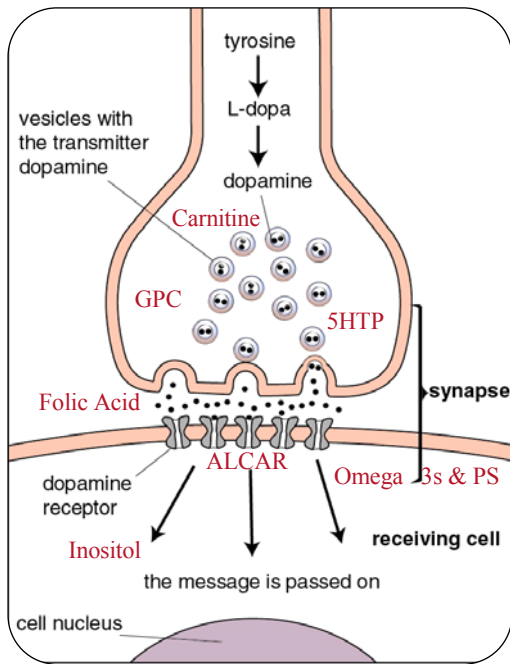


# DESIGNS FOR HEALTH NEW & IMPROVED BRAIN VITALE



## New and Improved Brain Vitale

Brain Vitale by Designs for Health has just become even better. Can't believe it? Well, imagine the two powerful brain revitalizing nutrients Acetyl L Carnitine and PhosphatidylSerine (PS) both capable of repairing brain neurons, now reinforced with the mind-body nutrient GPC (GlyceroPhosphoCholine). GPC is a unique osmo-protectant, raises choline and acetylcholine throughout the nervous system, helps generate unique omega-3 phospholipids to build cell membranes, and is a clinically proven brain revitalizer. These three brain supernutrients are assisted by Ginkgo biloba extract, which enhances the brain microcirculation and provides critical antioxidant protection. The Phytosome® form of Ginkgo is at least twice as effective. Along with inositol, another key osmo-protectant and a precursor for second messenger action within the nerve cells, you have one amazing brain formula.

Dr. Parris Kidd gives this formula a *"thumbs up"* and says *"this sets the standard for effective brain formulas."*

### New & Improved Brain Vitale:

Size: 60 capsules (also available in 50 gram powder size)

Each 2 capsules contains:

Acetyl L-Carnitine	500 mg
GlyceroPhosphoCholine (GPC)	200 mg
Inositol	200 mg
Phosphatidylserine	120 mg
GinkgoSelect™ Phytosome™	90 mg
[Ginkgo biloba (leaves) and Glycine (soybeans)]	

## Research leads the way to changes in DFH top formulas

### Research on GPC shows:

- Naturally occurring in all our cells and mother's milk
- Unique type of metabolic protectant
- "Active" form of choline - has an added phosphate and glycerol group
- Water soluble and can cross the blood brain barrier (PC cannot)
- Effectively raises acetylcholine
- Improvements in attention, mental focus and cognition even if linked to Alzheimer's or poor brain circulation
- Numerous studies showing increased brain recovery following stroke or other injury
- Revitalizes master hormone functions from pituitary control in the elderly (growth hormone)
- Studies used 1200 mg per day in divided doses
- The largest stroke trial in Italy, 2000 patients, GPC helped 95% to improve
- GPC outperforms other cholinergic precursors: better than choline, PC, and citicholine (known as CDP choline)

### What does ALC (Acetyl L-Carnitine) do?

- Critical energy cofactor for brain cells
- REPAIRS physically damaged neurons
- Helps stroke victims
- Helps prevent age related memory decline
- Increases learning capacity
- Enhances immune function

### What does Ginkgo do?

- Improves microcirculation to the brain cells
- Helps enhance short and long term memory
- Helps improve mood
- Supports mental focus and energy
- Helps revitalize fading memory
- Protects the brain from stress induced neuronal death
- Balances catecholamine, serotonin and cortisol levels
- Phytosome® form is at least two times as bioavailable, with enhanced degree of efficiency



## **Ginkgo biloba prevents mobile phone-induced oxidative stress in rat brain.**

Clin Chim Acta. 2004 Feb;340(1-2):153-62.

Ilhan A, Gurel A, Armutcu F, Kamisli S, Iraz M, Akyol O, Ozen S.

**BACKGROUND:** The widespread use of mobile phones (MP) in recent years has raised the research activities in many countries to determine the consequences of exposure to the low-intensity electromagnetic radiation (EMR) of mobile phones. Since several experimental studies suggest a role of reactive oxygen species (ROS) in EMR-induced oxidative damage in tissues, in this study, we investigated the effect of Ginkgo biloba (Gb) on MP-induced oxidative damage in brain tissue of rats. **RESULTS:** Oxidative damage was evident by the: (i) increase in malondialdehyde (MDA) and nitric oxide (NO) levels in brain tissue, (ii) decrease in brain superoxide dismutase (SOD) and glutathione peroxidase (GSH-Px) activities and (iii) increase in brain xanthine oxidase (XO) and adenosine deaminase (ADA) activities. These alterations were prevented by Ginkgo biloba treatment. Furthermore, Gb prevented the MP-induced cellular injury in brain tissue histopathologically. **CONCLUSION:** Reactive oxygen species may play a role in the mechanism that has been proposed to explain the biological side effects of mobile phone, and Ginkgo biloba prevents the Mobile Phone-induced oxidative stress to preserve antioxidant enzymes activity in brain tissue.



## **Prevention of age-related spatial memory deficits in a transgenic mouse model of Alzheimer's disease by chronic Ginkgo biloba treatment.**

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Alzheimer's disease (AD) is characterized by cognitive decline and deposition of beta-amyloid (Abeta) plaques in cortex and hippocampus. A transgenic mouse AD model (Tg2576) that overexpresses a mutant form of human Abeta precursor protein exhibits age-related cognitive deficits, Abeta plaque deposition, and oxidative damage in the brain. We tested the ability of Ginkgo biloba, a flavonoid-rich antioxidant, to antagonize the age-related behavioral impairment and neuropathology exhibited by Tg2576 mice. At 8 months of age, 16 female Tg2576 and 15 female wild-type (wt) littermate mice were given ad lib access to tap water or Ginkgo biloba (70 mg/kg/day in water). After 6 months of treatment, all mice received Morris water maze training (4 trials/day for 10 days) to assess hippocampal dependent spatial learning. All mice received a 60-s probe test of spatial memory retention 24 h after the 40th trial. Untreated Tg2576 mice exhibited a spatial learning impairment, relative to wt mice, while Ginkgo biloba-treated Tg2576 mice exhibited spatial memory retention comparable to wt during the probe test. Spatial learning was not different between Ginkgo biloba-treated and untreated wt mice. There were no group differences in learning to swim to a visible platform. Soluble Abeta and hippocampal Abeta plaque burden did not differ between the Tg2576 groups. Brain levels of protein carbonyls were paradoxically elevated in Ginkgo biloba-treated mice. These data indicate that chronic Ginkgo biloba treatment can block an age-dependent decline in spatial cognition without altering Abeta levels and without suppressing protein oxidation in a transgenic mouse model of AD.

## **Ginkgo biloba normalises stress-elevated alterations in brain catecholamines, serotonin and plasma corticosterone levels.**

Eur Neuropsychopharmacol. 2003 Oct;13(5):321-5. Shah ZA, Sharma P, Vohora SB.

Department of Medical Elementology and Toxicology, Faculty of Science, Hamdard University, 110 062 New Delhi, India.

Stress and depression and associated mental health problems have increased tremendously in modern times. The search for effective and safe alternatives from natural sources especially plant products should, therefore, continue. Forced immobilization is one of the best explored models of stress in rats and the role of corticosterone, serotonin and catecholamines, i.e. norepinephrine (NE), dopamine (DA) is well documented. Numerous studies have shown that Ginkgo biloba has antioxidant and neuroprotective properties and utility in cerebrovascular insufficiency and impaired cerebral performance. We investigated the effect of G. biloba on whole brain catecholamine, serotonin and plasma corticosterone levels following 1, 2 and 4 h restraint stress using HPLC and also plasma corticosterone using luminescence spectrophotometry. G. biloba extract (14 mg/kg p.o.) restored restraint stress-induced elevation in whole brain levels of catecholamines (NE, DA), 5-HT and plasma corticosterone to near normal levels. Further studies are warranted to explore the clinical potential of this encouraging lead in the management of stress and to elucidate the mechanisms involved.