



# ginkgo for cognition and more

**T**he oldest living species of tree in the world, ginkgo (*G. biloba*) dates back more than 200 million years in the fossil record. Charles Darwin once called the ginkgo tree a “living fossil.” The medicinal use of ginkgo in Chinese medicine goes back to the sixteenth century. Since that time, whole ginkgo leaf and its extracts have been used and studied for the treatment of many conditions involving decreased blood flow to the tissues, which ginkgo may be helpful in restoring.

## » Diabetic Retinopathy

People with diabetes are at an increased risk for vascular diseases, including diabetic retinopathy. Caused by injury to the blood vessels that deliver nutrients to cells in the eye, this disease is characterized by hemorrhages in the retina, the innermost layer of eye tissue. Almost all people who have had Type 1 diabetes for at least 20 years and nearly 80 percent of those with Type 2 diabetes show signs of retinopathy.

In a pilot study, individuals with Type 2 diabetes and retinopathy took 240 mg of a ginkgo leaf extract. After three months, they showed significant improvement in red blood cell deformability (ability of red blood cells to

change shape and deliver oxygen to tissues), significant decrease in blood viscosity (the “thickness” of blood, a risk factor for blood clots), and significant improvement in blood flow to the retina.

## » Tinnitus

Tinnitus is characterized by a humming or ringing in the ears without any external stimulus. An American Association of Family Physicians (AAFP) review determined that ginkgo is “moderately” effective in the treatment of this condition. One study of 103 volunteers found that 50 percent experienced improvement or disappearance of their symptoms in 70 days, versus 119 days for those receiving a placebo.

## » Cognition

Multiple clinical trials have investigated ginkgo for cognition (the ability to process and use information), and the German Commission E has approved it for the treatment of cognitive decline due to decreased blood flow. Some clinical trials support the use of ginkgo for mental function, while others do not. However, trials that used the standardized extract EGb 761 in volunteers consistently demonstrated improvement in cognitive function.

In one study, participants received either a placebo, 120 mg, 240 mg, or 360 mg of a ginkgo extract. Researchers noted significant improvements in attention to tasks for the people taking 240 mg or 360 mg ginkgo. Participants taking a placebo or the lowest dose of ginkgo showed no improvements.

## » Dosage

Take ginkgo for 12 weeks initially to determine if it is effective. However, results may be seen in as little as four weeks. For memory problems and dementia, 120 to 240 mg daily, in two to three doses, is recommended. For tinnitus and peripheral vascular disease, the recommended dose is 160 mg per day, again taken in two or three doses.

## » Herb-Drug Interactions

My review of human clinical trials shows that ginkgo decreased serum concentrations of alprazolam (Xanax)—but not warfarin, midazolam, and caffeine concentrations. Use caution interpreting this data, as standardized extracts and other preparations may exert different effects. If you take any medications, consult a healthcare professional knowledgeable in herb-drug interactions.

—John Neustadt, ND

“Diabetic retinopathy” by R. N. Frank, *N Engl J Med*, 2004 ● “Differential cognitive effects of *Ginkgo biloba* after acute and chronic treatment in healthy young volunteers” by S. Elsabagh et al., *Psychopharmacology*, 5/05 ● “*Ginkgo biloba*” by M. Blumenthal et al., *American Family Physician*, 9/03 ● “*Ginkgo biloba* extract EGb 761 in dementia: Intent-to-treat analyses of a 24-week, multi-center, double-blind, placebo-controlled, randomized trial” by S. Kanowski et al., *Pharmacopsychiatry*, 11/03 ● “Herb-drug interactions: What clinicians need to know” by J. Neustadt, *Integrative Medicine*, 2-3/06