

MILLENNIUM

Dynatropin



Over the years, Millennium Health has developed and manufactured unique supplements to address the growing needs for optimal health and wellness associated with traumatic brain injury as well as aging. We, the founders, are health care professionals (MDs and NMDs) with extensive experience in the use of natural products to support a healthy brain and body. The Millennium's mission has been to develop products that provide unique solutions for health and wellness while providing the financial support for our Veteran's and sister organization the **Warrior Angeles Foundation**, a veteran run and operated 501(c)3 charitable organization. The proceeds

from these sales are used to fund on-going assessment and treatment of veterans who have sustained traumatic brain injury with or without PTSD. They are supported by the Millennium-TBI Project that has developed the leading-edge treatment protocols that are discussed on multiple Joe Rogan Experience podcasts, The Dr. Drew Show, Montel Williams, and Fox and Friends with Dr. Marc Siegel. The culmination of our work can be seen in the Academy Award nominated documentary movie – **Quiet Explosions**, based upon a book by Andrew and Adam Marr with the incredible production/direction by Jerri Sher.

How this GH Secretagogue works:

Dynatropin uses a number of amino acids that directly and indirectly increase growth hormone production by stimulating the dopamine receptor (DR2), decreases Somatostatin (which shuts down GH production), stimulates growth hormone releasing factors and influences both ghrelin and leptin. It is the nanoliposomal delivery system that makes the composition to be absorbed to produce its effects. This product's composition was developed by Dr. Gordon in 2001 and was released to physicians-only in 2006.

Direction for use: (We recommend discussing this and any other products with your healthcare provider before starting.)

After an initial morning baseline GH, IGF-1, and IGFBP-3 blood levels; dosing will be recommended by your healthcare provider between 2-4 sprays into the mouth at bedtime. Without these initial blood levels, many healthcare providers will direct your dosing to start at 2 sprays.

Laboratory Testing:

We recommend that you obtain blood testing for IGF-1 and IGFBP-3 before starting DynaTropin© and then 3 months after starting. This can be performed by your personal physician with initial labs consisting of GH, IGF-1, and IGFBP-3 and followed with IGF-1 and IGFBP-3 in 3 months.

Interpretation of lab results:

A pending paper on the interpretation of Growth Hormone secretagogues will be available at www.tbihelpnow.org/the-science-in-2024. Until then, please ask your healthcare provider.

The products and the claims made about specific products on or through this document have not been evaluated by the United States Food and Drug Administration and are not approved to diagnose, treat, cure, or prevent disease. The information provided on this document is for informational purposes only and is not intended as a substitute for advice from your physician or other health care professional or any information contained on or in any product label or packaging. You should not use the information on this document for diagnosis or treatment of any health problem or for prescription of any medication or other treatment. You should consult with a healthcare professional before starting any diet, exercise, or supplementation program, before taking any medication, or if you have or suspect you might have a health problem.

The following references are examples of peer-reviewed medical articles discussing the benefits of Growth Hormone.

References:

- 1) **Growth hormone secretagogues: recent advances and applications.** *Drug Discovery Today*, 4(1359-6446 SB-IM), 497–506. Ankersen, M., Hansen, Kappelgaard, A. M. et al. (1999). <https://www.sciencedirect.com/science/article/abs/pii/S1359644699014154?via%3Dihub>
- 2) A multi-center-controlled trial of growth hormone treatment in children with cystic fibrosis 1470. *Pediatric Pulmonology*, 47(3), 252–263. Stalvey, M. S., Anbar, R. D., Jacobs, J. R., Bakker, B., Lippe, B., & Geller, D. E. (2012). <https://doi.org/10.1002/ppul.21546>.
- 3) Recombinant growth hormone enhances muscle myosin heavy-chain mRNA accumulation and amino acid accrual in humans. *Proceedings of the National Academy of Sciences of the United States of America*, 86(9), 3371–3374. Fong, Y., Rosenbaum, M., Tracey, K. J., Leibel, R. L., Gertner, J. M., Fischman, D. a. & Lowry, S. F. (1989). <https://doi.org/10.1073/pnas.86.9.3371>
- 4) Psychiatric and neuropsychological changes in growth hormone deficient patients after traumatic brain injury (TBI) in response to growth hormone therapy. *Journal of endocrinological investigation*. 2010, vol. 33, no.11, pp. 770-775. POPOVIC V. et al.
- 5) Effects of Growth Hormone on Pulmonary Function, Sleep Quality, Behavior, Cognition, Growth Velocity, Body Composition, and Resting Energy Expenditure in Prader-Willi Syndrome. *J. Clin. Endocrinol. Metab.* 2003 88: 2206-2212. Jonathan Q. Purnell. Depts Ped & IM Oregon Health and Science University. USA
- 6) Role of the growth hormone/insulin-like growth factor 1 axis in neurogenesis. *Endocrine Development*, 17(17), 63–76. Aberg, D. (2010). <https://doi.org/10.1159/000262529>
- 7) Recombinant Human Growth Hormone Accelerates Wound Healing in Children with Large Cutaneous Burns. *Annals of Surgery* 1994. Vol. 220, No. 1. 19-24. R. E Barrows. Shriners Burns Institute and the Depts of Surgery and Physiology and Biophysics, U of Texas Medical Branch, Galveston, Texas. USA
- 8) Growth Hormone: A Promising Treatment for the Failing Heart. *Pharmacotherapy*. 2000;20(9). Julie K. Kenney, PharmD. University of Nebraska Medical Center, College of Pharmacy, 986045 Nebraska Medical Center, Omaha, NE. USA
- 9) Impaired Growth Hormone Secretion in Fibromyalgia Patients Evidence for Augmented Hypothalamic Somatostatin Tone. *Arthritis & Rheumatism* May 2002. Vol. 46, No. 5, pp 1344–1350. Department of Medicine, Oregon Health Sciences University, Portland, OR . USA
- 10) Neurobehavioral and quality of life changes associated with growth hormone insufficiency after complicated mild, moderate, or severe traumatic brain injury. *Journal of Neurotrauma*. 2006. Vol.23;6. pp928-942. Daniel F. Kelly, Div. of Neurosurgery, Div. of Endocrinology, UCLA School of Medicine, LA, CA. USA.
- 11) The effects of growth hormones on cortical and cancellous bone. *J Musculoskel Neuron Interact* 2001; 2(1):49-58. T.T. Andreassen, H. Oxlund Dept of Connective Tissue Biology, Institute of Anatomy, University of Aarhus, Aarhus, Denmark.
- 12) Use of Growth Hormone for Postoperative Respiratory Failure. *Am J Surg*. 1996;171:576-680. James B. Knox, et al., Dept. of surgery, Brigham and Women's Hospital, Boston, MA. USA
- 13) Increased Serum 1,25-Dihydroxyvitamin D after Growth Hormone Administration is not Parathyroid Hormone-Mediated. *Calcif Tissue Int* (1997) 61:101–103. N. M. Wright. Depts of Medicine and Pharmacology, Medical U. of South Carolina, Charleston, South Carolina. USA
- 14) Measurement of oxidative stress and endothelial dysfunction in patients with hypopituitarism and severe deficiency adult growth hormone deficiency. *Pituitary*, 15(4), 589–597. González-Duarte, D., Soto-Moreno, A., (2012). <https://doi.org/10.1007/s11102-011-0374-4>
- 15) Beneficial effects of one-year growth hormone administration to children with juvenile chronic arthritis on chronic steroid therapy. I. Effects on growth velocity and body composition. *The Journal of Clinical Endocrinology and Metabolism*, 83(March), 403–409. Touati, G., Prieur, a M., Ruiz, J. C., Noel, M., & Czernichow, P. (1998). <https://doi.org/10.1210/jcem.83.2.4569>
- 16) Covid-19 and Growth Hormone/Insulin-Like Growth Factor 1: Study in Critically and Non-Critically Ill Patients. *Frontiers in Endocrinology*, 12(June), Ilias, I., Dimopoulou, I., et al. (2021). 1–5. <https://doi.org/10.3389/fendo.2021.644055>
- 17) The effects of 10 years of recombinant human growth hormone (GH) in adult (GH)-deficient patients. *Journal of Clinical Endocrinology and Metabolism*, 84(8), 2596–2602. Gibney, J., Wallace, J. D., Spinks, T., Schnorr, L., Ranicar, A., Cuneo, R. C., Lockhart, S., Burnand, K. G., Salomon, F., Sonksen, P. H., & Russell-Jones, D. (1999). <https://doi.org/10.1210/jcem.84.8.5916>
- 18) Effects of 5 years of growth hormone (GH) replacement therapy on cardiac parameters and physical performance in adults with GH deficiency. *Pituitary*, 12(4), 322–329. Cenci, M. C. P., Soares, D. V., Spina, L. D. C., de Lima Oliveira Brasil, R. R., Lobo, P. M., Mansur, V. A., Gold, J., Michmacher, E., Vaisman, M., & Conceição, F. L. (2009). <https://doi.org/10.1007/s11102-009-0182-2>
- 19) Insulin-like growth factor 1: At the crossroads of brain development and aging. *Frontiers in Cellular Neuroscience*, 11(February), 1–15. Wrigley, S., Arafa, D., & Tropea, D. (2017). <https://doi.org/10.3389/fncel.2017.00014>
- 20) The Role of Insulin-Like Growth Factors and Insulin-Like Growth Factor–Binding Proteins in the Nervous System. *Biochemistry Insights*, 12, 117862641984217. Lewitt, M. S., & Boyd, G. W. (2019). <https://doi.org/10.1177/1178626419842176>
- 21) Psychiatric and neuropsychological changes in growth hormone deficient patients after traumatic brain injury in response to GH Therapy. *Journal of Endocrinological Investigation Psychiatric*. Maric, N. (2009). <https://link.springer.com/article/10.1007/BF03350340>
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