The Gut Health Secret to Naturally Producing NAD^+

By Robert Ferguson

Ever heard of a supplement called **NAD^+ (nicotinamide adenine dinucleotide)**?

With all the positives you may have heard about it - more energy, better focus, and slowing down the effects of aging - it's important to know that your body and your cells **naturally make NAD^+**.

Even more surprising is that getting NAD^+ from a supplement or IV is **not doing what you think it is**. And while it's true that we produce less NAD^+ as we age, the good news is this: by improving your **gut health**, you can **maximize your body's natural NAD^+ production**.

You Don't Need an IV or Supplement to Boost NAD^+

Did you know your body can make its own **NAD^+ naturally**, without expensive supplements or IV treatments?

And here's the best part: it all starts in your **gut**.

Thanks to new science and the latest **Gut Health Test**, we can now see how your body makes NAD^+ and whether inflammation or poor gut balance is slowing its production.

Before we get into how it works, let's first understand what NAD^+ is and why it's so important.

What Is NAD^+ and Why Does It Matter?

NAD^+ is one of the most important molecules in your body. You can think of NAD^+ as the **battery pack for your cells**.

It gives your cells the power to:

- Turn food into energy
- Repair DNA damage
- Support brain function
- Help muscles recover
- Keep your metabolism running smoothly

Without NAD^+, your body can't function.

But here's the catch: as we age, these "cell batteries" run low. By middle age, **NAD^+ levels can drop by 50% or more**. That's when many people start feeling tired, foggy, achy, and older than they really are.

How NAD^+ Powers Mitochondria and Cellular Energy

Inside every cell are **mitochondria**, tiny structures that act like **power plants**, producing energy in the form of **ATP (adenosine triphosphate)**. ATP fuels everything you do, from thinking and moving to healing and breathing.

Here's where **NAD^+** steps in: it acts like the **spark plug and energy carrier** that keeps those cellular power plants running.

After food is digested, **nutrients enter your cells** through the cell membrane. Once inside, NAD^+ goes to work. It picks up electrons (energy) from those nutrients and carries them into the mitochondria, where that energy is transformed into ATP, the body's main source of usable energy.

Without enough NAD^+, your mitochondria can't produce ATP efficiently. The result?

- Less energy
- More fatigue
- Slower recovery
- Accelerated aging

It's like having a high-performance engine but not enough spark plugs to ignite the fuel.

Cell Membrane Fluidity: The Gateway to Energy

Even if you have enough NAD^+ and healthy mitochondria, your cells still need the right environment for nutrients and oxygen to get in, and waste to get out. That environment depends on your **cell membrane**.

When the membrane is **fluid and flexible**, nutrients flow in easily, and waste products move out efficiently. But when it becomes **rigid** - often from eating too many omega-6 fats and not enough omega-3s - this flow slows down. Nutrients can't reach the mitochondria as effectively, and your energy production suffers.

You can think of cell membrane fluidity as the difference between trying to swim through **clear water** (healthy membrane) versus **thick syrup** (rigid membrane). The more fluid your cell membranes are, the easier it is for your mitochondria to access what they need to make energy.

Omega-3s: The Missing Link Between Membranes and Mitochondria

Omega-3 fatty acids, especially **EPA and DHA,** are essential for maintaining **cell membrane fluidity**. These fats make the cell membrane flexible and strong, improving how cells communicate, take in nutrients, and expel waste.

When your omega-6 to omega-3 ratio is balanced (ideally 3:1 or better):
✅ Nutrients move in easily
✅ Mitochondria receive more oxygen
✅ NAD^+ can be used efficiently to create ATP

When that ratio is off (as it is for most Americans, often 20:1 or worse), the cell membranes stiffen. This slows nutrient exchange, weakens mitochondrial function, and makes NAD^+ far less effective.

That's why restoring balance with **BalanceOil+**, a scientifically designed combination of omega-3s and polyphenols, is so important. The polyphenols protect the omega-3s from oxidation and enhance their absorption into cell membranes, ensuring that your mitochondria operate in the optimal environment for energy and repair.

Why NAD^+ Supplements and IVs Don't Fix the Problem

When you take NAD^+ in a pill or get it through an IV, most of it **never reaches your cells**. The molecule is too large to cross cell membranes easily, so much of it breaks down before it can help.

It's like trying to charge your phone by pouring electricity on it - it doesn't get inside where it's needed.

The truth is that your body already has the perfect system for making NAD^+ on its own. You just need to **support the natural pathways** that produce it.

That's where your gut health and something called the **Kynurenine Pathway** come in.

The Kynurenine Pathway: Your Body's NAD^+ Factory

Your body makes NAD^+ from an amino acid called **tryptophan**, which you get from foods like chicken, turkey, eggs, beans, and fish.

Tryptophan is essential - that means your body can't make it; you must eat it.

Once it's absorbed, tryptophan has three main "career paths":

1. It can help produce **serotonin**, the "feel-good" brain chemical.
2. It can go down the **Kynurenine Pathway**, where it's turned into NAD^+, your cellular fuel.
3. Or your gut bacteria can convert it into **Indole Propionic Acid (IPA)**, a powerful antioxidant that protects your gut lining and lowers inflammation.

You can think of it like this:

- **Tryptophan** is the raw ingredient.
- The **Kynurenine Pathway** is the factory.
- **NAD^+** is the finished product that powers your body.

When your body and gut are in balance, this factory runs smoothly, keeping your energy, focus, and metabolism high.

When Inflammation Disrupts NAD^+ Production

When inflammation, stress, or infection is present, the body shifts into defense mode.
It starts sending too much tryptophan down the Kynurenine Pathway to fight the stress.

That might sound good, but it causes problems:

- **Kynurenine levels rise**
- **Serotonin and IPA drop**
- **NAD^+ production becomes less efficient**

It's like a traffic jam, too many cars (tryptophan) get forced down one lane (the pathway), clogging the system.

So even though your body is working hard, it's not producing the clean, steady energy you need. You feel tired, unfocused, and burned out.

Kynurenic Acid: The Pathway's Safety Brake

As tryptophan moves through the Kynurenine Pathway, it can turn into several different compounds. One of them is **Kynurenic acid (KYNA)**, your body's built-in safety brake.

Kynurenic acid helps protect your brain from overstimulation and reduces inflammation. It keeps things calm and balanced.

But when inflammation is high, the body makes less Kynurenic acid and more **Quinolinic acid**, a compound that can cause oxidative stress and damage.

You can think of it this way:

- **Kynurenic acid** = the *brake pedal* (calm, protective)
- **Quinolinic acid** = the *gas pedal stuck to the floor* (stress, damage)

When the balance shifts toward Quinolinic acid, your NAD^+ factory gets overwhelmed, and your energy production drops.

Your Gut: The Missing Piece in the NAD^+ Puzzle

While the Kynurenine Pathway runs within your cells, your **gut** plays a major role in its function.

Your friendly gut bacteria can take tryptophan and convert it into **Indole Propionic Acid (IPA)**, a natural compound that acts like an internal bodyguard.

When your gut is healthy:
✅ **IPA is high**, inflammation stays low, and NAD^+ production runs efficiently.

When your gut is unhealthy:
⚠️ **IPA drops**, **Kynurenine rises**, and inflammation blocks your body's ability to make NAD^+.

So, in simple terms:

- **Healthy gut = high IPA + balanced NAD^+**
- **Inflamed gut = low IPA + poor NAD^+ production**

How the Gut Health Test Reveals the Full Picture

The new **Gut Health Test** makes this invisible process visible. It measures both **Kynurenine** and **Indole Propionic Acid (IPA)** from a simple finger-prick blood sample (no stool needed).

These two markers show:

- If inflammation is forcing tryptophan down the wrong path
- If your gut bacteria are producing protective IPA
- Whether your NAD^+ factory is efficient or running on fumes

When paired with your **BalanceTest**, which measures your **omega-6 to omega-3 ratio**, you get a complete view of how inflammation, gut health, and NAD^+ production work together.

How to Naturally Support NAD^+ Production

You can help your body make more NAD^+, naturally, by focusing on these simple steps:

✅ **Reduce inflammation** by balancing your omega-6 to omega-3 ratio (aim for 3:1 or lower).
✅ **Feed your gut microbiome** with fiber-rich foods like oats, beans, apples, and greens.
✅ **Get enough vitamin B6**, which helps enzymes in the Kynurenine Pathway function properly.
✅ **Exercise regularly**, since movement helps clear excess kynurenine from the blood.
✅ **Sleep well and manage stress**, which keeps tryptophan metabolism balanced.
✅ **Use BalanceOil+**, which combines omega-3s and polyphenols to calm inflammation and protect your cells for optimal NAD^+ efficiency.

From Guessing to Knowing

For the first time, you can see how well your body produces NAD^+ and how your gut influences that process.

With your **Gut Health Test** and **BalanceTest**, you can track inflammation, gut balance, and cellular energy, all from simple at-home tests.

Instead of guessing what your body needs, you can see it, measure it, and improve it.

Call to Action

If you want to find out how well your body is naturally producing NAD^+ and whether inflammation is slowing you down, take the **Gut Health Test** today.

It's quick, easy, and gives you real answers about your energy, gut health, and cellular repair.

To learn more about the Gut Health Test and BalanceTest, contact the person who shared this article with you, email me at robert@dietfreelife.com**,** or schedule a free consultation.

References

1. Badawy, A. A.-B. (2017). Kynurenine pathway of tryptophan metabolism: Regulatory and functional aspects. *International Journal of Tryptophan Research, 10*, 1–20. https://doi.org/10.1177/1178646917691938
2. Cervenka, I., Agudelo, L. Z., & Ruas, J. L. (2017). Kynurenines: Tryptophan's metabolites in exercise, inflammation, and mental health. *Science, 357*(6349), eaaf9794. https://doi.org/10.1126/science.aaf9794
3. Gao, J., Xu, K., Liu, H., Liu, G., Bai, M., Peng, C., & Li, T. (2018). Impact of the gut microbiota on intestinal immunity mediated by tryptophan metabolism. *Frontiers in Cellular and Infection Microbiology, 8*, 13. https://doi.org/10.3389/fcimb.2018.00013
4. Grant, R. S., Naif, H., Espinosa, M., & Kapoor, V. (2019). IDO, tryptophan metabolism, and NAD^+ production: A review. *Frontiers in Immunology, 10*, 424. https://doi.org/10.3389/fimmu.2019.00424

5. Kennedy, B. E., & Sharif, T. (2019). NAD^+ metabolism and the Kynurenine Pathway in immunity and disease. *Frontiers in Cell and Developmental Biology, 7*, 91. https://doi.org/10.3389/fcell.2019.00091
6. Lopes, M., et al. (2021). The Kynurenine Pathway and NAD^+ metabolism: Targeting inflammation and aging. *Frontiers in Molecular Biosciences, 8*, 686412. https://doi.org/10.3389/fmolb.2021.686412
7. Pillon Barcelos, R., Haas, R. H., & Kerr, D. S. (2020). The role of mitochondria and NAD^+ in energy metabolism and aging. *Molecular and Cellular Biochemistry, 475*(1–2), 1–18. https://doi.org/10.1007/s11010-020-03785-0
8. Stillwell, W., & Wassall, S. R. (2003). Docosahexaenoic acid: Membrane properties of a unique fatty acid. *Chemical Physics of Lipids, 126*(1), 1–27. https://doi.org/10.1016/S0009-3084(03)00041-9
9. Venkatesh, M., Mukherjee, S., Wang, H., Li, H., Sun, K., Benechet, A. P., ... & Mani, S. (2014). Symbiotic bacterial metabolites regulate gastrointestinal barrier function via the xenobiotic sensor PXR and Toll-like receptor 4. *Immunity, 41*(2), 296–310. https://doi.org/10.1016/j.immuni.2014.06.014
10. Yoshino, J., Baur, J. A., & Imai, S. (2018). NAD^+ intermediates: The biology and therapeutic potential of NMN and NR. *Cell Metabolism, 27*(3), 513–528. https://doi.org/10.1016/j.cmet.2017.11.002

About The Author

Robert Ferguson is a California- and Florida-based single father of two daughters, clinical nutritionist, Omega Balancing Coach™, researcher, best-selling author, speaker, podcast and television host, health advisor, NAACP Image Award Nominee, creator of the Diet Free Life methodology, and Chief Nutrition Officer for iCoura Health. He also serves on the Presidential Task Force on Obesity for the National Medical Association and the Health and Product Advisory Board for Zinzino, Inc.