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Ginkgo-Standardized Extract

Technical Background

- Ginkgo extract is derived from the trees of an ancient Chinese tree, *Ginkgo biloba*.¹
- Ginkgo extract has received most attention for its ability to improve cognitive functioning.² Recent studies indicate that this effect is greatest in short-term, acute intakes.³ Studies have found that it increases blood flow to the brain,⁴ improves transmission of nerve signals, and improves memory.^{5,6}
- Although not a cure, Ginkgo shows particular promise in improving cognitive function in persons with Alzheimer disease.^{7,8} A recent year-long clinical trial on Alzheimer's patients showed a modest but statistically significant improvement in memory and a slowing down or temporarily reversal of the progression of Alzheimer's symptoms.⁹
- Studies have shown that Ginkgo acts as an antioxidant, inhibits platelet aggregation,² and possesses free radical scavenging activity,¹⁰ all of which work to improve cardiovascular health.
- There is also substantial evidence that ginkgo's activities in the body may improve ocular health. Studies have found the ginkgo helps protect the retina,^{11,12} and may improve symptoms of glaucoma.¹³
- A recent study also found that ginkgo induced cell death in oral cavity cancer cells,¹⁴ and may inhibit growth in tumor cells.¹⁵

Sources and Recommended Intake

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

Abstracts

Kennedy DO, Scholey AB, Wesnes KA. Modulation of cognition and mood following administration of single doses of Ginkgo biloba, ginseng, and a ginkgo/ginseng combination to healthy young adults. *Physiol Behav.* 2002 Apr 15;75(5):739-51. It has previously been demonstrated in separate studies that single doses of Ginkgo biloba, Panax ginseng, and a combination of the two extracts can improve different aspects of cognitive performance in healthy young volunteers. The present study directly compared the effects of single doses of G. biloba, ginseng, and a product combining the two on aspects of mood and cognitive performance in the same cohort of healthy, young adult volunteers. The study followed a randomised placebo-controlled, double-blind, balanced, cross-over design. Twenty participants received 360 mg of ginkgo, 400 mg of ginseng, 960 mg of a product combining the two extracts, and a matching placebo. Treatment order was dictated by random allocation to a Latin square, with a 7-day wash-out

period between treatments. Cognitive testing comprised completion of the Cognitive Drug Research (CDR) computerised assessment battery and two serial subtraction mental arithmetic tasks. Mood was assessed with Bond-Lader visual analogue scales. Following a baseline cognitive assessment, further test sessions took place 1, 2.5, 4, and 6 h after the day's treatment was taken. The results largely supported previous findings. All three treatments were associated with improved secondary memory performance on the CDR battery, with the ginseng condition evincing some improvement in the speed of performing memory tasks and in the accuracy of attentional tasks. Following ginkgo and the ginkgo/ginseng combination performance of both the Serial Threes and Serial Sevens, subtraction tasks was also improved at the later testing sessions. No modulation of the speed of performing attention tasks was evident. Improvements in self-rated mood were also found following ginkgo and to a lesser extent the combination product.

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