

PATIENT GUIDE

NAD+ *therapy*

A clear look at what NAD+ does in the body, the ways it can be given, and what the research supports today.

COMPOUND	CLASS	ROUTES	RESEARCH	SOURCES
NAD+	Coenzyme therapy	Infusion, injection, oral	Active and growing	23 · PMID linked

§ 01

Why we are talking about NAD+

NAD+ is one of the most actively studied molecules in longevity medicine, and the interest is well earned. It sits at the center of how your cells make energy and how they repair themselves, and the amount your body carries falls as you get older. That combination is exactly what makes it worth a serious conversation.

This guide is written so you can have that conversation with confidence. It covers what NAD+ does, the different ways it can be taken, what the published research supports so far, and what your first visit would involve. The research behind it is listed at the end, with links so you can read it yourself.

Every cell NAD+ is universal. Every cell in your body uses it, both to convert food into usable energy and to supply the repair enzymes that maintain your DNA. ²

28 Randomized human trials completed. NAD+ has moved well beyond the laboratory. A 2026 systematic review identified 113 intervention studies, including 28 randomized trials in people, with more underway. ⁵

60% Measured increase in NAD+. Six weeks of an oral precursor at 1,000 mg daily raised NAD+ measured inside immune cells by roughly 60 percent in healthy middle aged and older adults, and was tolerated well. ⁷

4 Ways to take it. NAD+ support can be given as an infusion, as a small injection under the skin, as a precursor capsule, or as an NAD+ or NADH tablet. Each one is explained in §05.

§ 02

What NAD+ does in the body

Nicotinamide adenine dinucleotide, usually shortened to NAD+, is a coenzyme. That means it is a helper molecule that certain enzymes simply cannot work without. It has two main jobs.

The first is energy. NAD+ carries electrons through the chain of reactions inside your mitochondria that turns food into the fuel your cells run on. The second is repair and regulation. NAD+ is consumed as a raw material by the enzymes that fix damaged DNA and by the sirtuins, a family of proteins involved in how cells respond to stress and aging.²

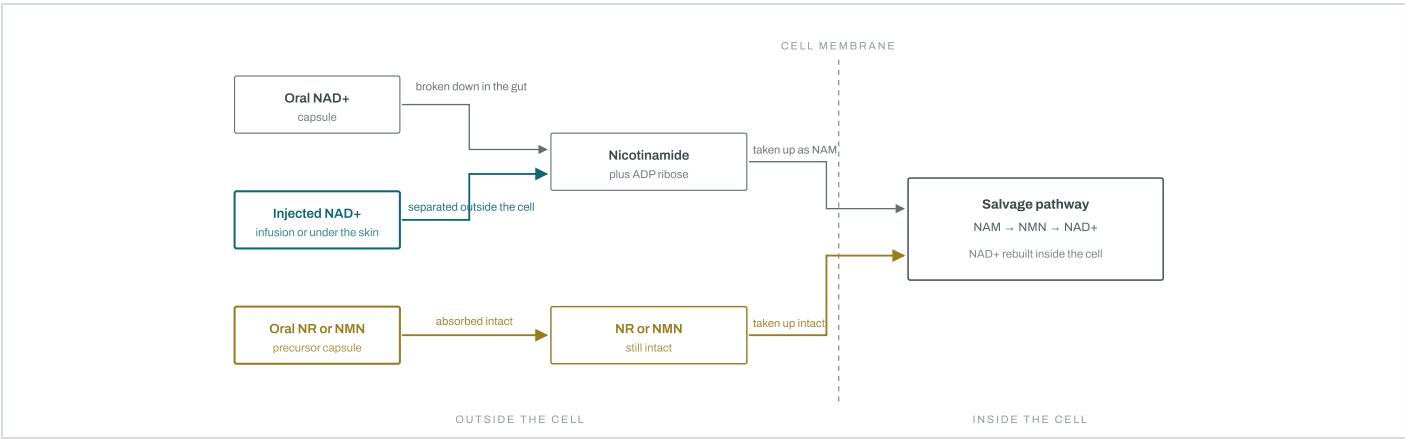
Those two jobs compete over time. As repair demand rises with age, NAD+ gets used up faster. Measurements in human tissue show levels declining across the lifespan alongside rising oxidative stress.¹ This is the observation that started the field, and it has held up well.

THE NAD+ FAMILY These names appear in a lot of marketing. They are related but not interchangeable.		
NAME	WHAT IT IS	HOW IT IS GIVEN
NAD+	The finished coenzyme your cells use	Intravenous infusion, or subcutaneous injection
NR nicotinamide riboside	A precursor. A vitamin B3 derivative your cells convert into NAD+	Oral capsule. Also given by infusion in some settings
NMN nicotinamide mononucleotide	A precursor, one step closer to NAD+ than NR	Oral capsule
NAM nicotinamide	Plain vitamin B3, and the molecule your cells recycle back into NAD+	Oral, widely available

§ 03

How NAD+ reaches your cells

This is the part most people have never had explained, and it makes everything else easier to understand. NAD+ is a large molecule that carries an electrical charge, so it does not pass through a cell membrane in one piece. Your body handles it the way it handles most large molecules: it takes it apart outside the cell, moves the pieces in, and rebuilds it on the inside. That rebuilding route is called the salvage pathway.



Every route arrives at the same destination. Whether NAD+ is infused, injected under the skin, or a precursor is taken by mouth, the cell rebuilds NAD+ through the salvage pathway. What differs between the options is how much raw material reaches that pathway, and how quickly.^{2 3}

A human study confirmed this directly. Researchers gave a six hour NAD⁺ infusion to eleven healthy men aged 30 to 55 and tracked what appeared in blood and urine. The pattern of metabolites they measured matched the signature of the enzymes that separate NAD⁺ into its components, and NAD⁺ itself did not rise in the plasma over the first two hours.³ In other words, the infusion delivers the building blocks efficiently, and the cell does the assembly.

WHY THIS IS USEFUL TO KNOW

It explains why NAD⁺ taken by mouth is largely broken down in the digestive tract before it can be absorbed.¹⁹ It also explains why the oral precursors work: they are small enough to be absorbed intact and delivered to the salvage pathway. Knowing this makes it much easier to choose between the options.

§ 04

What the research shows today

NAD⁺ research has progressed quickly, and it is worth being clear about which parts are settled and which are still being worked out. Both are encouraging in their own way.

What is well established

Oral NAD⁺ precursors raise NAD⁺ levels in people. This has been shown consistently since the first human bioavailability study in 2016.⁶ A randomized crossover trial in healthy middle aged and older adults found that 1,000 mg of nicotinamide riboside daily for six weeks raised NAD⁺ measured inside immune cells by about 60 percent, and was tolerated well.⁷ Oral precursors also raise the NAD⁺ metabolome inside aging human skeletal muscle and shift inflammatory signatures there in a favorable direction.⁸ A 2026 comparison of three different NAD⁺ boosters confirmed that each raises circulating NAD⁺, by different amounts and through different routes.¹⁵

What is still being defined

The question researchers are working on now is which patients benefit most, and in which measurable ways. Results across clinical trials have varied, which is normal for a field at this stage. Some have been positive: nicotinamide mononucleotide improved muscle insulin sensitivity in prediabetic women in a trial published in *Science*, a finding that generated healthy scientific debate in the same journal.^{9 10} Another found that blood NAD⁺ rose, walking speed was maintained, and sleep quality improved in older adults.¹⁷ Others, in peripheral artery disease and in mild cognitive impairment, confirmed that NAD⁺ levels rose without demonstrating a clear clinical benefit at the doses and durations studied.^{11 12} Larger and longer trials are now running, including newer work in cognitive health published in 2026.¹³

Where injected NAD⁺ sits

The published human research on the intravenous route is at an earlier stage than the research on oral precursors. What exists today is a pharmacokinetic study describing how the body handles an infusion,³ and a 2026 comparison of infused NAD⁺ against infused nicotinamide riboside that looked at tolerability and safety markers over 30 days.⁴ Randomized trials measuring clinical outcomes from injected NAD⁺ have not yet been published, and the subcutaneous route has not yet been studied in published clinical trials.⁵ Many patients choose the infusion and report feeling well on it, and that experience is worth taking seriously. It simply has not yet been tested in the same way the oral route has.

HOW WE WOULD SUMMARIZE IT

The biology is sound and the safety record so far is reassuring. The strongest published evidence sits with the oral precursors. The infusion is a reasonable option for patients who want it and who have been screened properly, offered with an honest account of where the evidence currently stands. We will give you our recommendation based on your own situation rather than a single protocol for everyone.

§ 05

The ways NAD⁺ can be taken

NAD⁺ support comes in several forms. They differ in convenience, in cost, and in how much research sits behind them. Here is how each one works.

Intravenous infusion

NAD⁺ is given slowly through a vein in the clinic. Because it goes straight into the bloodstream, it bypasses the digestive tract entirely. It is the most studied of the injected routes: published human work includes a study of how the body processes an infusion and a comparison of infused NAD⁺ with infused nicotinamide riboside.^{3 4} What an infusion feels like is covered in §06.

Subcutaneous injection

NAD⁺ can also be given as a small injection just under the skin, the way many other medicines are. A dose takes a few minutes rather than a couple of hours and uses a much smaller volume. The subcutaneous route was included when NAD⁺ was put forward to the FDA for compounding use, at doses from 20 to 1,200 mg.¹⁹ Once injected, NAD⁺ is processed through the same pathway shown in §03.² Published clinical studies of subcutaneous NAD⁺ are not yet available, so the dose is set by your physician. As with any injection, some tenderness or redness where the needle went in is possible.

Tablets and capsules

Oral products fall into three groups, and they behave quite differently.

- **NAD⁺ tablets.** NAD⁺ taken by mouth is largely broken down in the digestive tract before it can be absorbed, which limits how much reaches the body intact.¹⁹
- **NADH tablets.** NADH is the reduced form of NAD⁺, and stabilized oral versions have been studied in people with chronic fatigue syndrome. A small 1999 crossover trial reported that 8 of 26 patients responded favorably to 10 mg of NADH, compared with 2 of 26 on placebo.²² A larger 2021 trial in 207 patients combined 20 mg of NADH with coenzyme Q10 for 12 weeks and found improvements in cognitive fatigue and quality of life in the treated group.²³
- **Precursor capsules and tablets.** Nicotinamide riboside and nicotinamide mononucleotide are absorbed intact and converted to NAD⁺ inside the cell, which is why they carry the largest body of human research, described in §04.⁶
⁷ They also come as tablets that dissolve under the tongue. A 2026 trial in 14 healthy men compared sublingual and swallowed NMN and found similar blood NAD⁺ levels over the first hour, with both forms well tolerated.²¹

COMPARING THE OPTIONS				
	IV INFUSION	UNDER THE SKIN	PRECURSOR CAPSULE OR TABLET	NAD+ OR NADH TABLET
How it is given	In clinic, through a vein	Small injection	By mouth, daily	By mouth, daily
Time per dose	About 90 minutes or more ⁴	A few minutes	Seconds	Seconds
Bypasses digestion	YES	YES	Not needed, absorbed intact ⁶	No ¹⁹
Human research	Early studies published ³ ⁴	Not yet published	Many randomized trials ⁵	Small trials of NADH in chronic fatigue ²² ²³
Common experience	Warmth, flushing, cramping or chest pressure that ease when the rate is slowed ⁴	Possible tenderness at the injection site	Generally uneventful ⁵	No severe effects reported in trials ²²

These options can also be combined. Your physician can help you decide which approach fits your goals.

§ 06

What to expect from an infusion

Knowing what an infusion feels like beforehand makes the experience much easier, so we would rather tell you now than have you discover it in the chair.

NAD+ is given slowly. Most people notice a feeling of warmth, some flushing, and a sensation of pressure in the chest or cramping in the abdomen as the rate increases. These sensations are expected, they are dose rate related, and they settle when we slow the drip. In the published series, symptoms resolved once the infusion was complete. ⁴

Because the rate is set by your comfort rather than by the clock, sessions vary in length. In that same study the average NAD+ infusion took 97 minutes. ⁴ Plan for around two hours, bring something to read, and eat beforehand.

DURING YOUR VISIT

- Your blood pressure and heart rate are checked, and the rate is adjusted to keep you comfortable.
- Tell us straight away about any symptom that feels different from the warmth and pressure described above. We would always rather stop and check.

§ 07

Safety

The safety picture so far is reassuring. In the 2026 comparison study, liver enzymes, inflammatory markers, kidney function and thyroid function were unchanged across 30 days of follow up after four consecutive daily infusions. ⁴ The oral precursors have been examined more thoroughly still, including a dedicated high dose safety trial, and have been tolerated well. ¹⁴ ⁵

TELL YOUR PHYSICIAN BEFORE STARTING IF ANY OF THESE APPLY

- You have heart disease, chest symptoms of any kind, or blood pressure that is not well controlled.
- You are pregnant, trying to conceive, or breastfeeding.
- You have a current or past cancer diagnosis, or you are under active surveillance.
- You have significant kidney or liver disease.
- You take any prescription medication, over the counter product or supplement. Please bring the full list.

Long term data on repeated infusions or injections over years is not yet available, since the published follow up periods are measured in weeks. ⁴ That is one of the reasons we review how you are doing rather than simply continuing indefinitely.

§ 08

Is this right for you

NAD+ therapy suits some patients very well and is not the right starting point for others. The purpose of your consultation is to work out which group you are in.

Before we begin

- | | |
|--------------------------|--|
| ☐ | A review of your medical history, current medications and supplements |
| ☐ | Blood pressure and a cardiovascular history, with an ECG if your physician feels one is warranted |
| ☐ | Baseline bloodwork, so that anything we see later can be compared against a starting point |
| ☐ | A clear note of what you are hoping to feel, written down, so we can tell together whether it worked |

If your bloodwork points to a specific and treatable cause for how you have been feeling, we will treat that first. Fatigue in particular has many causes that respond well to simple treatment, and finding one of those would be a better outcome for you than any infusion.

Reviewing your progress

We will reassess against your documented starting point after a defined period rather than leaving it open ended. If you are doing well, we will plan how to continue. If you are not, we will say so and look at other options. You are welcome to stop at any time.

QUESTIONS WORTH ASKING US

What would you expect me to notice, and by when? How will we measure whether this is working? What would make you recommend stopping? Which route would you choose for someone in my situation? We are glad to answer all of these, and a good clinic should welcome them.

Regulatory status, stated plainly

NAD⁺ for injection, whether given by infusion or under the skin, is not approved by the U.S. Food and Drug Administration for any indication, and there is no FDA approved NAD⁺ injection product.¹⁹ It is prepared by a compounding pharmacy on a physician's prescription. Prescribing a compounded or unapproved preparation is lawful and common in American medicine, and it is a decision your physician makes with you. It does mean no regulator has reviewed this preparation for your indication, and you should know that before you consent.

Oral products sit differently. NAD⁺, NADH, nicotinamide riboside and nicotinamide mononucleotide taken by mouth are sold as dietary supplements. Nicotinamide mononucleotide was confirmed by the FDA in September 2025 to be lawful as a dietary ingredient, with notification requirements still applying to manufacturers.²⁰ If you buy any of these yourself, choose a brand that publishes third party testing.

If you would like details about the preparation used in your treatment, please ask.

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IMPORTANT NOTICE

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DATE

REVIEWING PHYSICIAN

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