

# Daily Cellular Energy and Repair\*

# TRU NIAGEN®



## Make Age Only Just A Number

While many factors contribute to aging, scientists believe the depletion of a key cellular resource called nicotinamide adenine dinucleotide (NAD+) is one significant factor.<sup>1-4</sup>

NAD+ is the critical catalyst that powers energy metabolism. It allows your mitochondria to convert the food you eat into the energy your body needs to sustain its healthy function.

Between the ages of 40 and 60, we lose up to 50% of our NAD+.<sup>5</sup> When NAD+ levels are low, cells become less efficient at generating the energy needed to maintain health as we age.

### Tru Niagen® Pro Helps:

- Replenish NAD+ levels\*<sup>6-9</sup>
- Increase cellular energy production\*<sup>8, 10, 11</sup>
- Support healthy cellular metabolism\*<sup>8, 10, 11</sup>
- Promote cellular repair\*<sup>10-14</sup>
- Promote healthy aging\*<sup>1-4</sup>

### What Is Tru Niagen® Pro?

Tru Niagen® Pro is daily cellular energy support designed to help maintain your health, longer. Its key ingredient, Niagen® nicotinamide riboside, often referred to as 'NR', is a unique form of vitamin B3 clinically proven to safely boost NAD+ to support your cells' ability to generate energy.\*

Your healthcare provider may have recommended Tru Niagen® Pro to provide you with cellular care to help you age better® and live better.\*

New research on NR is constantly publishing. Ask your healthcare provider to share the latest on the benefits of boosting NAD+ to support cellular health.

### What's In The Bottle?

Tru Niagen® Pro is available in 300mg and 500mg dose options.

Tru Niagen® Pro offers you the highest dose of Niagen® NR per capsule (500mg) and is available exclusively through your healthcare provider. Tru Niagen® is formulated without animal byproducts, dairy, gluten, caffeine, or artificial colors or flavors.

### How To Take Tru Niagen® Pro

Take as directed by your healthcare provider, at the same time each day, with or without food.

### Product Line



Product line includes: Tru Niagen® Pro 300mg, Tru Niagen® Pro 500mg, and Tru Niagen® Stick Packs

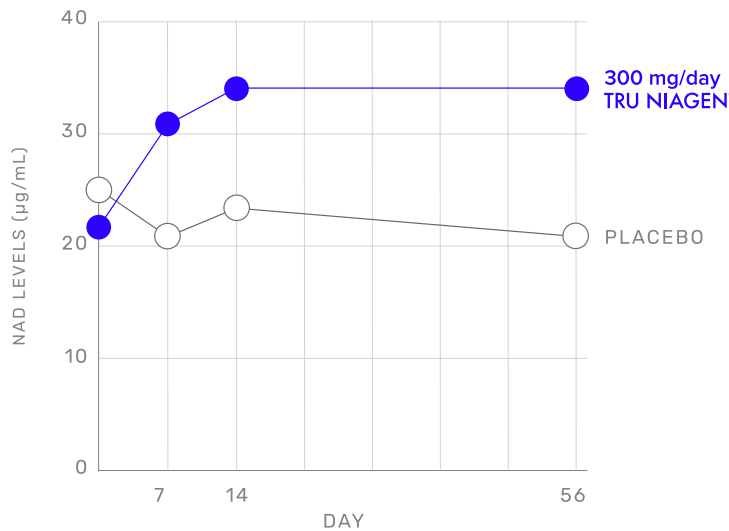
## What To Expect

Our bodies use NAD+ every day for basic functions like eating, breathing, and sleeping, and for complex functions such as cellular repair. Your experience with increased NAD+ levels may vary depending on your age, health status, weight, and activity level. The most commonly noticed changes reported by Tru Niagen® users include improvements in energy levels and an enhanced sense of overall well-being.\*

The fifth and largest published human trial of Niagen® confirmed that even though we know Tru Niagen® starts working to increase NAD+ as soon

as you take it, the study showed that it takes about two weeks to fully increase NAD+ levels to a new elevated level. With continued use, participants experienced a sustained 40% to 50% increase in NAD+ levels by the end of the eight-week study.<sup>9</sup>

Whatever your experience, you can feel confident that the science shows that NR is hard at work, boosting NAD+ at the cellular level.\* The longer you take Tru Niagen® Pro, the more opportunities you'll have to reap the benefits without adverse side effects.



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## A Safe, Evidence-Based Approach To Ongoing Cellular Health

When you take Tru Niagen® Pro, you know you are getting the only clinically proven, FDA-notified form of NR.

Rigorous testing using internationally accepted safety protocols has confirmed the safety of Niagen® NR. Five published clinical trials demonstrate that NR safely and effectively increases NAD+ in humans.<sup>6-8, 15</sup> Niagen® NR has been successfully reviewed twice under the Food and Drug Administration's (FDA) New Dietary Ingredient (NDI) notification program and has also been successfully notified to the FDA as generally recognized as safe (GRAS).

Its key ingredient has now been studied in more than 100 pre-clinical investigations and has multiple published human trials, with many more in process.

Tru Niagen® products bearing the NSF Certified for Sport® seal undergo additional testing from NSF International, helping everyone from professional athletes to everyday workout warriors verify they are making a safe supplement choice.



[TRUNIAGENPRO.COM](http://TRUNIAGENPRO.COM)

## Practitioner Recommendations/Notes:

## References

- [1] Fang, E.F., S. Lautrup, Y. Hou, T.G. Demarest, D.L. Croteau, M.P. Mattson, and V.A. Bohr. *NAD+(+) in Aging: Molecular Mechanisms and Translational Implications*. Trends Mol Med, 2017. 23(10): p. 899-916. [2] Rajman, L., K. Chwalek, and D.A. Sinclair. *Therapeutic Potential of NAD+ Boosting Molecules: The In Vivo Evidence*. Cell Metab, 2018. 27(3): p. 529-547. [3] Verdin, E., *NAD+(+) in aging, metabolism, and neurodegeneration*. Science, 2015. 350(6265): p. 1208-13. [4] Yoshino, J., J.A. Baur, and S.I. Imai. *NAD+(+) Intermediates: The Biology and Therapeutic Potential of NMN and NR*. Cell Metab, 2018. 27(3): p. 513-528. [5] Massudi, H., R. Grant, N. Braidy, J. Guest, B. Farnsworth, and G.J. Guillemain. *Age-associated changes in oxidative stress and NAD+ metabolism in human tissue*. PLoS One, 2012. 7(7): p. e42357. [6] Trammell, S.A., M.S. Schmidt, B.J. Weidemann, P. Redpath, F. Jaksch, R.W. Dellinger, Z. Li, E.D. Abel, M.E. Migaud, and C. Brenner. *Nicotinamide riboside is uniquely and orally bioavailable in mice and humans*. Nat Commun, 2016. 7: p. 12948. [7] Airhart, S.E., L.M. Shireman, L.J. Risler, G.D. Anderson, G.A. Nagana Gowda, D. Raftery, R. Tian, D.D. Shen, and K.D. O'Brien. *An open-label, non-randomized study of the pharmacokinetics of the nutritional supplement nicotinamide riboside (NR) and its effects on blood NAD+ levels in healthy volunteers*. PLoS One, 2017. 12(12): p. e0186459. [8] Martens, C.R., B.A. Denman, M.R. Mazza, M.L. Armstrong, N. Reisdorph, M.B. McQueen, M. Chonchol, and D.R. Seals. *Chronic nicotinamide riboside supplementation is well-tolerated and elevates NAD+(+) in healthy middle-aged and older adults*. Nat Commun, 2018. 9(1): p. 1286. [9] Conze, D., C. Brenner, and C.L. Kruger. *Safety and Metabolism of Long-term Administration of Niagen® (Nicotinamide Riboside Chloride) in a Randomized, Double-Blind, Placebo-controlled Clinical Trial of Healthy Overweight Adults*. Sci Rep, 2019. 9(1): p. 9772. [10] Canto, C., R.H. Houtkooper, E. Pirinen, D.Y. Youn, M.H. Oosterveer, Y. Cen, P.J. Fernandez-Marcos, H. Yamamoto, P.A. Andreux, P. Cettour-Rose, K. Gademann, C. Rinsch, K. Schoonjans, A.A. Sauve, and J. Auwerx. *The NAD+(+) precursor nicotinamide riboside enhances oxidative metabolism and protects against high-fat diet-induced obesity*. Cell Metab, 2012. 15(6): p. 838-47. [11] Zhang, H., D. Ryu, Y. Wu, K. Gariani, X. Wang, P. Luan, D. D'Amico, E.R. Ropelle, M.P. Lutolf, R. Aebersold, K. Schoonjans, K.J. Menzies, and J. Auwerx. *NAD+(+) repletion improves mitochondrial and stem cell function and enhances life span in mice*. Science, 2016. 352(6292): p. 1436-43. [12] Gariani, K., K.J. Menzies, D. Ryu, C.J. Wegner, X. Wang, E.R. Ropelle, N. Moullan, H. Zhang, A. Perino, V. Lemos, B. Kim, Y.K. Park, A. Piersigilli, T.X. Pham, Y. Yang, C.S. Ku, S.I. Koo, A. Fomitchova, C. Canto, K. Schoonjans, A.A. Sauve, J.Y. Lee, and J. Auwerx. *Eliciting the mitochondrial unfolded protein response by nicotinamide adenine dinucleotide repletion reverses fatty liver disease in mice*. Hepatology, 2016. 63(4): p. 1190-204. [13] Mouchiroud, L., R.H. Houtkooper, N. Moullan, E. Katsyuba, D. Ryu, C. Canto, A. Mottis, Y.S. Jo, M. Viswanathan, K. Schoonjans, L. Guarente, and J. Auwerx. *The NAD+(+)/Sirtuin Pathway Modulates Longevity through Activation of Mitochondrial UPR and FOXO Signaling*. Cell, 2013. 154(2): p. 430-41. [14] Wang, S., T. Wan, M. Ye, Y. Qiu, L. Pei, R. Jiang, N. Pang, Y. Huang, B. Liang, W. Ling, X. Lin, Z. Zhang, and L. Yang. *Nicotinamide riboside attenuates alcohol induced liver injuries via activation of Sirt1/PGC-1alpha/mitochondrial biosynthesis pathway*. Redox Biol, 2018. 17: p. 89-98. [15] Dallerg, O.L., B. Christensen, M. Svart, M.S. Schmidt, K. Sulek, S. Ringgaard, H. Stodkilde-Jorgensen, N. Moller, C. Brenner, J.T. Treebak, and N. Jessen. *A randomized placebo-controlled clinical trial of nicotinamide riboside in obese men: safety, insulin-sensitivity, and lipid-mobilizing effects*. Am J Clin Nutr, 2018.

\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.