



## Ginkgo Biloba Extract

(Time-Release)

Stock #898-8 (30 tablets)

*Ginkgo biloba* extracts, sold in Europe under the trade names Tanakan, Ginkgobil, Tebonin, etc., are among the most popular prescription medications in both Germany and France. In 1989, over 10 million prescriptions were written around the world for standardized *Ginkgo biloba* extract (GBE). The global acceptance of this phytomedicine is primarily due to the herb's remarkable medicinal benefits which have been substantiated in numerous studies and clinical trials. The recommended standardization for GBE is 24% ginkgo flavone glycosides and 6% terpene lactones.<sup>1</sup>

Ginkgo flavone glycosides are a group of bioflavonoids which are primarily responsible for the herb's antioxidant activity and its effectiveness for reducing platelet aggregation. These important properties may explain GBE's ability to enhance cerebral and central nervous system function and to help prevent cardiovascular diseases, such as atherosclerosis. The terpene lactones present in GBE are known as ginkgolides and bilobalide. Ginkgolides stimulate circulation to the brain and extremities and may reduce platelet-activating factor (PAF), the substance released from cells which causes blood platelets to aggregate (stick together). High levels of PAF have been linked with nerve cell damage, decreased blood flow to the central nervous system, bronchial constriction, and inflammatory disorders. Bilobalide appears to provide a protective action on nerve cells. A recent animal study published in *Planta Medica* indicates bilobalide may help regenerate damaged nerve cells.<sup>2-4</sup>

Medical researchers have explored numerous applications for GBE with some of the most important findings relevant to asthma, brain function, dopamine synthesis, impotency, inflammation and vascular diseases. However, the herb's principal clinical application has been focused on the treatment of vascular insufficiency. Over 50 double-blind clinical trials have demonstrated the effectiveness of GBE for improving chronic cerebral arterial insufficiency (impaired blood flow to the brain), as well as peripheral arterial insufficiency. Symptoms of cerebral insufficiency which have responded favorably to GBE include impaired mental function and short-term memory loss, depression, headaches, tinnitus, vertigo, and suppressed vitality.<sup>1,4,5</sup>

The acclaimed *British Journal of Clinical Pharmacology* published a review of over forty clinical studies of GBE for the treatment of cerebral insufficiency. The review concluded that GBE proved effective in decreasing all symptoms associated with cerebral insufficiency, including impaired mental performance (senility). The mean dose of GBE was determined to be 120mg daily for 4 to 6 weeks.<sup>1,6-7</sup>

A 6-month double-blind, placebo-controlled study published in *Current Medical Research and Opinion*, demonstrated that the 31 individuals diagnosed with mild to moderate memory impairment who received a standardized *Ginkgo biloba* extract (GBE) showed improved mental ability following supplementation.<sup>1,7-8</sup>

Of great significance in the treatment of Alzheimer's disease are the results from a recent study published in the *Journal of the American Medical Association* (JAMA). The 52-week, double-blind, placebo-controlled study was conducted upon 309 individuals diagnosed with mild-to-severe dementia associated with Alzheimer's disease or multi-infarct dementia, using a standardized GBE (40mg taken three times daily for a total daily dose of 120mg). Study results demonstrated improvement in Alzheimer's patients equivalent to a six-month delay in disease progression.<sup>9,10</sup>

In addition to increasing cerebral circulation, both experimental and clinical studies confirm that GBE also enhances the speed at which information is transmitted over nerve cells. However, improvement in mental performance does not appear to be limited to the elderly, as indicated by a study published in *International Journal of Clinical Pharmacology Research*. This double-blind, placebo-controlled study involved healthy female participants who were given doses of GBE ranging from 120mg to 600mg daily. The results showed significant improvements in participants' memory, as measured by the Sternberg technique following the administration of GBE.<sup>1,7</sup>

It is important to note that since *Ginkgo biloba* extract reduces the clotting time of blood, this herb may increase the effectiveness of other anticoagulants.<sup>12</sup>

NSP's Ginkgo Biloba Extract contains 120mg of concentrated *Ginkgo biloba* extract, standardized to 24% ginkgo flavone glycosides and 6% terpene lactones. Furthermore, each tablet is formulated with a special enteric coating which allows the contents to be absorbed slowly over approximately a 12-hour period.

References:

- 1 Murray, Michael T. *The Healing Power of Herbs*. Rocklin, CA: Prima Publishing, 1995.
- 2 Lininger DC, S., et al. *The Natural Pharmacy*. Rocklin, CA: Prima Health, 1998.
- 3 Bruno, C., Cuppini, R., et al. "Regeneration of motor nerves in bilobalide-treated rats. *Planta Medica*; 1993, 59, 302-307.
- 4 Weiner, M. and Weiner, J. *Herbs That Heal: Prescription For Herbal Healing*. Mill Valley, CA: Quantum Books, 1994.
- 5 "Botanical Research Bulletins: Ginkgo versus Tacrine." *American Journal of Natural Medicine*; 1997, 4(4), 24.
- 6 Kleijnen, J. and Knipschild, P. "Ginkgo bilobafor cerebral insufficiency." *British Journal of Pharmacology*; 1992, 34, 352-358.
- 7 Null PhD, G. *The Clinician's Handbook of Natural Healing*. NY, NY: Kensington Books, 1997.
- 8 Rai, G., Shovlin, C., and Wesnes, K. "A double-blind, placebo controlled study of *Ginkgo biloba*extract ("tanakan") in elderly outpatients with mild to moderate memory impairment." *Current Medical Research and Opinion*; 1991, 12(6), 350-355.
- 9 LeBars, P.L., et al. "A placebo-controlled, double-blind, randomized trial of an extract of *Ginkgo biloba*for dementia." *JAMA*; 1997; Vol. 278, 1327-1332.
- 10 Leigh, E. "JAMA Study Reports on Positive Results with Ginkgo in Alzheimer's." *HerbalGram*; 1998, No. 42, 14.
- 11 Hindmarch, I. and Subhan, Z. "The psychopharmacological effects of Ginkgo biloba extract in normal healthy volunteers." *Internation Journal of Clinical Pharmacology Research*; 1984, 4, 89-93.
- 12 Tyler PhD, Varro E. *The Honest Herbal*. Binghamton, NY: The Haworth Press, Inc., 1993.