Free speech is fleeting, this content will disappear in:
0 days 4 hours 15 minutes
Learn More

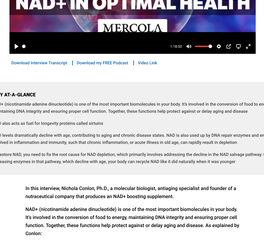
Access Dr. Mercola's Censored Library
CLICK HERE

The Crucial Role of NAD+ in Optimal Health

Analysis by Dr. Joseph Mercola ✓ Fact Checked

March 27, 2022
Download PDF

Next



Download Interview Transcript | Download no FREE Podcast | Video Links

STORY AT-A-GLANCE

- NAD+ (nicotinamide adenine dinucleotide) is one of the most important biomolecules in your body. It's involved in the conversion of food to energy, maintaining DNA integrity and ensuring proper cell function. Together, these functions help protect against or delay aging and disease
- NAD also acts as fuel for longevity proteins called sirtuins
- NAD levels dramatically decline with age, contributing to aging and chronic disease states. NAD is also used up by DNA repair enzymes and enzymes involved in inflammation and immunity, such that chronic inflammation, a state illness in old age, can rapidly result in depletion
- To restore NAD, you need to fix the root cause for NAD depletion, which primarily involves addressing the decline in the NAD salvage pathway. By increasing enzymes in that pathway, which decline with age, your body can recycle NAD like it did naturally when it was younger

In this interview, Nichola Conlon, Ph.D., a molecular biologist, antiaging specialist and founder of a nutraceutical company that produces an NAD+ boosting supplement.

NAD+ (nicotinamide adenine dinucleotide) is one of the most important biomolecules in your body. It's involved in the conversion of food to energy, maintaining DNA integrity and ensuring proper cell function. Together, these functions help protect against or delay aging and disease.

Conlon:

> *NAD is actually something I ended up working on in the drug development industry. I was fortunate enough to work for a company that was forward thinking. It actually started looking at developing molecules that would improve our health span, which is the proportion of the life that we live in good health.*
>
> *So, rather than just focusing on individual diseases, we were actually looking at underlying mechanisms of cellular aging and looking at slowing cellular aging to improve healthy lifespan.*
>
> *This is when I came across NAD, which is an incredibly important molecule in the body. Going back to molecular biology roots, NAD is important for two critical things in the body.*
>
> *The first is energy production. The process that takes the energy out of the food we eat and converts it into ATPwhich is the form of energy currency that our cells can use to survive and do all the functions that they need to do, absolutely requires NAD.*
>
> *Without it, we simply wouldn't be alive because our bodies wouldn't be able to make any energy. It's estimated that if we didn't have any NAD in our body we'd literally be dead in 30 seconds, which shows how critical it is to our cells.*
>
> *The second thing that it's really important for is cellular maintenance and repair. NAD almost acts as a sensor in the body. It enables the cell to know that it's exposed to energetic stress, which is basically how much energy or lack of energy the cell has … These are the two major things that NAD is known for, and because of these roles, it's absolutely fundamental to overall cellular health."*

As an example, if you were to exercise or fast, that uses up cellular energy. NAD will sense this raised energy demand and increase its levels. Elevated NAD is actually a signal that the cell is in a state of stress. In response, cellular maintenance and repair processes are switched on to preserve the cell and help it survive the stress.

Some History

NAD plays a large role in the Krebs citric acid cycle as it helps to pass the electrons along in the mitochondria in the electron transport chain to facilitate oxidative phosphorylation and generate cellular ATP. While discovered in 1905, well over a century ago, few scientists have paid much attention to it.

In the late 1990s, David Sinclair, Ph.D., while working in Leonard Guarente's lab at Massachusetts Institute of Technology (MIT), realized that NAD is the fuel for longevity proteins called sirtuins. That's when it started coming into prominence as an anti-aging agent.

> *"It was around 2014 that I started getting involved in the aging field," Conlon says. "This was a time when a lot of scientists were talking about this idea that we could slow cellular aging … [Today], there isn't a single scientist that works in the field of biogerontology — the study of aging — who doesn't say that you can slow biological."*

Testing NAD Levels Is Complicated

Oftentimes, before you start supplementing something, you'll want to find out what your level is. Unfortunately, that's extremely difficult to do with NAD. We do know that NAD levels decrease with age, which is one of the reasons why people want to boost their NAD back to youthful levels.

> *"In scientific laboratories, we use some fairly sophisticated techniques to measure NAD," Conlon says, "But now there's been an emergence of companies saying, 'Send your blood and we'll measure it for you.' The reality is, unfortunately, that as good as that would be, it just doesn't work that way.*
>
> *If you think of what NAD does, NAD is described as a redox molecule. What that means is, that it is continually flipping states. It carries electrons in the electron transport chain and [is involved in] the mitochondrial reactions. This means that by its very nature, NAD is designed to flip between different states, so it's really, really unstable.*
>
> *Literally, as soon as NAD is taken out of the body, it starts to break down into its precursors. It starts to change form. Therefore, if you don't do something to stop those reactions very, very quickly, what you end up measuring is not a correct reflection of what is actually in the body and in the cell.*
>
> *When we measure NAD in the laboratory, we have to make sure that as soon as it is taken out of the person, it's put straight on ice to stop any reactions and then immediately prepped to take out the cells that we want to measure the NAD from. They then cryogenically freeze to stop any changes or any reactions until we measure the NAD. You've got about a 30-minute window to get this done.*
>
> *After that, to work out how much NAD is in the sample, you can then use techniques such as mass spectrometry, which compares the amount of NAD in the sample to standards, which are known amounts of NAD.*
>
> *These are not simple techniques. They are quite advanced laboratory techniques. So, when companies that say they can provide this as a postal service, at the moment, I'm quite skeptical of what they are actually measuring."*

How NAD Is Made and Regenerated

Your net NAD level is the sum of what your body makes minus what it loses. If you can successfully limit the amount being lost, then you can maintain your NAD level. So, how is it made, and how is it lost? Conlon explains:

> *"It's incredibly complex. It's not just a simple case of adding two things together to make more NAD and that's the end of it. Within the cell, there are five different precursors that NAD can be made out of. These are the raw materials that your body uses to manufacture NAD …*
>
> *You've got the B vitamins and derivatives nicotinic acid (nicotinamide), niacin, nicotinamide riboside (NR) and nicotinamide mononucleotide (NMN). And also the amino acid tryptophan. Once these are inside the cell, they enter various different pathways which then assemble them into NAD.*
>
> *There are three main pathways. The most important pathway for NAD production is something called the NAD salvage pathway. This is because not only can it make NAD from these external raw materials that come into the cell, but it can also recycle NAD as it is broken down.*
>
> *A key thing that many people don't realize is that when NAD is being used up in all of these beneficial processes in the cell, such as in DNA repair and activating other cellular pathways like the sirtuins, it actually gets broken down into one of its precursors, nicotinamide.*
>
> *The cell is really clever because what it's evolved to have is this salvage pathway, a recycling pathway for this nicotinamide (nicotinamide). Which means that when NAD is used up, it gets broken down in nicotinamide and this nicotinamide then just gets recycled straight back into fresh NAD again.*
>
> *This makes absolute sense, because why would the body want to rely on generating such a critical molecule using external precursors? It needs to use something endogenous, something that it's always going to have a ready supply of.*
>
> *This also means that as demand for NAD goes up, more NAD is broken down to to nicotinamide, so technically there's more raw material that can simply be recycled straight back into fresh NAD again. This has been demonstrated to be the most important pathway for NAD production in the body.*
>
> *So when we're young, we've got this abundant supply of NAD that's continually being recycled via the salvage pathway. Unfortunately, as we get older, NAD declines. There are two main reasons for this. Firstly, more NAD is used up.*
>
> *When more NAD is used up, this means more needs to be recycled to replenish NAD. But it's also been found that that salvage pathway also declines with age. So right at this point in your life when you've got an increased demand for NAD, you've also got a reduction in the body's ability to regenerate NAD via this recycling route.*
>
> *When you put those two things together, what you get is an exponential decline in NAD, which is exactly what we see in human tissues throughout life. We see about a 50% reduction in NAD levels in our tissues every 20 years, which is quite shocking considering how important it is to our lives."*

How NAD Is Depleted

The thing that depletes NAD the most is when it's acting as a cofactor for other enzymes, such as the sirtuins and DNA repair enzymes. In that role, NAD acts much like a fuel, so it gets used up, causing your level to decline. In its energy production role, it merely flips between states, so the overall amount doesn't really change. The two primary enzymes that consume NAD are:

- **Poly ADP ribose polymerases (PARPs), especially PARP1, a DNA repair enzyme** — With age, the amount of DNA damage increases, which has to be repaired. One of the key enzymes that repairs this damage is called PARP1. For that enzyme to work, it needs NAD as a fuel. It literally takes NAD and breaks it down to form its reaction in the DNA repair action.

"What you see is that if you've got increased levels of DNA damage in your tissues, you get increased activity of this enzyme and you get NAD depletion," Conlon says. Studies suggest extensive DNA damage within a cell can within five minutes deplete the NAD level in that cell to about 5% to 10% of what it started out with.

One common exposure that causes DNA damage is electromagnetic field exposures (EMFs) from cell phones and wireless technologies. Some studies have shown that every time PARP1 is activated for DNA repair, it consumes 150 NAD molecules.[1]

- **CD38** — Another enzyme called CD38, found on the surface of many immune cells, also consumes about 100 molecules of NAD for every cycle of its reaction. CD38 is a cell surface enzyme involved in sending calcium signals throughout the cell to activate parts of your immune system.

"CD38 is one of the biggest NAD consumer in the body because of the fact that it is so inefficient at using NAD," Conlon says. "It's been found that even if you inhibit CD38 by just a very, very small amount, you can have a significant impact on NAD levels because it is so inefficient."

The Challenges of Exogenous NAD Supplementation

Unfortunately, boosting NAD is no easy feat either. Many use NR or NMN, but the bioavailability of these is quite poor. It's kind of like swallowing biodenical hormones. It's the real deal when you swallow it, but your liver has a tendency to want to detoxify and typically conjugates or adds a methyl group to facilitate excretion. So, they don't really have time to transfer into your blood.

> **"It's clearly now demonstrated that to restore NAD, you need to fix the root causes. You need to fix that salvage pathway. You need to increase the enzymes in that pathway that are actually declining with age so that your body can recycle NAD like it did naturally when it was younger. – Nichola Conlon, Ph.D."**

Conlon and her team discovered another way of boosting NAD.

> *"When we started looking at NAD, the first thing we did was to look for evidence that you could use molecules or supplements to boost NAD. At the time, everyone was looking at enhancing NAD levels with nicotinamide riboside or nicotinamide mononucleotide, which are the precursors or the raw materials that the body uses to make NAD.*
>
> *But there was no evidence that the reason that NAD was declining was because the body had a lack of availability of these precursors. In fact, still to this day, there's no evidence that our bodies have a reduced capacity to absorb these or that there's a reduced amount circulating in the plasma for the cells to use.*
>
> *Over the last couple of years, more understanding of NAD decline has emerged. It's clearly now demonstrated that to restore NAD, you need to fix the root causes. You need to fix that salvage pathway. You need to increase the enzymes in that pathway that are actually declining with age so that your body can recycle NAD like it did naturally when it was younger.*
>
> *You also need to look at these processes that are wasting NAD. You need to look at inhibiting CD38 and stopping chronic low level inflammation that's wastefully using up NAD. You also need to look at reducing DNA damage and being more efficient in its repair so you don't have this constant chronic activation of DNA repair, which is also using up NAD."*

Conlon and her team decided to pursue a multi-target strategy. Rather than just putting more raw material into the cell, the aim is to fix the cell. In experiments, they've demonstrated that you can boost NAD levels in the cells without putting any precursor in. You can actually just use ingredients that inhibit CD38 and activate nicotinamide phosphoribosyltransferase (NAMPT). This will boost NAD without having to add more raw materials to the cell.

NAMPT Is a Rate Limiting Enzyme for NAD Production

NAMPT is really important because that's the bottleneck, the rate limiting enzyme for the production of NAD. Conlon explains:

> *"The reason the salvage pathway declines with age is because of this one key enzyme. NAMPT actually recycles nicotinamide and converts it into NMN, which then gets converted back into NAD. The rate limiting step, the bottleneck in that process, is NAMPT. And lo and behold, that is the enzyme that declines as we get older.*
>
> *Studies have demonstrated that you get a 50% decrease in this enzyme between the ages of 45 and 60. That's a significant decline considering how important this is for new NAD production. The decline in the levels of this enzyme again correlates with the decline in NAD that we experience.*
>
> *Many diseases and issues that are associated with NAD decline are found to be because of a reduction in this enzyme. So, it's absolutely critical to try and improve the activation and expression of this enzyme in the body to enhance NAD. It worked brilliantly to give us high NAD levels when we were younger, so why not restore it back to that?"*

How Much Does NAD Decline Over Time?

NAD starts declining from the day you're born. For every 20 years thereafter, you lose about 50%. So, by the time you're 20, your NAD level is half of what you had at birth. By age 40, it's halved again from what you had at age 20, and so on. "It's an exponential curve," Conlon says. "Looking at elderly people's tissues, they really don't have very much left." I believe this may be one of the many reasons why elderly people are so susceptible to COVID. Perhaps even a primary one.

Conlon cites research showing SARS-CoV-2 infection does cause massive NAD depletion by over activating the PARPs. While PARP1 is involved in DNA repair, some of the other PARPs are involved in inflammatory responses, and they too need NAD.

> *"The running theory is that if we're older or sicker we have lower levels of NAD to begin with, so when we get infected, we're already at a lower starting point. So in someone who's younger and healthy and has high NAD, when they get infected, they've already got quite a good level to begin with, so even when they get that depletion, they can get by because they had adequate supplies to begin with.*
>
> *The other really interesting thing is what the cell does in response to the virus to try and mitigate this. All of the genes that the cell regulates to try and protect itself are all to do with NAD salvage. The body actively tries to increase NAMPT to protect itself because it knows that's the best way to produce NAD and rectify the problem."*

NAD Restoration for Optimal Health

According to Conlon, preclinical animal studies have shown NAD restoration really does help reverse disease and improve health span. In humans, using NR supplementation, the benefits have been less stellar. So far, they've not been able to replicate the preclinical models. Conlon suspects this is because NR and other precursors simply don't address the root causes of NAD decline.

> *"NAMPT is an enzyme, and you can get antibodies which will selectively attach to it. To measure it, we use a Western blot, which basically measures the amount of NAMPT protein that is available in the cell and it shows us a dark band. Basically, the darker the band, the more expression.*
>
> *Alpa Spicic sold works by increasing the activation of another energy sensor in the body called AMPK. AMPK is a sensor of any energy stress. When there's an energy stress in the body, AMPK goes up and it basically activates NAMPT so that it can increase NAD levels in the cells," Conlon explains.*

Best and Least Expensive Way to Improve Your NAD+ Levels

Conlon and her team discovered another way of boosting NAD. "When we started looking at NAD, the first thing we did was to look for evidence that you could use molecules or supplements to boost NAD. At the time, everyone was looking at enhancing NAD levels with nicotinamide riboside or nicotinamide mononucleotide, which are the precursors or the raw materials that the body uses to make NAD.

But there was no evidence that the reason that NAD was declining was because the body had a lack of availability of these precursors. In fact, still to this day, there's no evidence that our bodies have a reduced capacity to absorb these or that there's a reduced amount circulating in the plasma for the cells to use.

Over the last couple of years, more understanding of NAD decline has emerged. It's clearly now demonstrated that to restore NAD, you need to fix the root causes. You need to fix that salvage pathway. You need to increase the enzymes in that pathway that are actually declining with age so that your body can recycle NAD like it did naturally when it was younger.

You also need to look at these processes that are wasting NAD. You need to look at inhibiting CD38 and stopping chronic low level inflammation that's wastefully using up NAD. You also need to look at reducing DNA damage and being more efficient in its repair so you don't have this constant chronic activation of DNA repair, which is also using up NAD."

Conlon and her team decided to pursue a multi-target strategy. Rather than just putting more raw material into the cell, the aim is to fix the cell. In experiments, they've demonstrated that you can boost NAD levels in the cells without putting any precursor in. You can actually just use ingredients that inhibit CD38 and activate nicotinamide phosphoribosyltransferase (NAMPT). This will boost NAD without having to add more raw materials to the cell.

NAMPT Is a Rate Limiting Enzyme for NAD Production

NAMPT is really important because that's the bottleneck, the rate limiting enzyme for the production of NAD. Conlon explains:

"The reason the salvage pathway declines with age is because of this one key enzyme. NAMPT actually recycles nicotinamide and converts it into NMN, which then gets converted back into NAD. The rate limiting step, the bottleneck in that process, is NAMPT. And lo and behold, that is the enzyme that declines as we get older.

Studies have demonstrated that you get a 50% decrease in this enzyme between the ages of 45 and 60. That's a significant decline considering how important this is for new NAD production. The decline in the levels of this enzyme again correlates with the decline in NAD that we experience.

Many diseases and issues that are associated with NAD decline are found to be because of a reduction in this enzyme. So, it's absolutely critical to try and improve the activation and expression of this enzyme in the body to enhance NAD. It worked brilliantly to give us high NAD levels when we were younger, so why not restore it back to that?"

How Much Does NAD Decline Over Time?

NAD starts declining from the day you're born. For every 20 years thereafter, you lose about 50%. So, by the time you're 20, your NAD level is half of what you had at birth. By age 40, it's halved again from what you had at age 20, and so on. "It's an exponential curve," Conlon says. "Looking at elderly people's tissues, they really don't have very much left." I believe this may be one of the many reasons why elderly people are so susceptible to COVID. Perhaps even a primary one.

Conlon cites research showing SARS-CoV-2 infection does cause massive NAD depletion by over activating the PARPs. While PARP1 is involved in DNA repair, some of the other PARPs are involved in inflammatory responses, and they too need NAD.

"The running theory is that if we're older or sicker we have lower levels of NAD to begin with, so when we get infected, we're already at a lower starting point. So in someone who's younger and healthy and has high NAD, when they get infected, they've already got quite a good level to begin with, so even when they get that depletion, they can get by because they had adequate supplies to begin with.

The other really interesting thing is what the cell does in response to the virus to try and mitigate this. All of the genes that the cell regulates to try and protect itself are all to do with NAD salvage. The body actively tries to increase NAMPT to protect itself because it knows that's the best way to produce NAD and rectify the problem."

NAD Restoration for Optimal Health

According to Conlon, preclinical animal studies have shown NAD restoration really does help reverse disease and improve health span. In humans, using NR supplementation, the benefits have been less stellar. So far, they've not been able to replicate the preclinical models. Conlon suspects this is because NR and other precursors simply don't address the root causes of NAD decline.

"NAMPT is an enzyme, and you can get antibodies which will selectively attach to it. To measure it, we use a Western blot, which basically measures the amount of NAMPT protein that is available in the cell and it shows us a dark band. Basically, the darker the band, the more expression.

Alpa Spicic sold works by increasing the activation of another energy sensor in the body called AMPK. AMPK is a sensor of any energy stress. When there's an energy stress in the body, AMPK goes up and it basically activates NAMPT so that it can increase NAD levels in the cells," Conlon explains.

Best and Least Expensive Way to Improve Your NAD+ Levels

So deeply appreciate Dr. Conlon's insights and expertise on NAD+ precursors. Although I have read dozens if not hundreds of papers on NAD+ the entire subject is confusing and I now realize it is likely because of financial interests that the best precursors are not recommended more frequently. Dr. Conlon has concluded, and I thoroughly agree with her, that the best single NAD+ precursor is niacinamide, not niacin, NR or NMN.

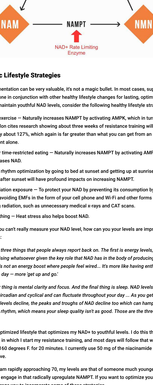
It is now beyond obvious to me why no one is promoting niacinamide. This is because it costs less than one cent a day and as a result there is simply no money to be made in promoting it. Ideally you buy niacinamide powder and use 1 to 1/2 of 1/4th of a teaspoon three times a day (25-50 mg).

You will need **special measuring spoons** to measure this small a dose. This is important as more is most definitely not better and much worse. If you use too much you will actually inhibit sirtuins which are important longevity proteins.

Spending $11 on 250 grams of niacinamide powder will give you a nearly four year supply of niacinamide. That pencils out to 23 cents a month or less than one penny a day. It is basically free. NMN in therapeutic doses of 1-2 grams/day can be one to two hundred dollars a month or 400-800X more expensive than niacinamide powder.

So let me review the reasons why Dr. Conlon and I both are convinced that niacinamide is the best NAD+ precursor. The immediate breakdown product of NAD+ is niacinamide and the enzyme NAMPT is the rate limiting enzyme in the salvage pathway to restore niacinamide back to NAD+. As you can see by the pathway below niacinamide is actually first converted to NMN before NAD+. This is likely why researchers like David Sinclair and others promote NMN.

However the enzyme NMNAT-3 that converts NMN to NAD+ is not the rate limiting enzyme. Recall that NAMPT is what controls how much NAD+ you make. So you flooding your body with NMN is not going to be as useful as using small amounts of niacinamide and activating NAMPT as discussed below. Ideal dosing of niacinamide is from 25 to 50 mg three times a day. It is the rare person that will not respond favorable to this simple intervention for increasing NAD+.



Synergistic Lifestyle Strategies

While supplementation can be very valuable, it's not a magic bullet. In most cases, supplementation needs to be done in conjunction with other healthy lifestyle changes for lasting, optimal results. So, to boost and maintain youthful NAD levels, consider the following healthy lifestyle strategies:

- Physical exercise – Naturally increases NAMPT by activating AMPK, which in turn increases NAD. Conlon cites research showing about three weeks of resistance training will boost NAMPT by about 127%, which again is far greater than what you can get from an NR supplement alone.
- Fasting or time-restricted eating – Naturally increases NAMPT by activating AMPK, which in turn increases NAD.
- Circadian rhythm optimization by going to bed at sunset and getting up at sunrise and avoiding blue light after sunset will have profound impacts on increasing NAMPT.
- Avoid radiation exposure – To protect your NAD by preventing its consumption by PARPs, consider avoiding EMFs in the form of your cell phone and Wi-Fi and other forms of DNA damaging radiation, such as unnecessary medical x-rays and CAT scans.
- Sauna bathing – Heat stress also helps boost NAD.

Considering you can't really measure your NAD level, how can you ever know if it is working? Conlon replies:

> *"We have three things that people always report back on. The first is energy levels, which is not surprising whatsoever given the key role that NAD has in the body in producing our energy. It's not an energy boost where people feel wired… It's more like having enthusiasm about the day — more get up and go.*
>
> *The other thing is mental clarity and focus. And the final thing is sleep. NAD levels are actually circadian and cyclical and can fluctuate throughout your day … As you get older and NAD levels decline, the peaks and troughs of NAD decline too which can hamper your circadian rhythm, which means your sleep quality isn't as good. Those are the three main things."*

I have a very optimized lifestyle that optimizes my NAD+ to youthful levels. I do this through an 18-hour daily fast in which I start my resistance training, and most days will follow that with an EMF-free sauna at 160 degrees F. for 20 minutes. I currently use 50 mg of the niacinamide powder I described above.

Even though I am rapidly approaching 70, my levels are that of someone much younger because of the activities I engage in that radically upregulate NAMPT. If you want to optimize your levels of NAD+, I encourage you to incorporate some of these strategies.

My #1 Bestselling Book – Now on Paperback!

My latest book, "The Truth About COVID-15," is an instant bestseller. After thousands of reviews it has a nearly perfect 5-star rating, so grab your copy today before it's too late!

The Truth About COVID-19
by Doctor Joseph Mercola
★★★★★
5,916 ratings

ORDER NOW

+ Sources and References

Next Article 3
Simple but Powerful Ways to Boost Athletic Performance

Hide Comments (106)

Post your comment

Sort Comments by : Top Rated | Newest | Oldest | Top Poster

Guillermo
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

Excellent report by Dr. Mercola on the transcendental importance of NAD in health and the roles to increase it. Nicotinamide adenine dinucleotide (NADH) increases mitochondrial energy and its deficiency is an essential factor in chronic diseases and aging. NAD+ produces its beneficial effects in multiple pathological pathways, including mitochondrial dysfunction, DNA damage, and oxidative stress, by modulating enzymes such as sirtuins, glycosylhydrolase 2-phosphate dehydrogenase, and AP endonuclease www.liebertpub.com/…/aro.2017.7045 (2018) journals.lww.com/nejsupsurg/Citation/2011/07000/Nicotinamide_Adenine_D... (2021) NAD is highly involved in various metabolic processes, such as glucose and fat regulation, and polymorphisms in these genes have been associated with the development of obesity, type 2 diabetes, cancer, cardiovascular disease.

disease and longevity. Nutraceuticals such as resveratrol, quercetin, kaempferol, and curcumin and other therapies such as sirtuin activating compounds, NAD, nicotinamide mononucleotide) are being explored as potential therapies in sirtuin and point to promising treatments to promote metabolic health and reduce obesity and age-related diseases. www.ncbi.nlm.nih.gov/…/PMC4912…/ (2016) Sirt1-dependent NAD+ is a critical metabolic intermediate that serves as an enzyme cofactor in redox reactions, and is also used as a coadjuvant by many enzymes such as sirtuins, adenosine diphosphate ribose transferases, and cyclic ADP-ribose synthetases.

Through these activities, NAD+ metabolism regulates a broad spectrum of cellular functions such as energy metabolism, DNA repair, regulation of the epigenetic landscape, and inflammation. NAD+ may have immunomodulatory properties on inflammation with a special focus on nucleotide sclerosis, inflammatory bowel diseases, and rheumatoid inflammation. bpspubs.onlinelibrary.wiley.com/…/bph.15477 (2021)

Reply · Mark as Spam · Posted On : 3/21/2022 1:47:09 AM

Like · Dislike

Guillermo
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

NAD+ improves learning and memory. Secondary endpoints also showed neuroprotective effects of NAD+ in different models of Alzheimer's disease. Proposed neuroprotective mechanisms included, among others, attenuation of oxidative stress, inflammation, and apoptosis, while enhancing mitochondrial function. link.springer.com/…/s12035-021-01462-6 (2021) Aging is one of the main pathological factors associated with osteoarthritis. Sirt-1 may be involved in the pathology of degradation of articular cartilage in osteoarthritis, by a mechanism that binds the NAD-dependent deacetylase in Sirt-1 and the modulation by Runx2 in said pathway. www.sciencedirect.com/…/fulltext (2017)

Quercetin and epigenin increase NAD+ levels through inhibition of the multifunctional protein CD38 that is present in mitochondria, with a Sirt3-dependent mechanism. CD38 levels increase in tissues with age and correlate with decreased NAD www.frontiersin.org/articles/doi.org/10.3389/fnagi.2016.00239/quercetin-epigenin-may-at... (2016) www.sciencedirect.com/…/S1550413115302248 (2016) Sirt-1 dependent NAD has an important role in human aging, the metabolic syndrome, chronic inflammation, and other diseases. Sirtuins, when the pattern of cellular metabolism is adjusted to the availability of nutrients, can regulate many biological functions related to aging. DNA repair, genome stability, inflammatory response, apoptosis, cell cycle, and mitochondrial functions. In regulating these functions, sirtuins cooperate with many transcription factors, including PGC-1a, NFkB, and p53. europepmc.org/…/26521204 (2016)

Work as Spam · Posted On : 3/21/2022 1:47:11 AM

Like · Dislike

Guillermo
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

This study reviews recent advances in the mechanistic understanding of biological aging, focusing on adenosine monophosphate-activated kinase (AMPK), sirtuin 1 (SIRT1), and mammalian target of rapamycin (mTOR) pathways, which are currently considered critical for ageing. We also discuss how these proteins and pathways can potentially interact with each other to regulate ageing. www.ncbi.nlm.nih.gov/…/fnbr/ (2021) NAD+ depends on the family of 7 Sirtuins (SIRT 1-7) that have a central role in NAD+ translation, changes in the regulation of many metabolic regulatory proteins, DNA repair, stress response, chromatin remodeling, circadian rhythm, and other cellular processes.

By mediating such broad functions, sirtuins are regulators for aging and longevity in various organisms. This article reports on associated diseases. NAD+ BIOSYNTHESIS, AGING, AND DISEASE www.researchgate.net/publication/…/publication/…/317167664/2958-dr-i-s-kil… (2018) NMPT is a combination of nicotinamide (Nicotin and Amide) found in milk, and phosphorus, a polyphenol found in blueberries, was administered to a population of 120 healthy adults between the ages of 60 and 80 years. The study consisted of three treatment groups: placebo, a recommended dose, and a double dose group. NAD + concentration increased by approximately 40% in the group and approximately 90% in the double administration group, after 4 weeks. www.nature.com/…/srep11772-t1.html#/ (2017)

Work as Spam · Posted On : 3/21/2022 1:47:54 AM

Like · Dislike

Guillermo
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

This study reviews recent advances in the mechanistic understanding of biological aging, focusing on adenosine monophosphate-activated kinase (AMPK), sirtuin 1 (SIRT1), and mammalian target of rapamycin (mTOR) pathways, which are currently considered critical for ageing. We also discuss how these proteins and pathways can potentially interact with each other to regulate ageing. www.ncbi.nlm.nih.gov/…/fnbr/ (2021) NAD+ depends on the family of 7 Sirtuins (SIRT 1-7) that have a central role in NAD+ translation, changes in the regulation of many metabolic regulatory proteins, DNA repair, stress response, chromatin remodeling, circadian rhythm, and other cellular processes.

By mediating such broad functions, sirtuins are regulators for aging and longevity in various organisms. This article reports on associated diseases. NAD+ BIOSYNTHESIS, AGING, AND DISEASE www.researchgate.net/publication/…/publication/…/317167664/2958-dr-i-s-kil… (2018) NMPT is a combination of nicotinamide (Nicotin and Amide) found in milk, and phosphorus, a polyphenol found in blueberries, was administered to a population of 120 healthy adults between the ages of 60 and 80 years. The study consisted of three treatment groups: placebo, a recommended dose, and a double dose group. NAD + concentration increased by approximately 40% in the group and approximately 90% in the double administration group, after 4 weeks. www.nature.com/…/srep11772-t1.html#/ (2017)

Work as Spam · Posted On : 3/21/2022 1:47:54 AM

Like · Dislike

Juststove
Joined On 1/5/2012 11:13:54 AM
Add as Friend · Send Message

Hey Guz, perhaps this is why babies & younger people are resistant, nearly immune to Covid?

Work as Spam · Posted On : 3/21/2022 4:48:48 AM

Like · Dislike

Guillermo
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

It is an important reference Just, aging and previous pathologies are the cause of serious Covid. NAD+ levels decline with age and oxidative stress over time. Also, during aging, decreased function of genes that control circadian rhythm can reduce NAD+ levels. In the mitochondria of the young, NAD+ can easily donate its electrons to generate NADH. During the aging process, increased DNA damage reduces NAD+, causing mitochondrial dysfunction. www.ncbi.nlm.nih.gov/…/PMC4912…/ (2016) pubmed.ncbi.nlm.nih.gov/22848765/ (2012) NAD+ activation of Sirtuins turns on genes that improve metabolism, aid in weight loss, and lower LDL cholesterol. Additionally, niacin and other NAD+ precursors are being tested as treatments for cardiovascular disease.

Nicotinamide riboside supplementation protected against diet-induced obesity. These animals may also burn fat better, burn more calories, and become more sensitive to insulin. Sirtuins improve glucose levels and glucose homeostasis www.ncbi.nlm.nih.gov/…/PMC3963124/ (2014) www.ncbi.nlm.nih.gov/…/PMC4814922/ (2016) SIRT1/NAD+ is important for the immune system to eliminate pathogens and through the activation of NRC1, hepaxca or liver cancer gene involved prevents MHC II from being activated by decreasing SIRT1 activity (oxidized LDL also decreases SIRT1 in macrophages). academic.oup.com/…/3849995/ (2011)

Work as Spam · Posted On : 3/21/2022 5:31:20 AM

Like · Dislike

Guillermo
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

As Dr. Mercola reports, CD38 is an enzyme found on the surface of many immune cells, it also consumes about 100 NAD molecules in each cycle of its reaction. CD38 is a cell signaling enzyme involved in sending calcium signals throughout the cell to activate parts of your immune system. The worldwide spread of the SARS-CoV-2 virus revealed specific susceptibilities to the virus among the elderly and those with age-related syndromes. These populations were more likely to experience a hyperimmune response characterized by reflexive acute lung disease accompanied by multi-organ failure.

These observations underscore the interplay between the virus, the biology of aging, and the outcomes seen in the most severe cases of SARS-CoV-2 infection. Evidence to support the hypothesis that CD38 plays a central role in altered immunomodulation as a result of COVID-19 infection. The authors discuss a critical but underexpressed trifecta of CD38-mediated NAD, aging, and the COVID-19 immune response and speculate that the CD38/NAD 1 axis is a promising therapeutic target for this disease. europepmc.org/…/24494897/ (2021)

Work as Spam · Posted On : 3/21/2022 5:31:20 AM

Like · Dislike

Guillermo
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

NAD acts as a cofactor in several catalytic reaction (redox) reactions and is a substrate for several nonredox enzymes. NAD+ is critical to a variety of cellular processes, including energy metabolism, cell signaling, and epigenetics. NAD homeostasis appears to be of paramount importance for health and longevity, and its disruption is associated with multiple diseases. NAD metabolism is dynamic and is maintained by synthesis and degradation. CD38 dysregulation causes changes in NAD homeostasis and contributes to the pathophysiology of multiple conditions.

Indeed, in animal models, the development of infectious diseases, autoimmune disorders, fibrosis, metabolic diseases, and age-associated diseases, including cancer, heart disease, and neurodegeneration, are associated with altered CD38 enzyme activity. pubmed.ncbi.nlm.nih.gov/31138131/ (2021) This study aimed to assess altered critical metabolic pathways with disease severity in hospitalized patients with COVID-19. The results show that obesity, respiratory rate, blood pressure and oxygen saturation, as well as some analytical parameters and radiological findings, were associated with the severity of the disease. Furthermore, ceramide metabolism, tryptophan degradation, and reductions in various metabolic reactions involving nicotinamide adenine nucleotide (NAD) at the time of inclusion were significantly associated with respiratory severity and correlated with inflammation. www.mdpi.com/…/febm (2021)

Work as Spam · Posted On : 3/21/2022 5:40:50 AM

Like · Dislike

Juststove
Joined On 1/5/2012 11:13:54 AM
Add as Friend · Send Message

Guz, I'm wondering if the NAD is different than the Niacin in B vitamin supplement? If so, would taking NAD along with the regular doses of Niacin or b-complex formula be an overload situation?

Work as Spam · Posted On : 3/21/2022 6:42:19 AM

Like · Dislike

Guillermo
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

Good thought, Just, I understand that individual metabolic processes to produce NAD may be different based on age, disease, and genetics. As Dr. Mercola reports, the "rate-materials" or "building blocks" (metabolic precursors) that the body needs to make (synthesis) NAD+: 1- Nicotinamide riboside (NR) 2- Tryptophan (L-Trp) 3- Nicotinic acid (NA, also commonly known as vitamin B3) 4- Nicotinamide (NAM, also called "niacin without rose") 5- Nicotinamide mononucleotide (NMN) Supplementation with NAD+ precursors involved in "recovery pathways" (such as nicotinamide riboside and NMN) is relatively more effective at increasing cellular levels of NAD+ compared to those involved in the "de novo" pathway. This is because the NAMPT enzyme can act as a major limiting factor in NAD+ production. www.ncbi.nlm.nih.gov/…/PMC4112140/ (2014) pubmed.ncbi.nlm.nih.gov/19286515/ (2009)

Work as Spam · Posted On : 3/21/2022 5:52:42 AM

Like · Dislike

Buddhi
Joined On 10/17/2020 2:36:40 PM
Add as Friend · Send Message

Except that NAMPT inhibitors have potent anticancer activity in several preclinical models by depleting NAD+ and ATP levels. So there is that. Unfortunately. www.science.gov/…/nampt%20inhibitors+anticancer. And "Elevated vNAMPT were reported in several metabolic and inflammatory disorders, including obesity, diabetes, and cancer, while eNAMPT is emerging as a biomarker of sepsis and septic shock." www.frontiersin.org/…/full. The reasonable and intelligent question we have failed to ask is can one have too much NAD Plus. A possible speculative attempt at an answer, though not empirical, is we should not go past that which we had at age 20 or so.

Work as Spam · Posted On : 3/21/2022 9:30:35 AM

Like · Dislike

Guillermo
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

Thank you Buddhi. The metabolism is very complex but the reality is that we must consider adopting natural measures for the prevention and cure of cancer. For example, fasting and exercise increase NAD and are a great treatment against cancer. In addition many phytochemicals enhance NAD and also the transcription factor NRF2 which is essential for NAD production. academic.oup.com/…/4680715 (2004) Natural dietary phytochemicals, such as curcumin and resveratrol, are generally considered the most promising breast cancer preventive agents.

Nuclear erythroid factor related 2 (Nrf2) is a transcription factor that plays a key regulatory role in the expression of multiple antioxidant and anti-inflammatory enzymes, which can effectively suppress excessive accumulation of carcinogens and their metabolites. The protein function Nrf2 is regarded as a target for the reduction of NAD/NADH. Therefore, modulation of Nrf2 by

dietary phytochemicals appears to be a promising approach for breast cancer prevention.
pubs.rsc.org/en/content/articlehtml/2017/fo/c6fo01756a#!divAbstract (2022) Nevertheless it is important to consider the workway effect, the propensity of some cells to metabolize glucose into lactate in the presence of oxygen has been observed for a long time in cancer and other contexts of cell proliferation, but only in the last two decades has it had significant gains - has been done to understand how and why this metabolic transformation occurs.
aacrjournals.org/cancerres/article/71/19/4909/675355/Cancer-Signaling- (2021)

Mark as Spam · Posted On : 3/27/2022 10:25:21 AM

Like · Dislike

Guillermus
Joined On 4/7/2015 8:47:48 AM
Add as Friend · Send Message

NRF2 activation makes cells resistant to chemical carcinogens and inflammatory challenges. In addition to antioxidant responses, NRF2 is involved in many other cellular processes, including metabolism and inflammation, and its functions go beyond what was originally anticipated. NRF2 activity is tightly regulated through a complex transcriptional and post-translational network that allows it to orchestrate the cell's response and adaptation to various pathological stressors for the maintenance of homeostasis.

The complex regulatory network of NRF2 activity and its roles in metabolic reprogramming, unfolded protein response, proteasome, autophagy, mitochondrial biogenesis, inflammation, and immunity. www.mdpi.com/..../477 (2020) Nicotinamide (NMN) is a precursor to vitamin B 3 commonly sold over the counter as a nutritional supplement with anti-aging properties. Accumulating preclinical evidence indicates that NAM also mediates oxoeffomeroic effects against a variety of neoplasms.

Supporting the translational relevance of dietary NAM supplementation, results from a Phase 2 randomized clinical trial demonstrated that oral NAM was safe and efficiently reduced the incidence of new non-melanoma skin cancers and actinic keratoses among individuals of high risk. However, the molecular and cellular mechanisms underlying this ability of NAM to delay carcinogenesis remain to be elucidated, as discussed in this short review. pubmed.ncbi.nlm.nih.gov/32382027 (2021)

Mark as Spam · Posted On : 3/27/2022 10:25:52 AM

Like · Dislike

Guillermus
Joined On 4/7/2015 8:47:48 AM
Add as Friend · Send Message

NADDG and NADPHG have traditionally been viewed as cofactors (or coenzymes) involved in a myriad of oxidation-reduction reactions, including electron transport in the mitochondria. Recent research NAD pathway metabolites have many other important functions, including roles in signaling pathways, post-translational modifications, epigenetic changes, and regulation of RNA stability and function through RNA protection of RNA. Nonoxidative reactions ultimately lead to net catabolism of these nucleotides; indicating that NAD metabolism is an extremely dynamic process. Indeed, recent studies have clearly shown that NAD has a half-life on the order of minutes in some tissues.
www.sciencedirect.com/science/article/abs/pii/S1043276019301699 (2021) NAD+ precursor transporters and receptors are critical in maintaining cellular NAD+ levels. The tissue level of NAD+ is maintained by the balance between NAD + biosynthesis and degradation. www.sciencedirect.com/science/article/abs/pii/S1043276019301698 (2021)

NAD precursors span pathways in cellular energy, inflammation, metabolism, and cell survival. Several metabolic and neurological diseases exhibit reduced tissue NAD levels, improved lifespan, and lifespan in animal models. Recent studies suggest a causal link between senescence, the age-associated reduction in tissue NAD, and the enzymatic degradation of the NAD precursor (nicotinic acid or niacin, nicotinamide, and nicotinamide riboside) that allowed a better understanding of its role in the cellular homeostasis, including signaling functions. that are dependent of their + functions, information continues to evolve about the role of this molecule in health and disease.
www.sciencedirect.com/science/article/abs/pii/S0304419X19302237 (2022)

Mark as Spam · Posted On : 3/27/2022 10:25:39 AM

Like · Dislike

Guillermus
Joined On 4/7/2015 8:47:48 AM
Add as Friend · Send Message

Extended-release niacin may have some muscle benefit benefits after chronic supplementation, as indicated by several molecular markers of mitochondrial biogenesis and muscle strength, although side effects related to flushing are of concern. Nicotinamide riboside supplementation was shown to increase muscle acetylcarnitine after exercise in one study however, prolonged study duration and optimal dosing protocols may be necessary to show other benefits. Tryptophan has been shown to benefit exercise performance. fasebj.onlinelibrary.wiley.com/doi/abs/10.1096/fasebj.2021.35.S1.03260 (2021) Sirtuins are important regulators of energy metabolism; especially sirtuins 1 and 3 increase during exercise.

Sirtuin 1 has a positive effect on mitochondrial biogenesis, thus increasing mitochondrial energy supply capacity.+Lactate accumulates during exercise, as a substrate for sirtuins, is capable of upregulating the flow of sirtuins in a feedback manner . There is also an exercise-dependent upregulation of NAD+ synthesis. Sirtuin 4 regulates long-chain fatty acid oxidation by inhibiting malonyl CoA carboxylase. Elevated levels of malonyl CoA inhibit mitochondrial uptake of long-chain fatty acids.
www.sciencedirect.com/.../B9780128141182000141 (2021)

Mark as Spam · Posted On : 3/27/2022 10:22:26 AM

Like · Dislike

Guillermus
Joined On 4/7/2015 8:47:48 AM
Add as Friend · Send Message

Chronic age-related inflammation promotes cellular senescence, chronic disease, cancer, and reduced life expectancy. Interventional exercise, when applied early in the disease, was effective in reducing tissue inflammation, oxidative damage, and cellular senescence, and improved hepatic steatosis and prevented tumor development. Behind these benefits were transcriptional changes in the enzymes that drive the conversion of tryptophan to NAD+. Increased SIRT activity correlated with decreased abundance of the key transcriptional regulators of inflammation and oxidative stress, NF-κB. Moderate exercise can effectively reprogram inflammatory and metabolic pathologies pre-established in aging via the benefit of disease prevention.
www.jimmunol.org/.../904.abstract (2021)

Mark as Spam · Posted On : 3/27/2022 10:32:58 AM

Like · Dislike

murmur
Joined On 4/16/2008 1:07:05 AM
Add as Friend · Send Message

Dr. Mercola thank you for this article, interview and for every single thing you do to help humanity. You have put yourself in harms way with the evil people trying to control freedom. I support you by always buying my products from you. God bless you. Guillermus thank you for enhancing whatever subject Dr. Mercola brings to us. You are so wise and bring even more information that I savor. Thank you and Buddy too!

Reply · Mark as Spam · Posted On : 3/27/2022 11:22:03 AM

Like · Dislike

Guillermus
Joined On 4/7/2015 8:47:48 AM
Add as Friend · Send Message

SL mamma: Dr. Mercola is a hero who defends humanity with true science with his health reports and the defense of freedom . Thanks. for me it is an honor to be useful based on the excellent reports of Dr. Mercola. ..

Mark as Spam · Posted On : 3/27/2022 12:11:46 PM

Like · Dislike

bradpals
Joined On 4/10/2011 11:23 PM
Add as Friend · Send Message

Thanks Dr. Mercola for posting this. I've read about some of Dr. Sinclair's work in the past, sirtuins, NMN, methyl groups, C38, etc. It can be complicated. Perhaps the previous exposure to this field helped me absorb more of what you wrote here, which, by the way, really makes things more clear in ways other articles I read weren't able to do (for me, anyway). As usual, I love that you promote cheap alternatives, as I already have Niacinamide in my cupboard. All of this is a reminder that although our bodies are complex with all sorts of compensatory mechanisms that are not always good, if good lifestyle choices (exercise, sleep hygiene, healthy foods high in methyl groups, limiting environmental hazards, etc) are in fact, way further than most of us are away off (FS I forget to note fasting! How could I forget to mention this (as Dr. M has)? So many benefits for so little a price (once you get used to it ;-)).

Reply · Mark as Spam · Posted On : 3/27/2022 1:08:20 PM

Like · Dislike

Guillermus
Joined On 4/7/2015 8:47:48 AM
Add as Friend · Send Message

Yes, calorie restriction (CR) prolongs life expectancy in a wide variety of species. CR induces an increase in the NAD/+/NADH ratio in cells and results in the activation of SIRT1, an NAD/+ dependent protein deacetylase that is believed to be a metabolic master switch related to the modulation of aging of life. CR also affects the expression of peroxisome proliferator activated receptors (PPARs). All three subtypes, PPARalpha, PPARgamma, and PPARdeltaRelta, are expressed in multiple organs. They regulate different physiological functions such as energy metabolism, insulin action and inflammation, and apparently act as important regulators of longevity and aging. pubmed.ncbi.nlm.nih.gov/20148032/ (2010) NF kappa B is one of the main mediators of aging and is activated by toxic, oxidative, and inflammatory stresses.

The most abundant protein in the mitochondrial inner membrane, adenine nucleotide translocator 1 (ANT1) plays a critical role in mitochondrial function, including adenosine triphosphate/adenosine diphosphate (ATP/ADP) exchange in mitochondria, leakage of Basal proton and mitochondrial permeability transition pore (MPTP). ANT1 transcription is regulated by the transcription factor NF kappa B (NF-kB). NF-KB signaling can repress ANT1 gene transcription and impair mitochondrial functions. Calorie restriction and fasting increase insulin sensitivity, Sirt1, and reduce inflammation. Insulin stimulates NF-kB impairing mitochondrial function. SIRT1 increases mitochondriogenesis, enhancing the oxidative stress response, p53-altered apoptosis, and decreasing the inflammatory response through NF-KB suppression www.nature.com/.../nrg4478 (2011)
www.ncbi.nlm.nih.gov/.../PMC2529062/ (2018)

Mark as Spam · Posted On : 3/27/2022 2:16:16 AM

Like · Dislike

Guillermus
Joined On 4/7/2015 8:47:48 AM
Add as Friend · Send Message

Sirtuins help cells adapt energy production. SIRT1 and some of the sirtuin orthologs enhance fat metabolism and modulate mitochondrial respiration to optimize energy harvesting. The AMP kinase/SIRT1-PGC-1α/PPAR axis and mitochondrial sirtuins appear to be essential for maintaining mitochondrial function. Nutraceuticals like resveratrol have a multiplicity of actions in addition to sirtuin activation. That net health benefit and relative safety may seemed from the animals' ability to survive environmental changes. www.sciencedirect.com/science/article/pii/S0891584912017568 (2012) Mitochondrial sirtuins SIRT3, SIRT4, and SIRT5 function as the primary sites of oxidative metabolism, control basic mitochondrial biology, and play crucial roles in energy production, apoptosis, and intracellular signaling.

Its dependence on NAD+ directly links its enzymatic activity to the metabolic state of the cell. In mammalian tissues, mitochondrial sirtuin expression and/or activity may decrease with age and contribute to mitochondrial dysfunction, an important hallmark of aging and the development of age-related diseases, including neurodegeneration, insulin resistance, and heart disease. www.sciencedirect.com/.../S1874191417300242 (2017)

Mark as Spam · Posted On : 3/27/2022 2:16:16 AM

Like · Dislike

HalSR96
Joined On 1/19/2021 7:07:37 AM
Add as Friend · Send Message

Wooow! Dr. Mercola's never-ending search for human betterment combined with the desire to share what's learned with us is a gift. Many thanks, Doctor Mercola.

Reply · Mark as Spam · Posted On : 3/27/2022 5:17:38 AM

Like · Dislike

cup
Joined On 3/7/2008 12:37:02 PM
Add as Friend · Send Message

Something's wrong with that spoon link, I think. Was another product substituted after that link was added to the article? The spoons in the link only go down to 1/8 tsp, which is a far cry from 1/64 of a teaspoon! You need much smaller measuring spoons to measure something as small as 1/64 of a teaspoon. Also, as for the niacinamide powder dosage instructions: "Use 1 to 1/2 of 1/64th of a teaspoon three times a day (25-50 mg)", it appears that something is missing in here and is confusing a lot of people. Should it say "1/4 to 1/2 of 1/64th of a teaspoon" instead of "1 to 1/2 of 1/64th of a teaspoon" as another commenter on here said? It's leading some people to guess at incorrect usage.

Reply · Mark as Spam · Posted On : 3/28/2022 9:32:20 AM

Like · Dislike

jonieb
Joined On 9/23/2009 9:22:04 PM
Add as Friend · Send Message

Wow, then we definitely don't want to be taking the 500mg capsules on sale! That is way too much!

Reply · Mark as Spam · Posted On : 3/27/2022 2:41:14 AM

Like · Dislike

der75060
Joined On 3/19/2018 8:22:21 AM
Add as Friend · Send Message

Seriously! My husband takes those - now I'm wondering!

Mark as Spam · Posted On : 3/27/2022 8:28:49 AM

Like · Dislike

rmdrose
Joined On 11/15/2011 8:59:01 AM
Add as Friend · Send Message

take apart capsules (gently twist plastic sleeve) and store peek contents in a brown or blue bottled jar! Only issue then is excipients used to fill the caps in the first place...

Mark as Spam · Posted On : 3/27/2022 8:57:26 AM

Like · Dislike

catspring47
Joined On 6/12/2013 11:09:32 AM
Add as Friend · Send Message

Jonie The capsules will have fillers in them, so if you were to measure the contents to take the 1/64th tsp. dose, it would be very inaccurate. It might be worth it to pitch the capsules and get the pure powder.

Mark as Spam · Posted On : 3/27/2022 9:38:55 AM

Like · Dislike

bee70578
Joined On 1/24/2014 4:03:10 PM
Add as Friend · Send Message

Jonieb - I've seen those, they seem to be diluted with other substances for most part, at least on UK Amazon. Good point.

Mark as Spam · Posted On : 3/27/2022 10:34:58 AM

Like · Dislike

epic123
Joined On 4/14/2009 10:22:18 AM
Add as Friend · Send Message

Which is better to take niacin or niacinamide?

Reply · Mark as Spam · Posted On : 3/28/2022 3:43:27 AM

Like · Dislike

jonieb
Joined On 9/23/2009 9:22:04 PM
Add as Friend · Send Message

People can also do a search of "niacinamide powder" on Duck Duck Go, click on the link above the page that says "shopping", and it will bring up a list of products available from different retailers other than Amazon

Reply · Mark as Spam · Posted On : 3/27/2022 10:55:15 PM

Like · Dislike

pr0jj
Joined On 11/21/2010 9:03:23 AM
Add as Friend · Send Message

So, if I obtain niacinamide powder, how do I go about taking it? Mix in a drink? add to food? place on tongue? Please advise.

Reply · Mark as Spam · Posted On : 3/27/2022 4:32:04 PM

Like · Dislike

pjmoulgirl
Joined On 4/14/2021 12:05:14 PM
Add as Friend · Send Message

Excellent information, thank you!

Reply · Mark as Spam · Posted On : 3/27/2022 4:32:27 PM

Like · Dislike

cba2560
Joined On 1/24/2014 3:26:05 PM
Add as Friend · Send Message

Please offer the sauna soon! I cannot wait for it to be an item in the store!

Reply · Mark as Spam · Posted On : 3/27/2022 1:07:27 PM

Like · Dislike

brianjellies
Joined On 6/19/2006 2:06:37 PM
Add as Friend · Send Message

One reader is complaining that Dr Mercola doesn't give details of where to order supplements mentioned in his newsletters specifically his one on NAD+. He does so in order to maintain impartiality. I tried myself to obtain Nacinamide (aka Nicotinamide) powder in a pharmaceutical grade and it wasn't easy. Here is one source I found:
www.amazon.co.uk/Pure-Vitamin-B3-Nicotinamide-Powder/dp/B01OKJX0U0/ref=1

Reply · Mark as Spam · Posted On : 3/27/2022 11:47:30 AM

Like · Dislike

Primmmoldy7
Joined On 7/24/2010 5:30:16 PM
Add as Friend · Send Message

I have had debilitating anxiety and panic from the virus. At first, I didn't realize it was from the virus. But after watching an FLCCC video on long haul, I realized it could be. I tried Ivermin and that helped tremendously. Since then, I have still been fighting inflammation, specifically. It seems like my heart has been overactive even though I was checked by a cardiologist and I appeared to be "fine". I read that Alpha Lipoic Acid could help with reducing inflammatory responses such as interleukin 6, so I tried it, and within hours it felt like a bucket of cold water was being poured on an electrical fire in my chest. I have been taking all kinds of anxiety supplement since I first had the panic attack that landed me in the ER: passionflower (a tart), inositol, choline, PS100, melatonin, and something called True Hope.

They have all helped, but it has felt like I hadn't been addressing the underlying cause until the tertiin, then the Alpha Lipoic Acid. After reading this, I am going to try the Niacinamide. My energy gets depleted easily when I feel weak and feel I could have a panic attack. Yesterday was the first day in 4 months I was able to do a full weighted workout without feeling like I could have a panic attack, but overnight, I felt like my body was playing catch up. Panic is an awful feeling. I have had times when I felt like I was dying. I have a feeling it's somehow connected to what is described here. Thank you for this helpful article!

Reply · Mark as Spam · Posted On: 3/27/2022 10:00:03 AM

jac3071
Joined On 12/31/2021 12:00:25 AM
Add as Friend · Send Message

Pure bulk has both powders mentioned. Niacinamide and NMN. Should you take both? I want to purchase but I want to make sure I'm not over doing it. Thanks if anyone can answer.

Reply · Mark as Spam · Posted On: 3/27/2022 9:48:35 AM

theBman
Joined On 3/27/2022 9:05:07 AM
Add as Friend · Send Message

Very interesting discussion. What is the Dr Nicholas Conlin Supplement? Where to get? Thank you!

Reply · Mark as Spam · Posted On: 3/27/2022 9:09:35 AM

jef185069
Joined On 2/27/2016 10:16:12 AM
Add as Friend · Send Message

I began taking niacinamide about three years ago at the recommendation of my skin Dr., based on a study (www.ncbi.nlm.nih.gov/...PMC4570055) that found 500mg (twice daily) showed a 28% decrease in precancerous skin issues. My concern here is that I could be inhibiting artists with too much intake. I was also curious, after much reading, if niacinamide was the same as nicotinamide – I saw both recommended in the study data on the web. Any insight on this matter would be greatly appreciated.

Reply · Mark as Spam · Posted On: 3/27/2022 7:19:03 AM

pen85936
Joined On 9/16/2021 9:05:14 AM
Add as Friend · Send Message

I need some clarity to make sure I get the dosage correct. Does the below mean 25mg - 50mg 3 x a day? "It is now beyond obvious to me why no one is promoting niacinamide. This is because it costs less than one cent a day and as a result, there is simply no money to be made in promoting it. Ideally, you buy niacinamide powder and use 1 to 1/2 of 1/4th of a teaspoon three times a day (25-50 mg). Thank you, Penelope

Reply · Mark as Spam · Posted On: 3/27/2022 5:54:46 AM

sam4bimon.com
Joined On 7/28/2009 12:04:44 PM
Add as Friend · Send Message

Thanks for this! But I'm confused when viewing the package for the powder you suggest. It says it's vitamin B3. Won't I be getting too much when taken with your vitamin B complex?

Reply · Mark as Spam · Posted On: 3/27/2022 5:42:52 AM

pjmaalgirl
Joined On 4/14/2021 12:00:14 PM
Add as Friend · Send Message

There is nothing like a cancer diagnosis that will start a research frenzy and the realization that our biochemistry is of mind-boggling complexity I'm wondering if boosting NAD may be harmful with cancer. There are some studies out there indicating this, but again, I have no claim to coming close to understanding the biochemistry (and that's with a science background as well). pubs.acs.org/doi/pdf/10.1021/acsmedchemlett.5b00187?ref=~link=NAD#!%2Ide... pubmed.ncbi.nlm.nih.gov/32268409

Reply · Mark as Spam · Posted On: 3/27/2022 5:08:29 PM

uncanie
Joined On 2/16/2016 8:25:45 AM
Add as Friend · Send Message

Here is an Amazon link for the 'powder niacinamide' and a link to the tiny measuring spoons that you use for the powder...read the article for the dosage. I believe it is 1 to 1/2 of the 1/4th size spoon 3 times a day. I think I will start out with once a day...since I get some niacinamide in my meds. The powder: smile.amazon.com/gp/product/B09NSHF8S1/ref=ppx_yo_dt_b_asin_title_o00?... spoons: www.amazon.com/gp/product/B00KHSPB6I/ref=ppx_yo_dt_b_asin_title_o00_o0...

Reply · Mark as Spam · Posted On: 3/27/2022 3:07:08 PM

tbsmyth
Joined On 6/29/2020 5:24:39 PM
Add as Friend · Send Message

The powder you recommended is listed as "not available." 😠 Is Amazon deliberately sabotaging the attempts to purchase this product?

Mark as Spam · Posted On: 3/27/2022 5:45:07 PM

e847124
Joined On 6/29/2015 6:52:44 AM
Add as Friend · Send Message

What supplement brand do you recommend please? Where do we purchase it?

Reply · Mark as Spam · Posted On: 3/27/2022 3:52:29 AM

juniab
Joined On 9/22/2009 9:22:04 PM
Add as Friend · Send Message

Click on his word "niacinamide" in the article, it's a link to Amazon. Or you could do your own search.

Mark as Spam · Posted On: 3/27/2022 2:38:42 AM

big47846
Joined On 5/10/2021 8:03:05 AM
Add as Friend · Send Message

Do NOT buy ANY supplements from amazon, or anything else for that matter! They are part of the kabal that is destroying the planet!

Mark as Spam · Posted On: 3/27/2022 7:23:25 AM

Renee888
Joined On 6/7/2020 7:33:10 AM
Add as Friend · Send Message

The supplement brand that Dr. Mercola links to at Amazon is isn't available now.

Mark as Spam · Posted On: 3/27/2022 1:14:19 PM

susankulu
Joined On 4/29/2016 2:18:10 AM
Add as Friend · Send Message

This brings up a question I often have. On vitamin bottles there is always a suggested dosage. I weigh 110 lbs. Should I take the same dosage as a 250 lb. man? For most supplements I take I usually try half the dosage to be safe. But I don't really know if for niacinamide supplementation it appears the dosage could be even more critical. I wish dosage suggestions were more specific.

Reply · Mark as Spam · Posted On: 3/27/2022 10:38:19 AM

seastars
Joined On 12/29/2010 2:11:39 PM
Add as Friend · Send Message

Can you please clarify the optimum daily amount of nicotinamide. Is 1 to 1.5 of a 1/4th teaspoon, or 0.5 to 1.0? Is 25-50mg the total amount for the day or the amount to be taken 3x per day?

Reply · Mark as Spam · Posted On: 3/27/2022 2:24:43 AM

juniab
Joined On 9/22/2009 9:22:04 PM
Add as Friend · Send Message

1/4 to 1/2 of a 1/4th tsps, 3 times a day

Mark as Spam · Posted On: 3/27/2022 2:42:13 AM

susankulu
Joined On 4/29/2016 2:18:10 AM
Add as Friend · Send Message

Thanks!

Mark as Spam · Posted On: 3/27/2022 12:57:05 PM

TheMountain
Joined On 7/31/2021 8:56:28 PM
Add as Friend · Send Message

Niacinamide is found in typical facial treatments. What are the thoughts on applying it topically for internal benefits? A lot of hormone creams are applied topically.

Reply · Mark as Spam · Posted On: 3/27/2022 12:57:05 PM

Guillermo
Joined On 4/7/2015 8:47:48 AM
Add as Friend · Send Message

Hi TheMountain. We should consider niacinamide as a topical application to help control acne, rosacea, pigmentation problems and wrinkles. Niacinamide can be effective in skin care products because it is a precursor to two very important coenzymes within cells: nicotinamide adenine dinucleotide (NAD+/NADH) and nicotinamide adenine dinucleotide phosphate (NADP+). Uses answer to energy(TE) As Niacinamide is water-soluble, its dermal penetration is hampered by the lipid bilayer of the skin (hydrophobic) and it is not effective enough because it barely penetrates the stratum corneum layer of the skin.

From in vivo' studies, the 24-hour absorption rate of niacinamide is only 2.2% of the initially applied dose, which is very low when compared to the actual amount of vitamin B3 released, in 24 hours, through the skin, by menthol nicotinate: 18% of the applied dose. This means that Nicotinamide D2 delivers 8 times more VIt. B3 than niacinamide, according to the graph below. multichem.it/en/is-niacinamide-as-easily-absorbed-by-the-skin-so-mean... In this study, the dermal absorption of two closely related skin care agents, niacinamide (nicotinamide, NA) and methyl nicotinate (MN), was evaluated.

At low doses, the penetration rate of NA was approximately 60-fold. lower than that of its more lipophilic and lower melting analog, MN, at high doses an even greater difference was observed. The difference can be explained qualitatively based on higher lipid solubility and lower crystallinity of MN relative to NA. Solution-limited mass transfer through a lipid layer on the SC surface is suggested. www.sciencedirect.com/science/article/abs/pii/S0022314915003176 (2021) www.ghavami.org/...//00021-3549 (21000527 Ksyd (2021)

Mark as Spam · Posted On: 3/27/2022 1:47:12 PM

Guillermo
Joined On 4/7/2015 8:47:48 AM
Add as Friend · Send Message

In this study we evaluated different strategies to optimize the percutaneous absorption of niacinamide (NA) and soybean phytosterols (PYTO) by using solid lipid nanoparticles (SLN) and penetration enhancers, such as hydrogenated lecithin. Skin permeation assessment of NA and PHYTO has been performed in vitro using excised human skin (ex vivo, stratum corneum-epidermis or SCE). In addition, we evaluated the in vivo effect that NA and PHYTO have on the recovery of the skin barrier after topical application; The in vivo evaluation clearly showed that the formulation containing both actives (NA and PHYTO) is capable of recovering approximately 50% of the integrity of the skin barrier eight days after removing the tape. This effect is probably due to the "synergistic effect" of NA and PITO. pubmed.ncbi.nlm.nih.gov/36261345/ (2016)

Mark as Spam · Posted On: 3/27/2022 1:47:29 PM

Guillermo
Joined On 4/7/2015 8:47:48 AM
Add as Friend · Send Message

In this study we evaluated different strategies to optimize the percutaneous absorption of niacinamide (NA) and soybean phytosterols (PITO) by using solid lipid nanoparticles (SLN) and penetration enhancers, such as hydrogenated lecithin. Skin permeation assessment of NA and PHYTO has been performed in vitro using excised human skin (ex vivo, stratum corneum-epidermis or SCE). In addition, we evaluated the in vivo effect that NA and PHYTO have on the recovery of the skin barrier after topical application; The in vivo evaluation clearly showed that the formulation containing both actives (NA and PHYTO) is capable of recovering approximately 50% of the integrity of the skin barrier eight days after removing the tape. This effect is probably due to the "synergistic effect" of NA and PITO. pubmed.ncbi.nlm.nih.gov/36261345/ (2016)

Mark as Spam · Posted On: 3/27/2022 1:47:29 PM

energy70
Joined On 6/5/2008 12:10:42 AM
Add as Friend · Send Message

Nice article. Given the low typical oral levels of niacinamide needed, could it safely be used topically instead?

Reply · Mark as Spam · Posted On: 3/27/2022 2:33:43 AM

Guillermo
Joined On 4/7/2015 8:47:48 AM
Add as Friend · Send Message

Niacinamide helps control acne, rosacea, pigmentation problems and wrinkles. Niacinamide can be effective in skin care products because it is a precursor to two very important coenzymes within cells: nicotinamide adenine dinucleotide (NAD+/NADH) and nicotinamide adenine dinucleotide phosphate (NADP+). Both molecules are critical to the chemical reactions your cells, including skin cells, need to repair damage, reproduce, and function normally. Many of these essential reactions cannot occur at all without NAD+, which your cells cannot produce without niacinamide.

In its topical actions, it should be noted that niacinamide is being applied in the prevention and treatment of various skin diseases, due to the fact that most of its actions are exerted by inhibiting poly (ADP-ribose) polymerase (PARP). Among these skin diseases, atopic dermatitis, acne or hyperpigmentation stand out, as detailed below. Niacinamide decreases the transfer of melanosomes – which are found in melanocytes– to keratinocytes, as has been shown in in vitro studies performed on co-cultures of melanocytes and keratinocytes.

Inhibition of melanosome transfer is a reversible and dose-dependent process of niacinamide. There is evidence that topical niacinamide may increase the production of ceramides (lipids that help maintain the skin's protective barrier), which may contribute to its topical effects on wrinkles, fine lines, and the skin's moisture barrier . All of this is probably why you're seeing niacinamide in a lot of skin care products.

Mark as Spam · Posted On: 3/27/2022 3:59:20 AM

Guillermo
Joined On 4/7/2015 8:47:48 AM
Add as Friend · Send Message

Niacinamide's anti-inflammatory properties make it an attractive treatment for skin conditions marked by inflammation, such as acne, a study published in 2013 in the International Journal of Dermatology found that a topical preparation of 4% niacinamide significantly improved moderate acne when applied twice daily for eight weeks Niacinamide had significant improvements in hyperpigmentation spots, fine lines and wrinkles compared to the control side. Dr. Trinsko echoes that niacinamide could improve hyperpigmentation by reducing the transfer of cells that cause pigmentation, called melanosomes lpi.oregonstate.edu/.../niacin pubmed.ncbi.nlm.nih.gov/12071324/ onlinelibrary.wiley.com/.../fpl.12002 onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-2494.2004.00226.x onlinelibrary.wiley.com/doi/abs/10.1111/j.1473-2130.2004.00115.x onlinelibrary.wiley.com/doi/abs/10.1046/j.1365-2133.2002.04824.x link.springer.com/.../...fbfpp00148b ...

Mark as Spam · Posted On: 3/27/2022 3:59:48 AM

rrwilrose
Joined On 11/10/2011 8:59:01 AM
Add as Friend · Send Message

Great links Gui, Thanks!

Mark as Spam · Posted On : 3/27/2022 9:00:42 AM

Like · Dislike

rrwdrose
Joined On 11/10/2011 8:59:01 AM
Add as Friend · Send Message

Hmmm, as usual, far less of any substance is needed using it transdermally that orally, because it bypasses the initial take down by the liver. I do see transdermally for that reason. Not sure it matters how exact or precise one is, rather than using it consistently over an 8-week period (to start) as its not a magic bullet. Shea butter, jojoba oil, coconut oil, any combination of organic skin lotion will do.

Mark as Spam · Posted On : 3/27/2022 12:05:55 PM

Like · Dislike

SnowSat
Joined On 1/9/2021 11:28:32 AM
Add as Friend · Send Message

It looks like Amazon does not carry the one linked here. Anyone have a good source? Her product looks good but way to pricy for me.

Reply · Mark as Spam · Posted On : 3/27/2022 12:29:10 PM

Like · Dislike

PolitiJim
Joined On 7/24/2014 12:38:27 PM
Add as Friend · Send Message

I would like to know if any studies have been done on the NAD effects from living with a hot chick.

Reply · Mark as Spam · Posted On : 3/27/2022 2:14:04 PM

Like · Dislike

forbiddenhealing
Joined On 2/21/2011 9:51:42 AM
Add as Friend · Send Message

Increasing NAD via food and food sources is one approach, but recycling it and any other oxidized biomolecules rests on overall systemic charge terrain. Intake of antioxidants, sun, sauna, biome diversity, exercise, electrolyte minerals and fasting all help overcome chronic inflammations and reduce acidic hypoxia. So Mega-C, RALA, NAC and a diet rich in polyphenols will protect and recycle NAD. This is all about generating enough ATP electrons to power cells and prevent all-cause oxidative damage...pure Redox medicine. Make up Mr. MLS, this is all in your first semester physiology text, so why not bolster biology instead of continuing to fall your patients with more and more drugs??? Reflect on a bigger picture than your own bank account...get a clue please.....
ze43e3.myfreepaypal.com/forum-comments

Reply · Mark as Spam · Posted On : 3/27/2022 8:16:01 AM

Like · Dislike

rrwdrose
Joined On 11/10/2011 8:59:01 AM
Add as Friend · Send Message

Question: isn't niacinamide normally taken or bolstered with concurrent vit C? Seem to remember taking these together for a while, trying to rebuild lost nutrients, in place of taking niacin...then switched to b-complex.

Mark as Spam · Posted On : 3/27/2022 9:08:49 AM

Like · Dislike

Guillermus
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

ROSE, this report may interest you. Niacin is considered a valuable agent for therapy to modify high LDL-C, as well as low HDL-C, high lipoprotein - a, and hypertriglyceridemia. Commercially available forms of niacin include unbound niacin or free nicotinic acid (NA), extended-release NA, a form of NA that is released gradually over a period of time, inositol hexanicotinate, six NA molecules connected by inositol to one inositol molecule, and nicotinamide, or niacinamide, the amide form of NA, which is readily bioavailable. This review is designed to help healthcare professionals evaluate the most appropriate forms of niacin for a particular therapeutic goal. In addition, it provides a literature-based assessment of the risk of NA, extended-release NA, inositol hexanicotinate, and nicotinamide. academic.oup.com/nutritionreviews/article/70/6/357/1847777?login=false (2012)

Mark as Spam · Posted On : 3/27/2022 10:42:45 AM

Like · Dislike

rrwdrose
Joined On 11/10/2011 8:59:01 AM
Add as Friend · Send Message

Thanks Gui, prefer NO flush.

Mark as Spam · Posted On : 3/27/2022 2:42:44 PM

Like · Dislike

woodyh.
Joined On 4/27/2011 5:42:34 PM
Add as Friend · Send Message

This is a must view! Just turn on bluetooth on your phone and scan to see who all is vaccinated in your vicinity
rumble.com/vprjbe/humans-emitting-a-bluetooth-mac-adress-signal.html...

Reply · Mark as Spam · Posted On : 3/27/2022 2:04:17 AM

Like · Dislike

juniob
Joined On 9/23/2009 9:22:04 PM
Add as Friend · Send Message

There are a ton of videos out there. The channel you posted has several links as to where to get apps and how to use them. This only works with android decks app phones.

Mark as Spam · Posted On : 3/27/2022 7:26:17 AM

Like · Dislike

HealthiestChoices
Joined On 11/30/2009 10:05:54 AM
Add as Friend · Send Message

That link not only didn't open, but froze all my other pages. Even had trouble with Ctrl, Alt, Delete. Had to restart. Just cautioning others.

Mark as Spam · Posted On : 3/27/2022 11:49:23 AM

Like · Dislike

eliebx
Joined On 3/27/2022 8:25:56 PM
Add as Friend · Send Message

So what about unvaccinated people - they do not come up?

Mark as Spam · Posted On : 3/27/2022 8:58:23 PM

Like · Dislike

juniob
Joined On 9/23/2009 9:22:04 PM
Add as Friend · Send Message

The link worked just fine for me and still does. I'm wondering if he is on Bitchute though. I don't have an account with Rumble as they demand too much information.

Mark as Spam · Posted On : 3/27/2022 11:17:23 PM

Like · Dislike

Forrester2
Joined On 6/25/2017 8:19:14 AM
Add as Friend · Send Message

Since taking too much Niacinamide seems to be as bad or worse than not enough, I have a question: my normal multivitamin has 25 mg. of Niacin (It doesn't say what form). Should I only take the powder twice a day?

Reply · Mark as Spam · Posted On : 3/27/2022 5:56:58 PM

Like · Dislike

juniob
Joined On 9/23/2009 9:22:04 PM
Add as Friend · Send Message

Just my opinion, I would say yes or even once a day.

Mark as Spam · Posted On : 3/27/2022 11:03:50 PM

Like · Dislike

Imagicman
Joined On 12/30/2021 9:58:19 AM
Add as Friend · Send Message

It would also be nice to know how you're supposed to take the powder. with food? with water or other fluids? or snort it? btw, I found a place that sells it for price mentioned in the article called purebulk, $10.75 for 250 grams.

Reply · Mark as Spam · Posted On : 3/27/2022 5:25:07 PM

Like · Dislike

Forrester2
Joined On 6/25/2017 8:19:14 AM
Add as Friend · Send Message

I'm a bit confused. This article recommends taking very small amounts of Niacinamide, but Dr. Conlon is the CEO of a company called Nucitrols which sells a very expensive product called Niten. They are a bit vague about the ingredients in Niten, but some blogs say the principal ingredient is 250 mg. of Nicotinamide. Which is correct? Does your body convert 250 mg of Nicotinamide into 25 mg of Niacinamide?

Reply · Mark as Spam · Posted On : 3/27/2022 5:32:12 PM

Like · Dislike

juniob
Joined On 9/23/2009 9:22:04 PM
Add as Friend · Send Message

Uhh no, it doesn't convert it to a smaller amount. They're probably just throwing in their best guess amount. Other supplements have 500 mg.

Mark as Spam · Posted On : 3/27/2022 11:05:19 PM

Like · Dislike

jack444gmail.com
Joined On 7/28/2021 10:45:28 AM
Add as Friend · Send Message

I still don't understand the measurements. Is it a half of 1/4? Thank

Reply · Mark as Spam · Posted On : 3/27/2022 7:00:34 AM

Like · Dislike

DebbyW
Joined On 6/27/2010 9:07:35 AM
Add as Friend · Send Message

I think it is a range. 1/64 to half of that.

Mark as Spam · Posted On : 3/27/2022 7:12:32 AM

Like · Dislike

Charly ali
Joined On 12/13/2007 12:12:33 AM
Add as Friend · Send Message

It's 25 to 50 mg.

Mark as Spam · Posted On : 3/27/2022 7:47:21 AM

Like · Dislike

juniob
Joined On 9/23/2009 9:22:04 PM
Add as Friend · Send Message

You get the tiny measurement spoons. Then you use the 1/64 spoon, but only fill it to 1/4 or 1/2.

Mark as Spam · Posted On : 3/27/2022 11:06:17 PM

Like · Dislike

limissy
Joined On 2/17/2020 6:12:47 AM
Add as Friend · Send Message

Are there any side effects or restrictions with this product?

Reply · Mark as Spam · Posted On : 3/27/2022 4:46:36 AM

Like · Dislike

alan515
Joined On 5/30/2021 3:05:30 PM
Add as Friend · Send Message

Just to say that your take on the Conlon paper was the clearest exposition on this area I've ever read. Thank you. How you know so much about so many things will always be a mystery to me!

Reply · Mark as Spam · Posted On : 3/27/2022 7:15:17 AM

Like · Dislike

big47846
Joined On 5/19/2021 8:03:05 AM
Add as Friend · Send Message

Gui is a genius, and I am glad that he/she is one of us!

Mark as Spam · Posted On : 3/27/2022 7:28:15 AM

Like · Dislike

Buddhi
Joined On 10/27/2020 2:36:40 PM
Add as Friend · Send Message

And for more than GUI merely being a genius, he takes the time and effort to relate, as is (a genius) and does Dr. Mercola.

Mark as Spam · Posted On : 3/27/2022 9:37:01 AM

Like · Dislike

nanisos34
Joined On 10/9/2017 12:07:57 AM
Add as Friend · Send Message

I follow most of your recommendations except the supplement since I have no idea where to get it. Rowing for 20 minutes everyday (a combination of aerobic and anaerobic) to speed up my heart, practicing intermittent fasting 20/4 hours for the past three years, making and consuming fermented vegetables everyday, using good quality antioxantho, getting 7-8 hours of sleep hopefully replenish my NAD sufficiently I will be 88 in July.

Reply · Mark as Spam · Posted On : 3/27/2022 12:28:26 AM

MsMac46
Joined On 3/8/2021 3:24:35 PM
Add as Friend · Send Message

Naviosa34 Amazing ! Thats dedication- good for you

Healthbuf
Joined On 11/28/2018 1:55:15 AM
Add as Friend · Send Message

I just see niacinamide 500mg tablets and topical. They say it's a form of vitamin B3

Reply · Mark as Spam · Posted On : 3/27/2022 10:38:38 PM
Like · Dislike

seastars
Joined On 12/29/2019 2:11:59 PM
Add as Friend · Send Message

For my high level of genetically given LPs(), a lipid called lipoprotein little a, I take 125iu/day of nicotinic acid (Endurace). It has brought my LPa level down to an optimum range. I wonder if the niacinamide would combine well. I always like to add that this should be a part of everyone's lab test. Its not called "The Mess Murderer" for nothing.

Reply · Mark as Spam · Posted On : 3/27/2022 12:11:19 PM
Like · Dislike

rose5146
Joined On 12/25/2021 12:42:12 PM
Add as Friend · Send Message

If you can't measure something, NAD levels, how do you know it's there, by a feeling? This is too far-fetched and lacks common sense.

Reply · Mark as Spam · Posted On : 3/27/2022 7:40:06 AM
Like · Dislike

johnymars
Joined On 6/29/2011 11:09:49 AM
Add as Friend · Send Message

I tried to look up niacinamide powder and it was sold out on Amazon, but they had 500mg tablets and the recommended dosage was one pop, one whole is 10x more than Dr M recommends!!! Why the difference?

Reply · Mark as Spam · Posted On : 3/27/2022 8:32:26 PM
Like · Dislike

juniob
Joined On 6/12/2009 9:22:04 PM
Add as Friend · Send Message

They have the wrong dosage. The manufacturers of course don't have the up to date information that Dr. Mercola has and they want to make their product look good and potent.

Reply · Mark as Spam · Posted On : 3/27/2022 10:57:22 PM
Like · Dislike

ldmartinson
Joined On 8/24/2011 7:14:27 PM
Add as Friend · Send Message

Anyone know where else to get the niacinamide powder?

Reply · Mark as Spam · Posted On : 3/27/2022 4:02:32 PM
Like · Dislike

juniob
Joined On 6/12/2009 9:22:04 PM
Add as Friend · Send Message

Search Duck Duck Go for "niacinamide powder", then click on "shopping".

Mark as Spam · Posted On : 3/27/2022 11:02:16 PM
Like · Dislike

shower1
Joined On 8/24/2012 3:52:48 PM
Add as Friend · Send Message

I read Dr. Mercola daily and spend $$$$ on his products yearly. However, it seems Dr. Mercola's articles are increasingly aimed at people who can afford personal nutritionists and trainers rather than those of us trying to find health without being conned into taking pharmaceuticals. If you're going to recommend a supplement, please give us a source or brand where we can purchase a reliable product. I know the great name is an important topic but there are many other sources of information on it. There are few forms as widely used as Dr. Mercola's on alternative/functional medicine.

I found functional medicine thanks to Dr. Mercola. Having recently been diagnosed with mold toxicity after suffering with it for 6 years, I found it disappointing that there are never any articles on this subject. I was always into healthy eating, etc. and could not figure why I never felt good. Not feeling good is an understatement for all the pain and suffering this has caused in my life. Now I'm fighting my way back to health. Even though I have a functional medicine MD I'm working with I do a lot of my own research.

I have not once seen an article written on mold by Dr. Mercola. This is a health issue that needs to be brought to more peoples attention. I have family members that think mold toxicity is not a real disease because I have never seen it discussed. People suffering from this need Dr. Mercola's knowledge/help more than those who are trying to be elite athletes. I also think it is a disservice to place comments on how they judged rather than when they are submitted. It prevents feedback on how the articles are received by the general reader.

Reply · Mark as Spam · Posted On : 3/27/2022 7:33:17 AM
Like · Dislike

jland12
Joined On 10/25/2020 9:45:26 AM
Add as Friend · Send Message

View " Know the Cause" by Doug Kaufman on YouTube and sign up for his news letter. It is all about mold, fungus and yeast. Excellent info.

Mark as Spam · Posted On : 3/27/2022 9:28:33 AM
Like · Dislike

Buddhi
Joined On 10/27/2020 2:36:40 PM
Add as Friend · Send Message

Dr. Mercola knows all about mold. See here: paradigmchange.me/mercola

Mark as Spam · Posted On : 3/27/2022 9:29:41 AM
Like · Dislike

her1272
Joined On 3/6/2019 11:00:25 PM
Add as Friend · Send Message

I would like to see more exposure and information about "co-harm" (according to the FDA) gadolinium toxicity, the heavy metal used in MRI contrasts. As of this writing, there is no safe and effective chelator to remove it and contrary to what is being told to patients at the time of the MRI, everyone who receives it (approved since 1988 and over 300 million doses), retains it for life. They are now finding it in our waterways because it is being excreted, flushed down the toilet and not removed in the wastewater cleansing process. This is a dirty little sabotage secret that must be exposed to the public. I would also like to see more information regarding the adjuvant "MFS#", which is now being added to flu shots. It is the same adjuvant given experimentally to some unknowing Iraqi war military personnel in their anthrax vaccine. It was found to cause Gulf War Syndrome and is now being given unknowingly to the public in their flu vaccines.

Mark as Spam · Posted On : 3/27/2022 10:29:14 AM
Like · Dislike

Guillermou
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

IN THIS LINK REPORTS OF DR. MERCOLA ON MOLD. www.lewisscibwell.com MOLDY: A CONVERSATION WITH BITCHIN SHOEMAKER SURVIVING MOLD - CHRONIC INFLAMMATORY RESPONSE SYNDROME (CIRS) - DR. RICHIE SHOEMAKER www.survivingmold.com/legal/mycotoxin-dr.-shoemaker-essays/moldy-a-con... www.youtube.com/watch UNDE AND MOLD, interview with Dr. Ritchie Shoemaker. lymeing.wordpress.com/2013/05/18/lyme-and-mold-interview-with-dr-rho... paradigmchange.me/shoemaker www.verbal.com/ ...tagpanacea MOLD AND CHRONIC INFLAMMATORY RESPONSE SYNDROME (CIRS)tinyurl.com/mold-1 Dr. Mercola. They eventually found the following "magic foo" and credited these for advancing their recovery 1. Garlic: Garlic is a potent antifungal, antibacterial, antiviral, immune system stimulant, and detoxification agent. Garlic also helps clean out the respiratory tract. The best form is raw, whole garlic, rather than a supplement derived from garlic, as it is the synergism of the whole food that makes it so clinically active. Eat the cloves whole, or run them through your juicer alongside your veggies.

2. Ginger: Ginger is also an antifungal and antibacterial. It helps dislodge congestion in your respiratory tract, and is also a great digestive aid. Ginger also makes a great addition to fresh juice. 3. Cayenne: Cayenne is a catalyst for the other herbs. 4. Goldenseal: Goldenseal, with its active ingredient berberine, has antibacterial and immune-enhancing properties. However, it should not be used for long periods of time. Another herb they found therapeutic is parsley, which they used topically by infusing it into their bathwater for relief from rashes, hives, and other skin irritations.

Mark as Spam · Posted On : 3/27/2022 11:09:26 AM
Like · Dislike

Guillermou
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

Final Recommendations There are undoubtedly many other helpful natural agents, and you will have to rely on the expertise of your healthcare providers to find which ones are best for you. It will require some degree of trial and error. The take-away is, there ARE options if you suspect you have been poisoned by mold. And as usual, the natural approaches are much safer and more effective for restoring your health than antifungal drugs, antibiotics or steroids, which are the worst options by far. Here are a few strategies: highly recommend incorporating into your recovery plan: •Glutathione is mentioned by Hart and Lee Ann Billings as being helpful. Glutathione is your body's most powerful antioxidant and has been called the "master antioxidant" because it maximizes the activity of all the other antioxidants.

The best way to increase your glutathione level is by consuming a high-quality whey protein. It should be cold pressed, undenatured, derived from grass-fed cows, and free of hormones, chemicals and sugar. •Omega-3 fats are also very important, from a mixture of plant and animal sources. The best source of animal-based omega 3s comes from krill oil. •Artichoke leaf extract: A study published in the Journal of Agricultural Food Chemistry in 2004 found that extract of artichoke leaf was toxic to many types of fungi, including both molds and yeasts. •Vitamin D: Research suggests vitamin D may prevent mold allergies, so make sure your vitamin D levels are optimal.

Mark as Spam · Posted On : 3/27/2022 11:09:49 AM
Like · Dislike

Guillermou
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

This have mad all of these articles by Dr. Mercola. A treatment: cholestyramine (Ascorbate) 2. Effective Strategies to Identify and Correct the Inflammation Caused by Mold Exposure
articles.mercola.com/sites/articles/archive/2012/07/12/mold-and-other... July 22, 2012 According to Dr. Shoemaker, about 75 percent of patients experience a 75 percent reduction of symptoms with cholestyramine alone (but the numbers are less if there is ongoing mold exposure). Since the initial discovery of cholestyramine for the treatment of biotoxic disease, he has published about 20 papers about it, and approximately 500 physicians affiliated with SurvivingMold.com are using his protocol with benefit.

livertox.nih.gov/Cholestyramine.htm www.survivingmold.com www.survivingmold.com/...//ritchie-shoemaker-m-d www.survivingmold.com/...//surviving-mold-2010-new http://mold-ecfm.org/ cholestyramine-treatment-for-mold-sickness/ "Cholestyramine" or "Cholestyramine", Mycotoxins and Mold The science of mycotoxin detoxification is complex mold.org/cholestyramine-and-mold The MAPP Protocol, the Most Advanced Medical Treatment for Mold Illness and Rapid Recovery mold.org/mold-mapp-protocol http://moldecfm.org/ www.facebook.com/...?102074699457358 Cholestyramine—To Use or Not to Use

Mark as Spam · Posted On : 3/27/2022 12:08:28 PM
Like · Dislike

Guillermou
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

Diagnosis begins with a series of diagnostic blood tests that are readily available by commercial labs such as LabCorp and Quest. The results of these tests will guide the treatment. "Fortunately, there's an inexpensive test called visual contrast sensitivity that has been shown... to be important in neurotoxicology to show a deficit in the neurologic function of vision. This can be done online or with a handheld kit. It takes five minutes. It's non-invasive... We look for a deficit in the shape and height of the VCS curve which tells us about impairment of the ability to see contrast.

That is a pattern of gray lines against a gray background... It seems to be low-tech, but it's very sophisticated in its origin. The lab tests Dr. Shoemaker recommends include genetic tests, such as HLA-DR, HLA (human leukocyte antigen) are immune response genes found on chromosome 6. "If there is genetic susceptibility, what we look for is particular kinds of inflammation from innate immunity," he explains. "Here we look for cytokines; inflammation proteins that are free-formed and ready to go fight off the antigens.

We look for split products of complement. Not C3 and C4 that you might look for in lupus, but the split product of C3a and C4a... Some folks — the very unfortunate ones —have enhanced activity of the enzyme that makes C4a. It will actually auto-activate, so the illness not only gets worse the longer you stay ill, it is quicker to relapse at higher levels of C4a with another exposure as well."

Mark as Spam · Posted On : 3/27/2022 12:41:03 PM
Like · Dislike

Guillermou
Joined On 4/17/2015 8:47:48 AM
Add as Friend · Send Message

All of the recommended tests are well-recognized by insurance companies and are available through commercial labs like Quest and LabCorp. Other tests commonly used include: • T regulatory cell deficiency (CD4+CD25+) • Transforming growth factor beta 1 (TGF beta 1), which Dr. Shoemaker says is "a huge player in this illness." TGF beta 1 is associated with respiratory problems, particularly asthma like symptoms, tremors (reminiscent of those associated with Parkinson disease), as well as scarring on the brain, and symptoms similar to those of multiple sclerosis • Melanocyte-stimulating hormone (MSH) • Vasoactive intestinal polypeptide (VIP) Whenever autoimmunity is identified (elevated TGF beta 1 with low CD4+CD25+ cells (these production of antibodies to gliadin and cardiolipin), you'll want to remove gluten from your diet

Dr. Shoemaker recommends eliminating gluten for three months. 05. Documentary Reveals the Hazards of Toxic Mold and Mold-Related Illness articles.mercola.com/sites/articles/archive/2009/12/21/mold-toxicity.a... September 05, 2015 1. Suzanne Somers on healing from toxic overload 2. Dr. Ritchie Shoemaker on strategies for identifying and healing from mold exposure 3. Jack Thrasher on the "hidden" mold pandemic 4. Dr. Doris Rapp on mold-related health risks and remediation 5. Dr. Jim Pearson also about mold-related health risks and remediation

Mark as Spam · Posted On : 3/27/2022 12:51:22 PM
Like · Dislike

HealthiestChoices
Joined On 11/30/2009 10:05:54 AM
Add as Friend · Send Message

Hi, shower1– I'm sorry for all you've gone through with the mold exposure. I know it can be devastating. I have a school mate who has been faced with horrendous agony for a long time due to black mold exposure that was totally unnecessary but due to someone else's stupidity. It's great you've found a good doctor to help you. You are fortunate to have someone in your area. The closest one we had a few yrs. ago was about 60 mi. and was not clear-headed. Across the top of this section are 4 ways to sort the comments, I did a Search for Dr. Mercola mold with duckduckgo.com which brought up a lot of his earlier topics. (EDIT: I'd started my post before Gui came to help, but had an interruption, so didn't see his posts until after I clicked Submit. As usual, he's offered a lot of excellent tips for you.

Mark as Spam · Posted On : 3/27/2022 12:46:40 PM
Like · Dislike

juniob
Joined On 6/12/2009 9:22:04 PM
Add as Friend · Send Message

How's he going to endorse any product brand? I wouldn't expect him too. You don't want to be "conned into taking pharmaceuticals" yet you want him to give you a brand name. So he's all the rich-people products of others? A simple search of Duck Duck Go will list many many options for "niacinamide powder" suppliers. You want a guarantee from Dr. Mercola?

Mark as Spam · Posted On : 3/27/2022 11:13:20 PM
Like · Dislike

cup
Joined On 3/7/2008 12:37:02 PM
Add as Friend · Send Message

Dr. Mercola has had a number of different articles with interviews with mold experts quite a while back with a huge bunch of information he posted throughout 2011, but he says he may not be aware that unfortunately he had to take down his entire library of articles. He posted an article in July 2011 titled "The New Hidden Pandemic Sweeping Across America" with mold expert Jack Thrasher PhD. Dr. Thrasher has passed away by now, but you may try searching the net to try to bring up mold information connected with him. Dr. Mercola had another article on mold indoor air quality in September 2011 titled "Unexplained Headaches, Fatigue, Depression, and Brain Fog? Look No Further Than Your Own Home..." He posted several different mold articles in a 3-part series with article titles: "Why Almost All Sinus Infections are Misdiagnosed and Mistreated", "The Common Toxin That Can Be Still More Damaging than Pesticides and Heavy Metals..." and "Forget Antibiotics, Steroids and Medication - Starve This Toxin out of Your Body" that all dealt with mold.

You may be searching the net for all of the above article titles and see if you can find them saved on other people's net sites. I just now did a search for that last article "Forget Antibiotics, Steroids and Medication ....." (I typed the whole title in on the search engine - I use duckduckgo.com - search engine) and right away it came up with Dr. Mercola's very article published on the link swahrmanhealth.blogspot.com

So give it a try, researching all of these titles online; you may just find them all! AND Dr. Mercola had his own personal bottle with mold in his home that he detailed for all of us, so this is a subject important to him.

Mark as Spam · Posted On : 3/28/2022 1:39:34 AM
Like · Dislike

Post your comment

Next Article >

Join the World's #1 Natural Health Newsletter for FREE!
Latest Treatments News from Dr. Mercola — delivered straight to your Inbox!
Enter your email address
Subscribe Now!

Mercola proudly supports these charities and organizations. View All >

Mercola.com is a Natural Health and Wellness Website. Mercola.com does not provide medical advice, diagnosis or treatment. Mercola.com is not responsible for the content of any comments posted by users. Mercola.com is not responsible for the content of any linked sites. Mercola.com is not responsible for any loss or damage caused by your reliance on information obtained through Mercola.com. It is your responsibility to evaluate the accuracy, completeness or usefulness of any information on Mercola.com. There may be a time lag between the time we receive a new piece of information and the time we post it to the site. In the medical field, new information is constantly being published. Mercola.com is not responsible for any loss or damage caused by your reliance on information that is outdated. Your use of Mercola.com's website and services is subject to our terms of service, privacy policy and cookie policy. Mercola.com is not responsible for the content of any advertisements. Mercola.com does not endorse any of the products or services advertised on its website. Mercola.com does not guarantee the quality of any products or services you may purchase through its website. Mercola.com is not responsible for any loss or damage caused by your purchase of any products or services through its website. Mercola.com does not guarantee the accuracy of any product information posted on its website. Mercola.com does not guarantee the quality of any products or services you may purchase through its website. Mercola.com is not responsible for any loss or damage caused by your purchase of any products or services through its website.

Disclaimer: The entire contents of this website are based upon the opinions of Dr. Mercola, unless otherwise noted. Individual articles are based upon the opinions of the respective author, who retains copyright as marked. The information on this website is not intended to replace a one-on-one relationship with a qualified health care professional and is not intended as medical advice. It is intended as a sharing of knowledge and information from the research and experience of Dr. Mercola and his community. Dr. Mercola encourages you to make your own health care decisions based upon your research and in partnership with a qualified health care professional. If you are pregnant, nursing, taking medication, or have a medical condition, consult your health care professional before using products based on this content.

If you want to use an article on your site please click here. This content may be copied in full, with copyright, contact, creation and information intact, without specific permission, when used only in a not-for-profit format. If any other use is desired, permission in writing from Dr. Mercola is required.

Terms & Conditions • Updated Privacy Policy

© 1997-2022 Dr. Joseph Mercola. All Rights Reserved.

TRUSTe