NAD THERAPY

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Substance abuse includes the use of alcohol, illicit drugs, and the misuse of prescription drugs, especially pain relievers containing opioids. Despite the negative consequences of abusing one or more of these substances, an estimated 14.8 million people ages 12 and older had an alcohol use disorder, and 8.1 million had an illicit drug use disorder in 2018. That same year, an estimated 21.2 million people needed substance use treatment for problems related to the use of alcohol or illicit drugs, with approximately 3.7 million people actually receiving treatment.

Nicotinamide adenine dinucleotide (NAD) is an important coenzyme that helps with energy metabolism. NAD therapy is intended to restore the diminishing levels of this coenzyme in your body. While NAD therapy isn't approved by the Federal Drug Administration (FDA) for treatment of any condition, numerous facilities across the country have embraced it for various anti-aging treatments, as well as for treating chronic fatigue syndrome, Parkinson's, and addiction to alcohol and drugs.

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I. The Basics of NAD Therapy

This guide covers basic information on how NAD therapy works and …cluding the off-label use during treatment of substance use disorder and withdrawal. Details will also be provided on how NAD therapy is administered, the cost of therapy, potential side effects, and other considerations of using this type of treatment.

NAD therapy is a scientifically unproven yet highly touted treatment used to increase diminishing levels of naturally occurring NAD in the human body. It's promoted as an anti-aging supplement because it's thought to boost your body's levels of NAD, acting as fuel for many crucial biological processes. Facilities also use it to treat various ailments and for treatment of alcohol and illicit drug addiction. Most of the research on NAD therapy has included clinical studies using animals, so there's no definite verdict as to its effectiveness for humans. However, it's available for off-label use in many rehabilitation facilities.

Generic Treatment Name	NAD Therapy
Scientific Name	Nicotinamide Adenine Dinucleotide
Other Names	NAD+, Nicotinamide Adenine Dinucleotide Hydrate, Coenzyme 1, B-DPNH, BNADH, Enada (oral supplement), Reduced Nicotinamide Adenine Dinucleotide, Reduced DPN
Off Label Conditions Commonly Treated	Alzheimer's disease, chronic fatigue syndrome, high cholesterol, depression, high blood pressure, Parkinson's disease, jet lag, symptoms of aging, alcohol and illicit drug addiction
Availability	Because it's not an FDA-approved treatment, availability is limited to those facilities that offer NAD therapy off-label. It should still be administered by a medical professional.
How Administered	Intravenous (IV) injection and sometimes by intramuscular (IM) injection. There are also similar oral supplements available.
Cost of Treatment	IV therapy runs between $6,000 and $17,000
Length of Treatment	IV therapy runs 10 to 15 days
Potential Side Effects	Considered safe without adverse effects due to the medication; however, some people may feel pain or discomfort at the IV injection site

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NAD was discovered in the early 1900s and has since gone in and out of favor within the scientific community. While most research involving NAD boosting has consisted of experiments using roundworms and rodents, human trials are scarce. However, even though many results haven't been replicated in humans, trials have proven its feasibility and safety in people. Since 1980, Dr. Paula Norris Mestayer, the most experienced psychotherapist and counselor in the use of IV NAD therapy, has dedicated her professional career to helping people deal with addiction, bereavement, depression, post-traumatic stress, acute and chronic stress, and other health issues.

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II. How NAD Therapy Works

Nicotinamide adenine dinucleotide is in all the cells of your body and is essential for cell function and viability. NAD regulates energy metabolism and stress response and helps repair DNA damage. Studies have shown that NAD levels decrease as you age but can also decrease due to nutrient conditions, such as obesity, and the development of metabolic disorders, including diabetes and fatty liver disease. NAD levels are also thought to decline due to addiction, stress, depression, and illness.

NAD therapy generally involves an IV infusion containing amino acids and other nutritional supplements, which is intended to produce energy and increase the level of NAD in your body, which may restore brain functionality, increase energy, decrease anxiety, improve mood, and reduce cravings.

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III. What NAD Therapy Is Used For

Although human studies are limited and the FDA has yet to approve NAD therapy, there's some evidence that NADH (nicotinamide adenine dinucleotide + hydrogen) may help lower cholesterol, reduce blood pressure, increase nerve signals in Parkinson's patients, provide energy for those suffering from chronic fatigue syndrome, and counter alcohol's effects on the liver.

Some studies suggest that administering NAD precursors, including nicotinamide mononucleotide (NMN) and nicotinamide riboside (NR), effectively increases NAD levels and prevents metabolic diseases. Clinicians across the country also offer NAD therapy to reduce or stop alcohol and illicit drug cravings with positive benefits reported. However, there's currently not enough information to confirm whether any of the NAD supplements or treatments truly work.

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IV. How NAD Therapy Is Administered

Before beginning NAD Therapy, your needs are assessed to develop a personalized treatment plan. The most direct method of increasing NAD levels in your body is by administering it intravenously under the supervision of trained medical professionals. During therapy, an IV is inserted into your body, and a precise NAD boosting mixture slowly drips into your bloodstream. This allows it to bypass your stomach and travel directly to your brain. You typically receive one infusion per day for about 10 days with infusions usually lasting about six to eight hours. An energy boost and enhanced mood are commonly reported, and significant benefits have been reported by clinicians helping people with alcohol and illicit drug withdrawal.

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V. Cost, Side Effects, and Other Considerations

A television report, which aired in late 2016, declared that infusions were delivered over 10 to 15 days, cost $15,000, and weren't covered by insurance. Another source states that treatment costs run between $6,000 and $17,000, with an average cost of $11,850 for treatments lasting 10 days.

Because NAD therapy isn't FDA-approved for the treatment of any condition, treatment isn't generally supported by insurance. However, many insurance plans will cover treatment for addiction, so traditional substance abuse treatments are often covered. Rehabilitation centers may offer both traditional and non-traditional treatments, so your insurance plan may cover a portion of your treatment costs.

During one study, the safety of IV NAD therapy was assessed using clinical observation and liver function tests. No adverse effects were observed. Most people who used NADH oral supplements experienced no side effects when taking the recommended dose of 10mg per day. However, it wasn't recommended for women who were pregnant or breastfeeding due to a lack of information about the safety of using NADH supplements during pregnancy or breastfeeding.

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VI. How to Get Help & Additional Resources

Read our guides on Alcohol Addiction, including the signs and symptoms of alcoholism and treatment options, and Illicit Drug Addiction, including how to get help for addiction and how treatment works to learn more about substance abuse. For more information on NAD research, check out:

- Health News from NPR discusses unsubstantiated claims regarding addiction treatment.
- Frontiers in Aging Neuroscience provides in-depth details about a pilot study that investigated changes during a six-hour intravenous infusion of NAD.
- Kaiser Health News discusses animal research using NAD boosters and how the results may not be the same in humans.

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VII. FAQs

How can clinics offer a treatment that isn't FDA-approved?

Due to the ingredients in NAD therapy, it would fall under the category of dietary supplements, which include vitamins, amino acids, enzymes, minerals, and herbs. The FDA doesn't review dietary supplements for safety or effectiveness before these products are marketed. The clinic marketing the treatment would be responsible for ensuring the safety of its product. However, the Federal Trade Commission (FTC) can prevent companies from making unfounded claims about a treatment that isn't supported by scientific evidence.

Does NAD therapy reduce cravings?

Although there are some reports that indicate NAD therapy can reduce withdrawal symptoms and alcohol and drug cravings, there aren't any hard facts supporting these claims. Some clinics report that withdrawal symptoms are reduced by 70% to 80%, and others claim a 95% cure rate, but these claims aren't supported by the FDA or the FTC and could catch the attention of the FTC due to FTC regulations regarding unfounded claims.

How are NAD IV solutions made?

NAD solutions for IV therapy are often made by compounding pharmacies. Compounded medications provide individualized therapy with the precise combination of ingredients based on each person's unique needs.

Do clinics use other medications along with IV NAD therapy to ease drug detox?

Many clinics also offer approved prescription medications to help during the detox and withdrawal period. Along with medical supervision, proven medications help ensure that you don't experience seizures and other potentially dangerous effects caused by detoxification. However, clinics tend to limit the use of pharmaceuticals as much as possible.

Is NAD therapy a miracle cure for addiction?

Although some clinics tout NAD therapy as a miracle cure for alcohol and drug addiction, many will honestly tell you that it's simply a way to kick-start your recovery. Either way, you shouldn't count on it to cure your addiction all by itself. To achieve long-lasting recovery, you should follow a comprehensive rehabilitation program including medically supervised detox, behavioral and other substance abuse therapy, support groups, and appropriate aftercare.

Note: The information contained in this guide is for informational purposes and only intended to educate the public on how this therapy is used. It is not recommending a specific treatment or giving medical advice. Always consult with your doctor or other qualified medical and addiction professionals before beginning any type of treatment.

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VIII. Sources

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