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WHAT IS **NAD+?**

Nicotinamide adenine dinucleotide (NAD) is a universal and essential coenzyme in the production of energy, which your body requires for eating, sleeping, learning, talking, breathing, digesting.... The list is endless.

NAD+ acts as a "vehicle" for energy production. It is converted to NAD, which is involved in the production of ATP in the mitochondria of your cells. ATP provides energy for roughly 90% of your body's energy requirements. NAD+ is also crucial for the function of sirtuins, which are proteins important for maintaining healthy metabolism, cell survival, DNA repair, inflammation and circadian rhythm.

The Risks of NAD Deficiency

When NAD energy deficiency occurs, nearly all reactions in the body power down. For example, your brain uses 10 times more NAD than any other organ, yet it has a limited supply that must be continually renewed. When cells are exposed to a NAD-deficient environment, their structure changes or unplanned cell death occurs, risking mitochondrial dysfunction and cellular impairment.

Virtually all our mitochondrial DNA comes from our mothers. Approximately 10% of all babies are born with a maternally inherited NAD energy deficiency, which can lead to metabolic deficiency and low moods. In infancy particularly, these babies have no way to explain how they are feeling. As a result, some will be diagnosed with depression, only to be prescribed an antidepressant prior to their first birthday. In 1994, the FDA reported that a staggering 3,000 fluoxetine (Prozac) prescriptions were written for children under the age of one year for depression and behavioral issues.

For adults, NAD deficiency often spans a wide range of symptoms, yet this root cause may be overlooked, leading to mislabeling or misdiagnosis. To provide perspective, if NAD deficiency lasts for an extended period, permanent brain damage develops. However, doctors often label patients as depressive, alcoholic, eating disordered, hyperactive, drug-dependent or chronically fatigued, when they may simply lack the metabolic energy to continue. **They lack NAD.**

WHO CAN BENEFIT FROM NAD+?

- NAD+ is particularly useful for individuals who suffer from fatigue, brain fog and general lack of energy or motivation.
- NAD levels decline drastically with age, and NAD+ deficiencies are associated with accelerated signs of aging. NAD+ is therefore recognized for its anti-aging effects, as it rejuvenates existing stem cells, improves age-related sleep and digestive disorders and repairs DNA.
- A primary relationship exists between the development of cancer and decreased NAD concentration, which is why replenishing NAD is important for defending against tumor growth.

How to Increase NAD+

L-tryptophan, niacinamide and niacin (vitamin B3) are NAD precursors and are converted

HOW TO ORDER

You may place refills:

281.828.9088

physicianspreferencerx.com

Download the **Refill Pro app** on Google Play or the App Store and enter our number: 877.640.5248.

TAKE A **VIRTUAL TOUR**

An inside look at our new compounding labs

Physicians Preference Pharmacy standards are more stringent than those of the United States Pharmacopeia (USP). In addition to onsite weight testing, we send multiple samples per week to an outside laboratory for potency testing. Physicians Preference Pharmacy ranks first in Houston for the number of samples sent for potency testing and in the top 8% of pharmacies nationwide.

Physicians Preference Pharmacy is a Houston-based, PCAB-accredited compounding pharmacy serving physicians and patients since 2001. We are licensed to work with doctors and ship to patients in all 50 states.

in the body to NAD+. Taking supplemental L-tryptophan, niacin or niacinamide should ultimately result in higher NAD levels. Unfortunately, conditions such as obesity, diabetes, alcoholism and high fat diets can compromise absorption of the vitamins necessary to generate and maintain healthy reserves of NAD, so simply taking these vitamins may not be as helpful. Additionally, when metabolic conditions are being addressed, lifestyle and dietary changes alone are often not enough to replenish NAD levels.

A more efficient way to increase levels is supplemental NAD+. Dr. Abram Hoffer, a distinguished researcher of NAD, reports that his patients who would ordinarily take three to six months to show an adequate response to vitamin B3 responded to NAD+ in days to weeks. NAD+ is not absorbed when given by mouth, so it must be given either intranasally (nasal spray) or intravenously to be absorbed.

NAD+ is frequently given via intravenous (IV) infusion, as widespread absorption helps mitochondria throughout the body function more efficiently. While IV NAD+ can be an effective option, it does require a few hours of your time for the infusion. Supplementation with either intranasal NAD+ or oral precursors (i.e., L-tryptophan, niacinamide and niacin) following IV therapy may still be required.

A Unique Solution: Compounded NAD+ Nasal Spray

NAD+ nasal spray compounded by Physicians Preference Pharmacy provides a unique solution to NAD+ therapy. Treatment with our nasal spray typically requires one to two sprays in one nostril twice daily. This takes less than a minute out of your day and requires no trips to the doctor's office.

Administration of intranasal NAD+ provides the desired contact with brain tissue as well as immediate absorption of NAD+ into other tissues. It produces an immediate result, most notably a boost in energy and help combating symptoms of fatigue, anxiety, depression and brain fog. With continued treatment of NAD+, improvements in mitochondrial function and metabolism, slowed aging and reduced inflammation can also be expected.

Many of the chronic ailments we see today are rooted in energy metabolic deficiency, aka NAD deficiency and mitochondrial insufficiency. Treatment with NAD+ nasal spray provides an effective and flexible option for NAD therapy, as well as an add-on to IV therapy.

Talk to your doctor about a prescription for NAD+ nasal spray today! To learn more, call the pharmacy at **281.828.9088**.

DID YOU KNOW?

During a woman's life she will:

- Talk for up to 10 years
- Breathe 41 million times
- Drive in a car for one year
- Sleep for 22 years
- Fall in love twice, have sex more than 3,000 times and kiss for two weeks
- Grow 100 feet of fingernails, 38 million inches of hair and 78 inches of nose hair
- Discard over 40 pounds of dead skin
- Spend 5 years eating and drinking
- Renew her skeleton 11 times
- Renew the inner lining of her stomach 32,448 times

To do all these things successfully and to reach an average age of 78 years, her body will need to make and use 950 tons of NAD+. WHY? Because these all require energy.

Are you getting enough NAD+?

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