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Ginkgo

Technical Background

• Extracts derived from the leaves of the primitive deciduous tree Ginkgo biloba contain a complex mixture of flavonoid glycosides and several other natural products such as terpenes.\(^1\)
• Studies have shown that Ginkgo extract inhibits platelet aggregation\(^2\), demonstrates free radical scavenging activity\(^2\), increases blood flow to the brain\(^3\), improves the transmission of nerve signals\(^4\), and improves short term memory\(^5\).
• Numerous studies have shown a correlation between ginkgo and improved memory\(^6\),\(^7\),\(^8\). Although not a cure, Ginkgo shows particular promise in improving cognitive function in persons with Alzheimer disease\(^9\). A recent year long clinical trial on Alzheimer’s patents showed a statistically significant improvement in memory and a slow down or temporarily reversal of Alzheimer’s symptoms.\(^10\)
• Ginkgo’s antioxidant activity is also thought to provide protective effects to the cardiovascular system and retina.\(^11\),\(^12\)

Sources and Recommended Intake

• No Recommended Dietary Allowance (RDA) for Gingko has been established. In the majority of clinical studies, a dose of 120 mg/d of standardized (24% flavonoid glycosides) extract was used, however a range of from 87.5 – 160 mg/d is reported.
• No adverse reactions have been reported at these levels.

Abstracts

Smith PF, Maclennan K, Darlington CL. The neuroprotective properties of the Ginkgo biloba leaf: a review of the possible relationship to platelet-activating factor (PAF). J Ethnopharmacol 1996 Mar;50(3):131-9. Ginkgo biloba (Ginkgoaceae) is an ancient Chinese tree which has been cultivated and held sacred for its health-promoting properties. There is substantial experimental evidence to support the view that Ginkgo biloba extracts have neuroprotective properties under conditions such as hypoxia/ischemia, seizure activity and peripheral nerve damage. Research on the biochemical effects of Ginkgo biloba extracts is still at a very early stage. One of the components of Ginkgo biloba, ginkgolide B, is a potent platelet-activating factor (PAF) antagonist. Although the terpene fraction of Ginkgo biloba, which contains the ginkgolides, may contribute to the neuroprotective properties of the Ginkgo biloba leaf, it is also likely that the flavonoid fraction, containing free radical scavengers, is important in this respect. Taken together, the evidence suggests that Ginkgo biloba extracts are worthy of further investigation as potential neuroprotectant agents.
References

2 Stoll S; Scheuer K; Pohl O; Muller WE. Ginkgo biloba extract (EGB 761) independently improves changes in passive avoidance learning and brain membrane fluidity in the aging mouse. Pharmacopsychiatry 1996 Jul;29(4):144-9
11 Pietri S; Maurelli E; Drieu K; Culcasi M. Cardioprotective and Antioxidant Effects of Ginkgo Biloba Extract. J Mol Cell Cardiol 1997 Feb;29(2):733-42.