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CAN A PIECE OF GUM KEEP YOU RUNNING?

NAJNIN RIMI

More than 50 percent of adults over the age of 18 drink coffee every day.¹ Students on our own campus are not unfamiliar with the idea of a cup of coffee, or more, a day. But, could there be an alternative to this morning routine? Do we have to run on Dunkin? Kent Chen and Ryan Yoshimura worked with surgeons from UCLA to develop an exciting new energizer that would provide better results than the energizers used in the past. In 2015, they introduced Neurogum to the market.² Its purpose is to boost energy, cognition, and focus whether it is to study for a test or run a mile.

Neurogum contains natural caffeine, L-theanine, and B-vitamins that were combined to give a longer attention boost than regular caffeine. Forty milligrams of caffeine was incorporated into the gum to reduce the risk of Alzheimer's disease, as well as dementia. Several studies examining the relationship between caffeine and dementia have agreed that caffeine does play a role in protecting against the onset of Alzheimer's disease and dementia-related diseases. A linear study reviewing other studies, illustrated that the results, overall, presented agreements under various conditions.³

L-theanine is an amino acid contained in teas, such as green and black tea, and is said to be a complement to caffeine. It is suggested that L-theanine can enhance the user's focus, while also decreasing the negative effects of coffee, such as restlessness and stomach discomfort, and stress.⁴ Sixty milligrams of L-theanine is added, which is a greater than the amount of caffeine

in Neurogum. The L-theanine directly affects brain waves, called alpha waves, which reduces stress without the somnolent effects of relaxation.⁵ Usually, this ideal reaction from L-theanine is not found within a normal cup of tea, which contains only about 20 milligrams of the substance. The 60 milligrams of L-theanine added is equivalent to three cups of tea in one dense, small piece of gum.

The last of the ingredients include vitamins B6 and B12. Vitamin B6 assists with the production of neurotransmitters⁶; while, B12 helps produce DNA.⁷ These vitamins have many other functions as well, but they are also added in combination with the caffeine and L-theanine to promote the effects of all ingredients. This combination of ingredients allows the gum to extend cognitive function within the body of its consumer.

Theoretically, almost every aspect of this gum and its production plays a role in creating the desired effects for consumers. For example, this gum is made using a cold compress rather than applied heat, which allows it to maintain all of its ingredients upon utilization.⁸ The creators also emphasize that the route of administration for this product maximizes its ingredients, as well. Absorption via the oral mucosa is heavily understood to be faster and more efficient than digestion, which supports the idea of a gum rather than a drink.⁸ The thoroughness of their research further extends the value of this product. They prove its value appreciably in their written work, as they justify other decisions when manufacturing this gum that help maximize the ingredients. This product is a seemingly easy-to-use replacement for coffee, and with zero grams of sugar, Neurogum may be worthwhile for busy students seeking healthier lifestyles.

References

1. Chan, T. H. (2014, February 28). Coffee by the Numbers. Retrieved from <https://www.hsph.harvard.edu/news/multimedia-article/facts/>
 2. STRV. (2018). Wrap-up: Tech Talk with NeuroGum's Ryan Chen and Kent Yoshimura. Retrieved from <https://www.strv.com/blog/wrap-up-tech-talk-with-neurogums-ryan-chen-and-kent-yoshimura>
 3. Eskelinen, M. H., & Kivipelto, M. (2010). Caffeine as a Protective Factor in Dementia and Alzheimers Disease. *Journal of Alzheimers Disease*, 20(S1). doi:10.3233/jad-2010-1404
 4. NEUROGUM™ INGREDIENTS AND USE. (2018). Retrieved from <https://neurogum.com/pages/neurogum-ingredients-and-use>
 5. Nobre, A. C., Rao, A., & Owen, G. N. (2008). L-theanine, a natural constituent in tea, and its effect on mental state. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/18296328>
 6. Office of Dietary Supplements - Vitamin B6. (2018). Retrieved from <https://ods.od.nih.gov/factsheets/vitaminb6-healthprofessional/>
 7. Skerrett, P. J. (2019, February 11). Vitamin B12 deficiency can be sneaky, harmful. Retrieved from <https://www.health.harvard.edu/blog/vitamin-b12-deficiency-can-be-sneaky-harmful-201301105780>
 8. Yoshimura, K., & Chen, R. (2016). U.S. Patent No. WO2017105564A1. Washington, DC: U.S. Patent and Trademark Office. YNovember 13, 2018, from <https://www.shape.com/health-eating/diet-tips/what-is-biohacking-nutrition-science>
- [xi] Detwiler, J. (2018, June 25). I Hacked My Body So You Don't Have To. *Popular Mechanics*. Retrieved November 13, 2018, from <https://www.popularmechanics.com/science/health/a21272160/biohacking>
- [xii] Webb, S. (2017, October). Bootstrapping Biology. *BioTechniques*, 63(4), 152-156. <https://www.future-science.com/doi/pdf/10.2144/000114594>
- [xiii] Blazeski, G. (2014, May 1). The Need for Government Oversight Over Do-It-Yourself Biohacking, the Wild West of Synthetic Biology. Seton Hall University eRepository. Retrieved November 13, 2018 from https://scholarship.shu.edu/cgi/viewcontent.cgi?referer=https://scholar.google.dk/&httpsredir=1&article=1411&context=student_scholarship
- [xiv] Wolinsky, H. (2016). The FBI and biohackers: an unusual relationship. *EMBO Reports*, 17(6), 793-796. <https://doi.org/10.15252.embr.201642483>
- [xv] Shinde, S. & Meller-Herbert, O. (2017, June 12). Biohacking. *Anaesthesia*, 72(7), 909. Retrieved November 13, 2018 from <https://onlinelibrary.wiley.com/doi/full/10.1111/anae.13952>