off" certain genes like a light switch.

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If we look at Inflammation that causes damage to your DNA and other structures in your cells, which can lead to cell death. Such as when we consume inflammatory foods, drink alcohol, breathe in pollutants, or are exposed to other toxic chemicals, our cells are at risk. With bountiful amounts of NAD, your cells are able to activate enzymes to prevent and correct DNA damage. Superhero enzymes, such as sirtuins, allow your cells to live long and healthy lives, leading to a better quality of life for you.

Administering a high dose of NAD straight into your bloodstream, compared to other routes (i.e. oral) will give you a faster, more effective outcome. This high dose quickly optimises your NAD levels, which revs up the engine in your cells (called the mitochondrion) translating into more energy for you.

Energy production happens in your mitochondria—the little energy factories that pump out ATP—ABSOLUTELY depends on NADH (the inactive form) being recycled back to active NAD⁺. If this recycling stops and NADH accumulates the cell runs out of energy and it may die. This was clearly shown in a recent study on brain and kidney cells.

It goes without saying, then, that depleted levels of NAD⁺ and accumulation of NADH, or a low ratio of NAD⁺/NADH, can create problems for your mitochondria and your cells. Indeed, it results in low levels of cellular energy and may be one of the primary contributing factors to “mitochondrial dysfunction”. a condition we now know is implicated in a wide variety of chronic illnesses including autoimmune disorders, diabetes, and others.

So, what’s exciting is the Restoring of NAD⁺ levels to reverses these processes and allows cells to return to full energy status, offering a possible way to undo mitochondrial damage and the resulting of chronic illness.

Dr Charles Brenner one of the worlds experts on NAD⁺ (Stamford University) believes it’s the central regulator on metabolism. He researched that NAD in all essence is a product that enhances your own stem cell proliferation. It is one of the most potent anti-ageing molecules you can put into your body because it decreases the rate at which your telomeres shorten. The research on Telomeres is extensive and we really want them as long as possible to age gracefully. So, you may have heard of these sirtuin rich foods like blueberries, resveratrol’s cocoa etc they maintain Telomere length but none are as strong as NAD that effect in such a positive way on your NAD/ NADH ratio.

So, when we Increase mitochondrial Fission (splitting), NAD can speed up the defective mitochondrial DNA this is true benefit of how we defend our body against Cancer and clean up damaged cells. So stronger Mitochondria, make more ATP (that’s Energy) So this is an uncomfortable infusion. But I like that because I want you to feel like your body is doing the House keeping with the infusion. Understand its working nothing bad happens, the first is always the worst. But after that you accept its safe and get better tolerance and the infusion takes less time. Dr Brenner has NEVER seen an adverse reaction or seen on documented.

University of Penn Paper (Philadelphia) discovered 2018 Published in Cell Biology (Antonio Davila) NAD molecule transported into Mitochondria. They tagged the NAD molecule and could see its uptake into mitochondria, it was clear and had a profoundly higher uptake wen gradient is at its greatest (i.e. IV NAD) and that most NAD is produced outside the Mitochondrial cells. This would make sense and that’s why we feel sick

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whilst getting an IV drip, so this blows away why would I supplement with a NAD precursor Like NMN or NR. So, we get this B3 analogue from dietary sources Tryptophan & Niacin (high dose causes Flushing).

So, what about all the precursors: Niacin can't be used by a neurone, we need an NAD precursor for the neurone to use. We make Niacin by our own GUT as a by-product. We don't use just nicotinamide as inhibits the enzymes the opposite we use.

So, we don't do Glutathione on same day because they will dampen NAD response or any antioxidant for that matter on that DAY. So trending is also even for Stem cell therapy in the US they Infuse NAD+ three days prior to stem cell therapy (regenerative medicine) a NAD infusion each day because of this Mitochondrial Fission and that exemplifies the stem cells working. O so we accumulated defective DNA from oxidative Stress (poor diet / not neigh sleep / toxins)

So, let's be frank Ok so most people only absorb 10% of vitamins from GUT.

So, it does make sense to keep taking capsules that you're not absorbing. So, the funny thing right is you identify your deficient in Iron right so the first thing the doctors say is take an oral iron supplement the reason why it was low in the first place because poor absorption.

I am mean that's why we do Iv vitamins and minerals.

NAD+ AS AN ANTI-AGEING MOLECULE

Medical researchers have long known that a group of enzymes called sirutins play a crucial role in how the body ages—especially SIRT1 and SIRT3. We don't yet understand precisely how they work, but what we do know is exciting. SIRT enzymes appear to switch off genes that promote ageing such as those that cause inflammation, fat synthesis and storage, and blood sugar management issues.

Up until now the only way we knew to positively impact these SIRT enzymes was to go on a very low-calorie diet. As uncomfortable as it may be, caloric restriction is one of the few ways that has repeatedly been shown to lead to a longer life. I am a firm advocate of prolong fast period cycled throughout the year. (Supported by Prof Longo et al NSCU)

However, the tide appears to be turning. You see, recent research indicates that NAD+ plays a key role in the creation and activation of the sirutins.

Doctors out of the Department of Developmental Biology at the Washington University School of Medicine were the first to show this link in 2014. The authors note:

"NAD (+) levels decline during the ageing process and may be an Achilles' heel, causing defects in nuclear and mitochondrial functions and resulting in many age-associated pathologies. Restoring NAD (+) by supplementing NAD (+) intermediates can dramatically ameliorate these age-associated functional defects, counteracting many diseases of ageing, including neurodegenerative diseases."

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These findings were corroborated in 2016 when the scientific journal Rejuvenation published an article where the authors discussed how low NAD+ levels are DIRECTLY associated with cellular ageing, and they emphasised that this process can be prevented by increasing the levels of NAD+ within cells.

So, is NAD+ a fountain of youth? It could be. More research needs to be done. But one thing seems clear: It certainly has an impact on your body at the cellular level.

NAD+'S ROLE IN EXERCISE AND ENDURANCE

It is well known that ATP levels get depleted in muscles while exercising. This simply stands to reason. However, until recently we didn't know how NAD+ was implicated in this process.

A study done in 2010 using both trained and untrained healthy volunteers helped tease out the relationship. The researchers showed that intense exercise decreases NAD+. When the study participants took an antioxidant supplement containing pycnogenol (which stimulates NAD+ production and protects it from turning into the inactive, oxidised form of the molecule), NAD+ levels increased and exercise performance and "time to fatigue" also improved.

NAD+ RESTORATION:

Using a direct IV infusion of NAD+ is certainly a more efficient way of raising NAD+ levels than taking an indirect, oral supplement that acts as a stimulator for NAD+. So, we know that this IV can improve athletic performance, and it likely has a more pronounced effect than the study cited above.

The nicotinamide adenosine dinucleotide (NAD) molecule alternates between two forms. Which one is present depends on how it is being utilised? NAD+ is the reduced (active) form of the molecule. NADH is the oxidised (inactive) form of the same molecule. We only supplement NAD+

NAD+'S ROLE IN REVERSING CHRONIC ILLNESS AND NEURODEGENERATIVE DISEASE

At the end of the day, health and energy production are intimately related. If your mitochondria aren't functioning or they are producing too little energy, you are going to experience symptoms. When the problem becomes too severe it turns into illness.

The link between NAD+, energy production, and chronic illness really couldn't be clearer. Low NAD+ results in low ATP levels. Low ATP levels quickly depletes your cell's energy reserves. Left unchecked, and this can lead to cell death.

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How all of this shows up in your body depends on which cells are being affected. If nerve cells are affected, the lack of energy may manifest itself as depression, anxiety, fatigue and lack of focus. In severe cases where the nerve cells are dramatically impacted or even die, neurodegenerative illness like Parkinson's disease and Multiple Sclerosis may manifest themselves. In the worst cases—like mass cellular death—this may lead not only transient symptoms such as tremors, spasms, tingling, numbness and blurred vision, but to permanent, irreversible disability.

If your heart cells are affected, it can lead to cardiovascular disease. If your lung cells are affected pulmonary disorders may present themselves. Basically, when the cells in your organs and tissues don't have enough energy, illness results.

IV NAD+ combined with IV amino acids can be beneficial in restoring energy production—especially in the nerve tissue—and may even prevent permanent damage.

It's a product that enhances your own stem cell proliferation. It is one of the most potent anti-ageing molecules you can put into your body because it decreases the rate at which your telomeres shorten. So, you may have heard of these sirtuin rich foods like blueberries, resveratrol's cocoa etc but none are as strong as NAD. As they reflect in such a positive way on your NAD/ NADH ratio.

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U Penn Paper discovered NAD molecule transported into Mitochondria. They tagged the NAD molecule and could see its uptake into mitochondria so leads us to the profound and higher uptake when gradient is at its greatest which would make sense because that's why we feel sick, so this blows away why would I supplement with a NAD precursor Like NMN or NR. So, we get this B3 analogue from dietary sources Tryptophan & Niacin (Very inefficient process as it's an 8-point process). NAD is in a natural source is dairy, its stable in milk. However, you need 2 litres a day to get 2 mg!! How much dairy do I drink = NONE! it's outweighed by lactose intolerant symptoms.

So, let's be frank most people only absorb 10% of vitamins from GUT when taken oral.

So, it doesn't make sense to keep taking capsules as you're not absorbing. So, the funny thing is you identify your deficient in Iron right so the first thing the doctors say is take an oral iron supplement the reason why it was low in the first place because poor absorption. Really that's why we do IV vitamins and minerals.

At the completion of NAD infusion, we would encourage a Fast-vitamin PUSH for immediate energy.

20-30 ml PUSH (Multi Bs / Magnesium /Amino acids in small amounts)

Why NAD+? Here some good reasons

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Any Neurodegenerative Disorder

- More energy
- Brain clarity
- Reducing inflammation.
- Anti-ageing
- Reduces fatty Liver

NAD IV therapy can help. NAD and its twin form, NADH are primarily used in redox reactions to generate energy within your cells. Part of this process includes the breakdown of carbohydrates, or sugar. What happens when your body is flooded with sugar? On top of elevated blood sugar levels, your cells start to metabolise the simple carbohydrates leading to an overload of NADH. Excess NADH has been linked to several metabolic conditions.

NAD IS DIFFERENT FROM TYPICAL TREATMENT OPTIONS BECAUSE:

1. It is natural, compared to toxic pharmaceuticals which mostly harm your brain in the long run.
2. It is restorative. NAD helps your cells heal and helps with cellular biogenesis.
3. It is protective. NAD has shown to be neuroprotective.

NAD increases production of ATP, which is the currency your cells use for energy.

Most people who experience NAD IV therapy express the following brain benefits:

- Increased concentration
- Improved memory
- Increased mental clarity
- Improved mood

The IV therapy can last from 4 to 14 days, depending on your condition and your goals. It's important to work with a qualified doctor, because there are specific protocols.

Options NAD supplement

500mg IV infusion

500mg Nasal spray

500mg sublingual drops

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WHAT INFLUENCES YOUR OWN NAD LEVELS EVERY DAY BY DR CHARLES BRENNER

Inflammation Producers

1. Excessive Alcohol
2. Over Nutrition (Obesity depressive effect on NADPH: key metabolite that resists reactive Oxygen):
Leading type of malnutrition (too much food in general causing inflammation)
3. Noise Induced hearing loss (persistent)
4. Sun and Oxygen damage
5. Changing Time zone (Circadian Rhythm disrupted) Part time shift workers and poor sleep
6. Neurodegeneration: Brain depletion
7. Heart Disease: Heart depletion
8. ageing: LIVER depletion

Options

500mg IV infusion + Fast Vitamin PUSH COST to clinic MOST effective

500mg Nasal spray Daily

500mg sublingual drops

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<https://www.ncbi.nlm.nih.gov/pubmed/29883761>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5795269/>

<https://www.ncbi.nlm.nih.gov/pubmed/28068222/>

<http://science.sciencemag.org/content/352/6292/1436>

