

Patent-pending GungHo™ product is more than just an energy shot— unique claims on focus, memory recall, and brain health.

The ingredients in GungHo work together (Gung Ho is transliterated from Chinese and means “Work in Harmony”), to provide a smooth increase in mental and physical energy without the typical “crash”, allowing you to retain an inordinate ability to focus, recall and excel in your studies, work, or exercise.

Brain Energy – Not Just Caffeine Buzz

Energy reserves play a critical role in healthy brain function. The first vital benefit of GungHo is its ability to help keep the brain’s energy-producing centers healthy and alert. GungHo provides your brain with the safe, natural energy it needs to stay sharp. While the brain makes up only two percent of a person’s body weight, it consumes roughly 20 percent of the body’s energy when at rest. When performing difficult mental activities (such as studying for a test), the brain needs even more energy. GungHo will support the health of mitochondria, the powerhouses within cells that actually produce the brain’s energy. Healthy mitochondrial function supports cellular activity and results in higher levels of adenosine triphosphate (ATP)—the body’s main energy storage molecule—in brain cells. Unlike the typical energy shots and drinks, GungHo energy is not just a short-term stimulation from caffeine.

Clinically Proven Focus, Attention & Concentration

The second major benefit of GungHo is increased focus and concentration⁴⁰. The ability to focus requires:

1. An adequate ongoing supply of energy and
2. Healthy communication between neurons.

Not only does GungHo support healthy brain metabolism, but it also aids in neural communication by protecting neural structures against free radical damage and by facilitating the transmission of information through healthy cell membranes²⁶. To function optimally, cell membranes need adequate levels of phospholipids. Phospholipids are a combination of lipids (fats) and the mineral phosphorus that line cell membranes and help determine what is allowed in and out of the cell. GungHo provides a compound essential for the synthesis of phosphatidyl choline, the phospholipid that makes up approximately 30 percent of brain tissue. By increasing the body’s supply of these essential phospholipids, GungHo supports healthy brain activity²⁸⁻²⁹, focus and concentration.

Increased Memory Storage & Recall

GungHo, when taken at suggested doses (minimum two servings per day), will improve memory storage and recall^{29, 40, 41-43}. GungHo could be called a “brain nutrient” because it increases levels of several important neurotransmitters, including acetylcholine, an important brain chemical that regulates memory and cognitive function^{29-30, 41}. GungHo will also support the activity of nerves that respond to acetylcholine, helping to raise activity levels in the brain’s learning and memory circuits^{29, 40-43}. Other energy shots and drinks currently available cannot claim to improve memory storage or recall.

*“I am a psychiatrist/biophysicist who has investigated the effects of nutritional supplements on behavior and brain chemistry for the last 20 years. **GungHo is the only energy shot or drink that contains natural ingredients at proven effective doses to improve focus and concentration, keep the brain’s energy-producing centers firing, protect healthy brain cell function, sustain healthy cell membranes in the brain, and help brain cells communicate by keeping cell membranes in good condition. Other energy shots and drinks that are currently on the market do not include these natural brain health ingredients at effective doses and are unlikely to provide similar benefits. Unlike other energy shots or drinks that deal with short-term energy and no lasting impact on brain energy, GungHo will actually increase levels of critical neurotransmitters in the brain over time. Thus optimal results for focus, concentration and brain health will be seen with the suggested daily intake.**”*

- **Dr. Perry Renshaw, MD, PHD.** Professor of Psychiatry and Director of Magnetic Resonance Imaging* for The Brain Institute at the University of Utah. Former professor of Psychiatry at Harvard Medical School.**

Brain Health & Retention of Normal Cognitive Function With Aging

GungHo doesn't just provide brain energy, focus and memory recall – it supports overall brain health and cognition²⁶⁻³¹. GungHo is a multi-functional product that should facilitate neurotransmission by increasing levels of critical neurotransmitters, such as dopamine and norepinephrine, and enhance cellular integrity by increasing phospholipid synthesis³⁴⁻³⁶. GungHo provides the compound needed for the synthesis of phosphatidylcholine, a major constituent of brain tissue, while enhancing communication between neurons to support visual function^{29, 41-43}. GungHo helps protect neural structures from accumulating free-radical damage⁴⁴; it assists in sustaining healthy mitochondria in the brain, the energy factories inside brain cells⁴³⁻⁴⁴. Healthy brain metabolism is supported by nourishing and maintaining brain cell phospholipids⁴³⁻⁴⁴. GungHo helps maintain normal levels of acetylcholine, a chemical that helps regulate memory and cognitive function⁴³⁻⁴⁴. Regular consumption of GungHo at suggested doses will support the activity of nerve cells that respond to acetylcholine and help maintain brain cell membranes in a healthy condition⁴⁰. Finally, GungHo promotes optimal neural and cognitive function and should help maintain normal cognitive function with aging⁹⁻¹², and in the presence of emotional dysfunctions like depression^{31-33, 37-39}.

Endurance & Fitness; Less Distracted Workout

GungHo can also offer longer-lasting and more focused energy for physical exercise⁴⁰. Further, it is formulated to offer energy once your muscles are tired, for those last reps or sprints (increased choline supports the resynthesis of muscle acetylcholine)⁴¹⁻⁴³.

GungHo's proprietary blend of ingredients exerts several extremely important and clinically proven effects on processes that affect energy production in the body^{1-25, 28}. These include an ability to improve fat metabolism (brought about by increases in the level of neurotransmitters such as catecholamines: epinephrine and norepinephrine responsible for initiating fat burning), which results in improved performance when fatigued (anti-fatigue effect), and counteracts the typical post-lunch dip in alertness^{14, 19}. GungHo also offers enhanced reaction time and increased metabolism^{13, 23, 25}. With zero sugar, just four calories and no carbonation, GungHo can help you stay in great mental and physical shape.

Take GungHo before your work-out, preferably with something light to eat. A single-packet serving of GungHo will typically provide a smoother surge in energy and longer-lasting alertness than even "extra strength" versions of ordinary energy shots. GungHo also increases your ability to maintain focus, concentration and attention on the exercise itself^{41, 43}. Mental alertness may sometimes be even more important for success than physical energy in exertion situations.

Since GungHo is more balanced – you typically won't feel the jitters or a caffeine crash – GungHo offers a great advantage for high-exertion activities such as very long rides or runs. In these acute situations you may safely consume two packets of GungHo without the potentially disruptive side effects of other shots. This will improve physical performance and will greatly improve your mental alertness.

Smoothness & Safety – No Harsh "Rush" or Caffeine Crash

Caffeine cuts both ways. It can reduce performance as well as enhance it. That is why most common so-called energy shots fail at both ends of your experience. On one end, the initial "rush" and "jitters" disrupt mental focus and physical performance. On the other end, the final "crash" has a similar result. Only GungHo meets the strenuous performance criteria demanded by serious students, athletes, gamers, and anyone else whose lifestyle requires a constant, smooth, effective energy uplift. It could be said that the initial "rush" commonly experienced as a result of taking lesser energy shots provides "false hope". Rather than being a good thing, this harsh, sudden rush is the result of critical compositional imbalances that eventually provoke the familiar and customary "crash". The patent-pending GungHo formula offers smoother, more balanced energy without rush-induced jitters that reduce mental and physical goal-oriented effort... Yet it contains a full complement of energy-enhancing caffeine. Perhaps more significantly for mental and physical stability, GungHo does not render you dysfunctional at the end of the day – there is typically no crash, either from sugar or — more importantly — from caffeine.

One sign of a poorly formulated product is the "kitchen sink phenomenon," i.e., cramming in additional useless or trace amounts of questionable, scientifically unsound or sometimes potentially harmful substances, including certain amino acids/proteins (such as taurine, creatine, arginine-alphaketoglutarate, glutamine, etc.), vitamins (such as B6, B2, B1, pantothenic acid, B12) or so-called natural steroids (e.g., tribulis, codonopsis, DHEA, ZMA, etc). There are two common

side effects:

1. They can interfere with the ability to focus, and
2. They can send unbalancing potentially harmful signals to the nervous system. Jitteriness, anxiety, twitchiness, shakiness and similar sensations destroy focus and performance.

By far the most common mistake is cramming in numerous impressive sounding ingredients that offer little, if any, benefits. For instance, although some rat and mice studies suggest benefits from large amounts of taurine, no human study has provided evidence that this amino acid, at the levels found in energy shots or drinks, will enhance energy. A recent review of human taurine applications, while discussing several potential benefits of this non-essential amino acid (your body can make it), makes no mention of energy-enhancing benefits^{41,45-46}. Another research study has remarked, “this intriguing amino acid remains largely a mystery to science”⁴². While meeting the energy demands of the body often requires support of the sympathetic nervous system, high levels of taurine (6 gm/day/3 weeks) has actually been found to suppress the sympathetic nervous system⁴³. The kitchen sink approach to formulation by people untrained in scientific research often leads to concentration errors; either too much or too little of an ingredient can jolt the nervous system.

Although there has been research performed on energy shots and drinks, uniformly these studies are short term and do nothing to throw light on which of the myriad ingredients in the product produced the observed effect. It is almost universally believed by researchers in this area that any observed increase in energy is almost completely the result of the caffeine. The effects of other ingredients are usually dismissed out of hand⁴⁸⁻⁵³. The only exception is taurine, but as we have seen, the hope that this substance contributes any observable measure of energy enhancement has not been realized. When and if the claim for taurine is ever substantiated, and its safety is thoroughly established, we might consider its inclusion in GungHo. Until then, we believe that what room for active material there is in an energy shot should be taken up with proven effective compounds. GungHo contains only those ingredients shown to be effective at the dosage levels found in the product and whose combined action promotes balance and behavior enhancement without any perceptible aggravation of physiology.

GungHo improves function across several neurotransmitter categories thereby helping to promote balance and health. Simply ingesting caffeine, no matter what kinds of vitamins, amino acids, minerals or steroids may be added to it, especially in totally ineffective amounts, tends to stimulate just one neurotransmitter category and thereby can be destabilizing and promote imbalance. In contrast, GungHo offers smoother, longer-lasting physical and brain energy, with unmatched focus and with less potentially harmful, imbalanced “rush”, “jitters” or “crash”. Plus, of all energy shots or drinks, when taken at suggested doses, only GungHo can improve your capacity to focus, while increasing your memory storage and recall over time.

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

* *Magnetic resonance spectroscopy can measure minute amounts of important chemicals in the brain, such as neurotransmitters and molecules that store energy – adenosine triphosphate (ATP).*

** *Dr. Renshaw is one of the top experts in the world using magnetic resonance spectroscopy to study the effect of drugs and chemicals in the brain. As such, he was engaged by GungHo as an independent authority on brain energy and brain health to do a third-party scientific peer-review of GungHo's patent-pending formula and claims.*

Bibliography

- 1 Greenberg JA, Boozer CN, Geliebter A. "Coffee, diabetes, and weight control." *Am J Clin Nutr.* 2006 Oct;84(4):682-93.
- 2 Kalmar JM, Cafarelli E., "Effects of caffeine on neuromuscular function." *J Appl Physiol.* 1999 Aug;87(2):801-8.
- 3 Lieberman HR, Tharion WJ, Shukitt-Hale B, Speckman KL, Tulley R., "Effects of caffeine, sleep loss, and stress on cognitive performance and mood during U.S. Navy SEAL training. Sea-Air-Land." *Psychopharmacology (Berl).* 2002 Nov;164(3):250-61.
- 4 Bell DG, Jacobs I, Zamecnik J., "Effects of caffeine, ephedrine and their combination on time to exhaustion during high-intensity exercise." *Eur J Appl Physiol Occup Physiol.* 1998 Apr;77(5):427-33.
- 5 Horne JA, Reyner LA., "Counteracting driver sleepiness: effects of napping, caffeine, and placebo." *Psychophysiology.* 1996 May;33(3):306-9.
- 6 Hetzler RK, Knowlton RG, Somani SM, Brown DD, Perkins RM,3rd. "Effect of paraxanthine on FFA mobilization after intravenous caffeine administration in humans." *J Appl Physiol.* 1990 Jan;68(1):44-7.
- 7 Koot P, Deurenberg P., "Comparison of changes in energy expenditure and body temperatures after caffeine consumption." *Ann Nutr Metab.* 1995;39(3):135-42.
- 8 Reyner LA, Horne JA., "Early morning driver sleepiness: effectiveness of 200 mg caffeine." *Psychophysiology.* 2000 Mar;37(2):251-6.
- 9 Astrup A, Toubro S, Cannon S, Hein P, Breum L, Madsen J., "Caffeine: a double-blind, placebo-controlled study of its thermogenic, metabolic, and cardiovascular effects in healthy volunteers." *Am J Clin Nutr.* 1990 May;51(5):759-67.
- 10 Dulloo AG, Geissler CA, Horton T, Collins A, Miller DS., "Normal caffeine consumption: influence on thermogenesis and daily energy expenditure in lean and postobese human volunteers." *Am J Clin Nutr.* 1989 Jan;49(1):44-50.
- 11 Doucet E, Tremblay A., "Food intake, energy balance and body weight control." *Eur J Clin Nutr.* 1997 Dec;51(12):846-55. Review.
- 12 Kamimori GH, Johnson D, Thorne D, Belenky G., "Multiple caffeine doses maintain vigilance during early morning operations." *Aviat Space Environ Med.* 2005 Nov;76(11):1046-50.
- 13 Rosenthal L, Roehrs T, Zwyghuizen-Doorenbos A, Plath D, Roth T., "Alerting effects of caffeine after normal and restricted sleep." *Neuropsychopharmacology.* 1991 Feb;4(2):103-8.
- 14 Lorist MM, Tops M., "Caffeine, fatigue, and cognition." *Brain Cogn.* 2003 Oct;53(1):82-94.
- 15 Griffiths RR, Evans SM, Heishman SJ, Preston KL, Sannerud CA, Wolf B, Woodson PP., "Low-dose caffeine discrimination in humans." *J Pharmacol Exp Ther.* 1990 Mar;252(3):970-8.
- 16 Jarvis MJ., "Does caffeine intake enhance absolute levels of cognitive performance?" *Psychopharmacology (Berl).* 1993;110(1-2):45-52.
- 17 Nishijima Y, Ikeda T, Takamatsu M, Kiso Y, Shibata H, Fushiki T, Moritani T., "Influence of caffeine ingestion on autonomic nervous activity during endurance exercise in humans." *Eur J Appl Physiol.* 2002 Oct;87(6):475-80. Epub 2002 Aug 8.
- 18 Paluska SA., "Caffeine and exercise." *Curr Sports Med Rep.* 2003 Aug;2(4):213-9.
- 19 Caffeine for the Sustainment of Mental Task Performance: Formulations for Military Operations [Paperback]. Committee on Military Nutrition Research (Author), Food and Nutrition Board (Author), Institute of Medicine (Author) , 2001, Government Printing Office., pp. 37-38, 39, 43, 45, 62, 63, 65.
- 20 Warburton DM., "Effects of caffeine on cognition and mood without caffeine abstinence." *Psychopharmacology (Berl).* 1995 May;119(1):66-70.
- 21 Kelly TL, Mitler MM, Bonnet MH., "Sleep latency measures of caffeine effects during sleep deprivation." *Electroencephalogr Clin Neurophysiol.* 1997 May;102(5):397-400.
- 22 Penetar D, McCann U, Thorne D, Kamimori G, Galinski C, Sing H, Thomas M, Belenky G., "Caffeine reversal of sleep deprivation effects on alertness and mood." *Psychopharmacology (Berl).* 1993;112(2-3):359-65.
- 23 Arciero PJ, Gardner AW, et al., "Effects of caffeine ingestion on NF kinetics, fat oxidation, and energy expenditure in younger and older men." *Am J Physiol.* 1995, 268(6, pt 1), E1192 - 1198.
- 24 Jung RT, Shetty S, et al., "Caffeine: its effect on catecholamines and metabolism in lean and obese humans." *Clinical Science.* 1981, 60, 527-535.
- 25 Pasman WJ, Baak MA, et al., "The effect of different dosages of caffeine on endurance performance time." *International J Sports Med.* 1995, 16, 225 - 230.
- 26 Davies JK & Green JM, "Caffeine and anaerobic performance." *Sports Med.* 2009, 39 (10), 813-832.
- 27 Secades JJ, Lorenzo JL. "Citicoline: pharmacological and clinical review, 2006 update." *Methods Find Exp Clin Pharmacol.* 2006;28:Suppl B:1-56.
- 27 Babb SM et al. "Chronic citicoline increases phosphodiesterases in the brains of healthy older subjects: an in vivo phosphorus magnetic resonance spectroscopy study." *Psychopharmacology.* 2002;161:248-254.
- 28 Silveri MM et al. "Citicoline enhances frontal lobe bioenergetics as measured by phosphorus magnetic resonance spectroscopy." *NMR in Biomedicine.* In press 2008.
- 29 Fioravanti M, Yanagi M. "Cytidinediphosphocholine (CDP-choline) for cognitive and behavioral disorders in the elderly." *Cochrane Database Syst Rev.* 2005;18:CD00026.
- 30 Wurtman RJ et al. "Effect of oral CDP-choline on plasma choline and uridine levels in humans." *Biochem Pharmacol.* 2000;60:989-992.
- 31 Carlezon WA Jr et al. "Antidepressant-like effects of uridine and omega-3 fatty acids are potentiated by combined treatment in rats." *Biol Psychiatry.* 2005;57:343-350.
- 32 Carlezon WA Jr et al. "Antidepressant-like effects of cytidine in the forced swim test in rats." *Biol Psychiatry.* 2002;51:882-889.
- 33 Yoon SJ et al. "Decreased glutamate levels potentially mediated cytidine's efficacy in treating bipolar depression: A longitudinal proton magnetic resonance spectroscopy study." Under Review.
- 34 Eberhardt R et al. "Citicoline in the treatment of Parkinson's disease." *Clin Ther.* 1990;12:489-490.
- 35 Marti Masso JF, Urtasun M. "Citicoline in the treatment of Parkinson's disease." *Clin Ther.* 1991;13:239-242.
- 36 Licata SC et al. "The effects of daily treatment with citicoline on polydrug abuse in cocaine-dependent volunteers." College on Problems of Drug Dependence Annual Meeting, 2008.
- 37 Jensen JE et al. "Triacetyluridine (TAU) decreases depressive symptoms and increases brain pH in bipolar patients." *Exp Clin Psychopharmacol.* 2008;16:199-206.
- 38 Stork C, Renshaw PF. "Mitochondrial dysfunction in bipolar disorder: evidence from magnetic resonance spectroscopy research." *Mol Psychiatry.* 2005;10:900-919.
- 39 Cohen BM et al. "Decreased brain choline uptake in older adults. An in vivo proton magnetic resonance spectroscopy study." *JAMA.* 1995;274:902-907.
- 40 Unpublished data provided to GungHo by Perry F. Renshaw, M.D., Ph.D.
- 41 Zeisel, SH. "Choline: Critical role during fetal development and dietary requirements in adults." *Annu Rev Nutr.* 2006, 26: 229-250.
- 42 Amenta, F & Taybau, SK. "Pathways of acetylcholine synthesis, transport and release as targets for treatment of adult-onset cognitive dysfunction." *Curt Med Chem.* 2008, 15: 499-498.
- 43 Saver, JL. "Citicoline: update on a promising and widely available agent for neuroprotection and neurorepair." *Rev Neurol Dis.* 2008, 5(4): 167-177.
- 44 Clark, WM. "Efficacy of citicoline as an acute stroke treatment." *Expert Opin Pharmacother.* 2009, 10(5): 839-46.
- 45 Bouckenooghe T, Remacle C, Reusens B. "Is taurine a functional nutrient?" *Curr Opin Clin Nutr Metab Care.* 2006 Nov9(6):728-33.
- 46 Huxtable RJ. "Taurine: past, present and future." *Adv Exp Med Biol.* 1996;403:641-50.
- 47 Mizushima S, Nara Y, Sawamura M, Yamori Y., "Effects of oral taurine supplementation on lipids and sympathetic nerve tone." *Adv Exp Med Biol.* 1996;403:615-22.
- 48 Worthley, ML, Prabhu, A., et al., "Detrimental effects of energy drink consumption on platelet and endothelial function." *Amer J Med.* 2010, 123: 184-187.
- 49 Smit, HJ, Cotton, JR, et al., "Mood and cognitive performance effects of "energy" drink constituents: caffeine, glucose and carbonation." *Nutritional Neuroscience.* 7(June 2004): 127-139.
- 50 Scholey, AB & Kennedy, DO. "Cognitive and physiological effects of an 'energy drink': an evaluation of the whole drink and of glucose, caffeine and herbal flavouring fractions." *Psychopharmacology.* 2004, 176: 320-330.
- 51 Dunn-Lewis, C, Kraemer, WJ, et al., "A multivitamin supplement reduced markers of inflammation and improved physical performance in active individuals of middle to older age: a randomized, double-blind, placebo-controlled study." *Nutr J.* 2011, 10:90.
- 52 Seifert, SM, Schaechter, ER, et al., "Health effects of energy drinks on children, adolescents and young adults." *Pediatrics.* 2011, 127: 511-528.
- 53 Van den eynde, F, Van baleen P, et al., "De effecten van energiedranken op de cognitieve prestaties." *Tijdschrift voor Psychiatrie.* 2008, 50: 273-281.