**Attention Definite Hyper-phos Decisive [ADH-pD]**

In House Nootropic: Cognitive Centering Blend Brainstorm

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| **MATERIAL** | **WHAT IS?** | **WHAT DO? /**  **\*SYNERGY** | **OCCURANCE**  **I/O** | **BENEFIT** | **DOSAGE [DV]** |
| L-Tyrosine | Amino acids used by cells to synthesize proteins | -Creates neurotransmitters | In body / meat, fish, eggs, dairy, beans,nuts,  oats,wheat | Mental performance, alertness, memory | 500mg |
| L-Theanine | Natural amino acid |  | Camellia Sinesis / Boletus Badius [fungi] | Stress reduction, sleep aid, cognitive performance enhancement | 100-400mg |
| DMAE Bitartrate | Precursor to choline & acetylcholine [ACh] | -build/repair cell membranes in brain  -increase production > Acetylcholine [ACh]  -pharmacokinetic  \*Synergy w/ other vits/minerals | In body / fish [sardines, salmon, anchovies] | Mood [1977study], memory, brain support enhancement  -inhibit beta-amyloid>age related memory loss /  -anti-aging topical  -reduce hyperactivity  [1950’s-60s-70s study] | 50-300mg |
| Choline | Essential nutrient Vital | -Supports various functions, producing fats > make up cellular membranes = cellular growth  -DNA synthesis > gene expression  -converts into neurotransmitter [ACh] regulating auto body functions [breathe/heart rate]  -metabolize fats | In body / eggs, nuts, fish, seeds, cruciferous greens, dairy, soy, whole grain, fungi, potato | Cell maintenance, DNA synthesis, metabolism, brain development, memory & cognition, | 425-550mg |
| Bacopa Monnieri | Brahmi  “Water hyssop”  “Herb of Grace”  Perennial creeping Ayurvedic herb  Lamiales Order  Plantaginaceae Family | -Bacosides [A&B] active antioxidant compound  -Inhibit oxidative stress / cognitive deterioration  -Ability to cross blood-brain barrier=more bioavailability to brain > free function on cells & structures | Wetlands India / Australia / Europe / Africa / N+S America / Asia  Supplement extract / tea | Hinders Anxiety, depression, stress  Enhances memory retention, cognitive function  -reduction of free radicals>antioxidation  -balance stress hormone levels  -anxiolytic | 200-400mg |
| Kanna | Perennial succulent  “sceletium tortuosum”, “kougoed”  “Spirit herb”  Succulent  Caryophyllales Order  Aizoaceae Family | -Alkaloid  -Phytochemicals: mesembrine, mesembrenine, -brenol, -brenone | The Khoikhoi / The San of  S.Africa Khemet | Relieve fatigue, hunger, thirst, anxiety  -mood\stress stabilizer  -enhance memory, flexibility & reaction time | 175-400mg |
| Huperzine A | Naturally occurring sesquiterpene alkaloid > existing in body in small amounts & derived from firmoss Huperzia serrata [Chinese Club Moss]  Huperzia selago  [Fir Club Moss] | -Increases production of Acetylcholine [ACh]  -Pharmacokinetic | India  S.E. Asia  Can also be made in lab  [CAoS 1980]  Fir Club Moss  -Hippocampus /  Cortex regions | Potent acetylcholinesterase inhibitor [AChEI] > considerably hinders neuro oxidative damage  -Anti depressive, boost alertness & energy  -Enhance mental cognition, information ingestion and memory retention | 100-200mcg |
| Lions Mane | Eukaryote fungi  [Hericium erinaceus]  Hericenones  Erinacines | -via Heri/Erin > induce Nerve Growth Factor [NGF] > produces [ACh] neurotransmitters / increasing activity | -Hippocampus region  -Thiamine, manganese, zinc, potassium, riboflavin, niacin, oligosaccharides, | Accelerate brain cell regeneration, memory & emotional response processing  -Immune stimulant, antioxidative, anti-inflammatory, | ♾️  250-750mh |
| Alpha GPC  [L-Alpha Glycerylphosphorylcholine] | Phospholipid | Exponentialize Choline production > [ACh] neurotransmitter production & phosphatidylcholine [PC] = cell membrane structuring  \*AGPC – ACh – PC | In body via Choline  -In lab  Derived from sunflower / soy lecithin  -Cerebral cortex | Increase [ACh] production > providing choline > produce myelin = protection of cell membranes  -Enhance memory, info. Ingestion, cognitive clarity  -Motor function, organization, personality/mood/muscle recovery via AGPC-ACH-PC    △ May shift gut microbial community structure> (+)Parabacteroides, Ruminococcus, Bacteroides & (-) Akekrmansia, Lactobacillus, Roseburia | 400-800mg |
| Ginko Biloba | Herb of Ginkgoales Order  “Maidenhair Tree”  “Living Fossil”  “silver fruit”  “white fruit”  “Twice-Lobed”  Ginkgoales Oder  Ginkgoaceae Family  △ ENDANGERED! | -[Ach] release increase > enhancing working memory performance,  -Inflammation reduction > increasing blood flow  -Pharmacokinetic | China  Flavonoids, terpenoids  -Cortical regions / hippocampus  (+) flow> Visual cortex  (-) flow > Rt prefrontal cortex / Lft temporal cortex / Lft hippocampus / parahippocampal gyrus | Enhance memory, focus sustained, cognitive function clarity, antioxidation,  -Reduce depression/anxiety  -Increase nitric oxide circulation, blood flow = protect cell membrane walls > “opening” | ♾️  40-240mg |
| Goji | Lycium chinense  “Goji Berry”  “Wolfberry”  Shrub  Solanales Order  Solanaceae Family | -Immunity / neural boost  -Vitamin A / C, Iron, Calcium, Fiber  -Phytonutrients: beta-carotene, zeaxanthin, cryptoxanthin  -Flavonoids: quercetin, kaempferol, myricetin, rutin, hesperidin | China  -Brain, Liver, reproductive system, digestive tract  -Hippocampus region | Immune system boost via A&C vits, Iron + antioxidant  -Phytonutrient rich, acute anti-inflammatory properties > protective effects on neuron structure, activity, maintenance  -Increases nerve cell production  -Strengthen testes  -Enhance info ingestion, emotional response, motivation | ♾️  10-30g |
| Cordyceps | Eukaryote fungi  Parasitic  “Dong chong Xia cao”  “Winter Bug Summer Herb”  Cordyceps sinenses  Cordyceps militaris  -Hypocreales Order  Cordycipitaceae Family | -Increase body production of adenosine triphosphate [ATP] > energy delivery to muscles  -Regulate hormones via adaptogenic properties  -Pharmacokinetic | China Nepal Tibet,  N. Sikkim, India  Himalayan regions  Parasitic fungi, spores debilitate host > hyphae set to host carrion > mycelium nets > bloom  -Kidney, liver, reproductive system | -Aids endurance / stamina > increase in oxygen uptake  -Cardioprotective  -Higher power output  -Adrenal gland + nervous system stimulation sustained energy output  -Enhanced mental acuity, info. ingestion, cognitive performance, memory retention | ♾️  3-6g |
| Reishi | Eukaryote fungi  “Ganoderma lingzhi”  “Ganoderma lucidum”  “Mushroom of Immortality”  “Bear bread”  -Polyporales  Order  Ganodermataceae Family | Triterpenoids, polysaccharides, peptidoglycans  -G. lucidum polysaccharides modulate immune function > vivo/vitro  -Promote function of antigen-presenting cells, mononuclear phagocyte system, humoral immunity, cellular immunity  -Gadoteric acid > blood flow, neuroprotective  -[BBB] | E. Asia / PNW, N. America  Hardwood / Conifer / Oak /Hemlock  -Neurotransmitters: catecholamines, serotonin, glutamate | -Antioxidant / autophagy  -Anxiolytic  -Prevent against neurodegeneration  -Enhance cognitive function  -Affect genes, alter pathways of white blood cells  -Improved blood flow “open”  -Mitigate fatigue, depression, anxiety | ♾️  2-4g (extract)  (25-100g consumed whole) |
| Chaga | Eukaryote parasitic fungi  “Inonotus obliquus”  “cinder conk”  Hymenochaetales Order  Hymenochaetaceae Family | -Immune-modulating compound rich: beta-glucans > upregulate immune cell-signals  -Xylogalactoglutan polysaccharides  -Enhance white blood cell, T-cell performance  -Adaptogen  -Long chain polysaccharides | N. America / Finland, Alaska / Russia, Canada /Japan  Birch / Maple / Cherry /Oak / Alder  -Vitamins D & B, amino acids, iron, potassium, magnesium, selenium, fiber | -Mitigate depression, stress, anxiety  -Enhance info. Ingestion, memory retention  -Reduce amyloid protein deposition in brain-L-CP > convert to energy = sustained  -Aids Amygdala | ♾️  1-2g |
| Gotu Kola | Centella asiatica  “Kodavan”  “Pennywort”  Perennial flowering groundcover herb  Chinese, Indonesian, Indian, Afrikan Ayurvedic medicine  Apiales Order  Apiaceae Family | -Triterpene compound increasing volume and efficacy of collagen  -Anti-inflammatory, antiviral, antibacterial, insecticidal, antifungal  -Neuroprotective  -Activates release of brain-derived neurotrophic factor [BDNF] > encouraging new brain cell formation, support new cell generation / structure  -Pharmacokinetic | Afrika, Asia, Australia, W. Pacific  Juice / Tea / Supplement | -Enhance memory, cognitive function / clarity  -Contentedness, calm, alert  -Reduce stress, depression, anxiety  -Enhance brain cell structure generative support | ♾️  60-450mg |
| Rhodiola Rosea | Lignum rhodium  “Arctic Root”  “Golden Root”  “Orpin Rose”  “Rose Root”  Perennial Flowering groundcover  Saxifragales Order  Crassulaceas Family  △ Threatened by rapid growing demand! | -Adaptogen  -Antioxidant  -Compounds: polyphenols, rosavin, rosarin, organic acids, alkaloids, flavonoids, terpenoids, phenolic acids etc. [~140 total identified] | Arctic Regions Europe / Asia / N. America  -Roots | -Stimulate nervous system, enhance cognitive function / clarity, extenuate anxiety  -Enhance info. Ingestion, memory retention, concentration  -Inhibit fatigue  -Activate / enhance blood circulation “open”  Blood brain barrier [BBB] | ♾️  360-600mg |
| Panax Ginseng | ***”Rénshēn”***  “Heal All”  “Panacea”  Perennial herb  Apiales Order  Araliaceae Family | -tetracyclic triterpenoid saponins [ginsenosides], polyacetylenes, polyphenols, acidic polysaccharides  -Release nitric oxide from endothelial cells & perivascular nerves > erectile tissue  -Neuroprotective [BBB]  -Pharmacokinetic  \*Omega-3 synergy / [ACh] | NE China / E. Russia / Korean Peninsula  -Roots  -Lung, brain, erectile, dendritic, T, B, & NK cells, kidney, spleen, blood  [100 Ginsenosides identified] | -Enhance cognitive function, general longevity, relax  -Stimulate brain cells, cognition, concentration, general mental performance, memory, mood balance  -Inhibit anxiety, depression  -Attention, memory, executive function  -nervous system, brain activity, hormonal behavior & secretion | ♾️  .5g-3g |
| Saffron | Crocus sativus L.  “Saffron crocus”  Perennial flower | -Neuroprotective > anti-apoptosis, anti-neuroinflammation, antioxidative stress  -Crocetin, crocin, safranal | ??? Iran / Greece? | -Inhibit anxiety, stress response, depression | ♾️  15-30mg |
| Licorice Root | Glycyrrhiza glabra  “Toothbrush tree”  “Chew stick”  “Miswak”  “Gan cao”  Flowering bean plant  Fabales Order  Fabaceae Family | -Adaptogen  -Antioxidant, anti-inflammatory,  Antimicrobial  -Flavonoids, cumarins, stilbenoids > polyphenols, triterpenoids  -Expectorant  -Increased blood to stomache  \*Synergized w/ other probiotics > gut microbiome | W. Asia / N. Afrika Kemet / S. Europe  -Root | -Regulate cortisol, inhibit adrenal fatigue  -Demulcent  -Antimicrobial, whitens teeth, oral cleanse  -Increases blood to stomach > synergize w/ probiotic in gut microbiome | ♾️  100mg-1g |
| Ashwaganha | Withania somifera  “Winter Cherry”  Evergreen herb shrub  Solanales Order  Solanaceae Family | -Bioactive compounds: withaferin A, withanolides, withanosides +  -Antioxidant, anti-inflammatory agent  -Blood Brain Barrier  -Stimulate GABA receptors  -Neuroprotective | Asia / Afrika Kemet /Middle East  -GABA receptors  -Glial fibrillary acidic protein [GFAP]  -Brain-Derived Neurotrophic Factor [BDNF]1 | -Enhanced cognitive function / clarity  -Inhibit stress, anxiety, fatigue  -Increased reaction time, vigilance  -Enhance brain maintenance & repair  -Neuroprotective  -Dismantle presence of bisphenol A [BPA] | ♾️  250-500mg |
| Pine Bark | Pinus marinus  “Maritime Pine” | -Polyphenols, phytonutrients, vitamins  -Procyanidins flavonoids  -Catechins flavonoid  -Phenolic acid polyphenols  -antioxidant, anti-inflammatory, antimicrobial | Portugal / Spain / France /Morocco | -Improved cognition, focus, memory performance, clarity, concentration. | ♾️  150-450mg |

SYNERGISTIC EFFICACY

Sarris J, Kean J, Schweitzer I, Lake J. Complementary medicines (herbal and nutritional products) in the treatment of Attention Deficit Hyperactivity Disorder (ADHD): a systematic review of the evidence. Complement Ther Med. 2011 Aug;19(4):216-27. doi: 10.1016/j.ctim.2011.06.007. Epub 2011 Jul 26. PMID: 21827936.