Research on GPC Shows:
- Occurs naturally in all our cells and mother’s milk
- Protects metabolic mechanism of brain cells
- Crosses blood brain barrier where PC cannot
- Effectively raises acetylcholine to enhance memory function
- Improves attention, mental focus, and cognition even in Alzheimer’s and poor brain circulation
- Increases brain recovery following stroke or injury
- Revitalizes master pituitary hormone function in the elderly
- In a trial of 2000 patients, showed improvements in 95% of stroke patients
- Outperforms choline and citicholine in neurotransmitter production

Benefits of ALC:
- Critical energy cofactor for brain cells
- Repairs physical damaged neurons
- Helps prevent age-related memory decline
- Increases learning capacity
- Enhances immune function

Benefits of Ginkgo biloba
- Improves microcirculation to the brain cells
- Helps enhances long and short-term memory
- Helps improves mood
- Helps improve mental focus and energy
- Protects the brain from stress-induced neuronal death through anti-oxidant properties
- Balances catecholamine, serotonin and cortisol levels

Brain Vitale: NPN80049153
Medicinal Ingredients (per capsule):
- Acetyl-L-Carnitine .............................................................. 250 mg
- Ginkgo biloba (Leaf) (24.0% Flavonoid glycosides 6.0% Terpene lactones) ................................................................. 45 mg
- Choline alfoscerare .............................................................. 100 mg
- PhosphatidylSerine (Helianthus annuus-Seed) ................................................................. 60 mg
- Inositol .............................................................................. 100 mg

Non-Medicinal Ingredients: Microcrystalline cellulose, vegetable stearate, silicon dioxide.
Ginkgo biloba prevents mobile phone-induced oxidative stress in rat brain.

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 Gingko 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.

Stackman RW, Eckenstein F, Frei B, Kulhanek D, Nowlin J, Quinn JF.
Department of Behavioral Neuroscience, Oregon Health & Science University, Portland, OR 97239-3098, USA. stackman@ohsu.edu

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.
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.