



Origin of Ginkgo

Ginkgo (*Ginkgo biloba*) is one of the oldest living tree species now on earth as is regarded as “a living fossil”.^[1] Ginkgo has a broad spectrum of resistance or tolerance against bacterial and viral infections^[1] and could live for more than 1,000 years.^[2] Today, Ginkgo widely spreads in South & East America, southern part of France, China and Korea.

Traditional Use

Ginkgo preparations have been used for medicinal purposes for more than hundreds of years.^[2] Traditional Chinese physicians use ginkgo leaves to treat respiratory diseases. In Europe, modern researches have justified the use of ginkgo leaves as herbal product on improving health being such as cerebrovascular health.^[1] In Germany, Ginkgo is one of the most frequently prescribed product for cognitive disorders.^[15-16]

The Main Functions of Ginkgo Biloba Extract (GBE):

◆ **Strong Antioxidant**

The potent antioxidant properties of ginkgo leaves are mainly from the polyphenolic compound flavonoids.^[3] Researches have shown that flavonoids could protect nerves, cardiac muscles, blood vessels and retina, and scavenge free radicals.^[3-4] The particularity of GBE as an antioxidant is that unlike vitamins E and C, the flavonoids are able to act at the mitochondrial level, protecting the cellular power generator which is also the major source of free radicals in the body.^[2,4]

◆ **Improve blood flow**

Maintaining adequate cerebral blood flow is essential for normal brain functions, such as cognitive functions, learning ability and memory. As we age, there is a significant reduction in the cerebral blood flow.^[6] Cerebrovascular insufficiency is a condition results in decreased blood flow into the brain. Common symptoms include headaches, dizziness, vertigo and tinnitus (ringing in the ears).

Clinical trials have demonstrated that taking GBE consistently for three months could reduce blood viscosity.^[7] Terpenes from ginkgo leaves, such as ginkgolides selectively inhibit the platelet-activating factor and thus reducing chances of blood clot formation.^[8] It also causes dilation of blood vessels and improves both arterial and venous blood flow to increase blood supply.^[9] Hence, GBE could relief symptoms caused by insufficient blood flow to the brain.

◆ **Neuroprotective Effects**

Strong antioxidant property of GBE could help protect the neurons from oxidative damage.^[3-5] Studies have also demonstrated GBE could enhance memory in healthy middle-aged subjects.^[10-11]

Possible uses of Ginkgo Biloba Extract (GBE)^{[15-16]:}

- Memory and cognitive function
- Dementia
- Peripheral vascular disease
- Tinnitus
- Cardiovascular disease

The Main Functions of Lecithin:

◆ **Basic Component of Cell membrane**

Lecithin exists in every cell. Without it, cell membranes will become rigid and loss their functions.^[12] The main source of commercial lecithin is from soybean.

◆ **Maintain Neural and Brain Functions**

Lecithin contains choline which is an essential constituent of the neurotransmitter acetylcholine.^[13] Therefore, adequate choline or lecithin intake is important for memory and other neural and brain functions.^[13-14]

◆ **Protect Liver and Brain cells**

Phospholipids in lecithin aid transportation of fats and cholesterol in the body.^[13] Lack of lecithin in diet would lead to accumulation of fats in liver and body fluid and cause cell damages.

Benefits of Lecithin^{[15-16]:}

- Lower serum cholesterol levels
- Improving memory
- Essential component of cell membranes.

Recommended daily dose:

Adult: Take 1 softgel capsule 2-3 times daily or as directed by physicians.

Precautions:

Since Ginkgo leaves and its extract (GBE) has the abilities to prevent blood clot formation and dilation of blood vessels, which could enhance the effects of certain drugs such as blood thinning agents and anti-hypertensive agents. Hence, please consult your physician first if currently taking any cardiovascular drugs.

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