

Egyptian Herbal Monograph

Volume 2

Medicinal plants used in Egypt

Egyptian Drug Authority (EDA)

2026



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Ginkgo biloba L.

چنکو

1. Names & Synonyms (1)

***Ginkgo biloba* L. Family:** Ginkgoaceae.

Syns. *Pterophyllus salisburiensis* Nelson, *Salisburia adiantifolia* Smith, *S. macrophylla* C.Koch

Arabic: Ginkgo چنکو

English: Ginkgo leaf (2), Fossil tree; Kew tree; Maidenhair tree (3).

2. Parts used for medicinal purpose

Dried leaf (1, 3-5).

3. Major chemical constituents

- **Flavonoids:** Flavonols (quercetin, kaempferol, isorhamnetin, and their glycosides and coumaroyl esters) (6), proanthocyanidins (yield delphinidin and cyanidin as main building blocks after acid hydrolysis) (7, 8).
- **Terpene lactones:** Bilobalide, ginkgolides A, B, C, J, M (6).
- **Amino acids:** 6-Hydroxykynurenic acid (2-carboxy-4-one-6-hydroxyquinoline), a metabolite of tryptophan (9).
- **Others:** Benzoic acid, ginkgolic acid, 2-hexenal, polyprenols (e.g. di-trans-poly-cis-octadecaprenol) and acidic polysaccharide (10).

4. Medicinal uses (Indications)

- A. Improvement of (age-associated) cognitive impairment and of quality of life in mild dementia (1, 4, 5). Also helps to enhance cognitive function and memory in adults (11).
- B. Improvement of peripheral arterial occlusive disease particularly intermittent claudication (poor circulation to the lower legs), and vertigo tinnitus of vascular origin (2, 3, 5).
- C. Relief of heaviness of legs and the sensation of cold hands and feet associated with minor circulatory disorders, after serious conditions have been excluded by a medical doctor (4, 11).

5. Herbal preparations correlated to medicinal use (4)

1. Powdered herbal substance.
2. Dry extract, extraction solvent: acetone 60% m/m³, (extraction ratio 35-67:1) (1)

Herbal preparations are in pharmaceutical dosage forms. The pharmaceutical form should be described by the Pharmacopoeia full standard term.

6. Posology and method of administration correlated to medicinal use

Preparation 1 Indication C

Adults and elderly Single dose: 250-360 mg, daily dose: 750 mg (4).

Duration of use

If the symptoms persist for more than 2 weeks, a doctor or a pharmacist should be consulted.

Preparation 2 Indication A

Adults and elderly:

120–240 mg daily in 2 - 3 divided doses (1, 12).

Indication B

120–160 mg daily in 2 - 3 divided doses (3, 12).

Duration of use (4)

Treatment should last for at least 8 weeks. If there is no symptomatic improvement after 3 months, or if pathological symptoms should intensify, the doctor should check whether continuation of treatment is still justified.

Method of administration (4): Oral use.

7. Contraindications

- Hypersensitivity to active substances and to other plants of the same family.
- The use is contraindicated in pregnancy (4).
- The use in children and adolescents under 18 years of age has not been established (2, 4, 11).

8. Special warnings and precautions for use

- If the symptoms worsen during the use of the medicinal product, a doctor or a pharmacist should be consulted (4).
- In patients with a pathologically increased bleeding tendency (haemorrhagic diathesis) and concomitant anticoagulant and antiplatelet treatment, the medicinal product should only be used after consultation with a doctor (2, 4, 11).
- In patients with epilepsy: Ginkgo decreases seizure threshold (2, 4, 13).
- Use should be stopped prior to surgery due to a potential risk of increased bleeding or interaction with perioperative drug treatment (13).

9. Interactions with other medicinal products and other forms of interaction

- Concomitant use of *Ginkgo biloba* containing products and efavirenz is not recommended (4).
- Anticoagulants, platelet inhibitor, salicylates and other non-steroidal anti-inflammatory drugs: Because of the increased risk of bleeding, ginkgo should not be taken concurrently with these products (4).
- Anticonvulsants: Ginkgo components may decrease the anticonvulsant effect, concurrent use should be avoided (4).
- Buspirone, fluoxetine: Ginkgo given with these agents may cause hypomania (2).
- Cytochrome P4501A2/P4502D6/P4503A4 substrates: Ginkgo may affect drugs metabolized by these agents (2).
- Selective serotonin reuptake inhibitors (SSRIs): Ginkgo is often used to reverse the sexual side effects of SSRIs (2).
- Trazadone: Ginkgo with trazadone may cause coma (2).
- Anticoagulant/antiplatelet herbs: Ginkgo may increase the risk of bleeding when used with these herbs (2).
- St. John's wort: Ginkgo with St. John's wort can lead to hypomania (2).

Lab Test (2):

- Partial thromboplastin time, ASA tolerance test: Ginkgo may cause increased bleeding.
- Platelet activity: Ginkgo may decrease platelet activity.
- Prothrombin time, blood salicylate: Ginkgo may increase prothrombin time and blood salicylate.

10. Fertility, pregnancy and lactation

- The use during pregnancy and lactation should be avoided (3, 13).
- No fertility data available (1, 4).

11. Effects on ability to drive and use machines

No adequate studies on the effect on the ability to drive and use machines have been performed (4).

12. Undesirable effects (4)

- If adverse reactions occur, a doctor or a pharmacist should be consulted.
- Bleeding of individual organs has been reported (eye, nose, cerebral and gastrointestinal haemorrhage).
- Headache and dizziness.

- Mild gastrointestinal complaints: diarrhoea, abdominal pain, nausea and vomiting.
- Hypersensitivity reactions (allergic shock) may occur, skin, subcutaneous tissue disorders and allergic skin reactions (erythema, oedema, itching, rash) may also occur.

13. Overdose

No case of overdose has been reported.

14. Relevant biological activities

Not required as per Egyptian guidelines for registration of herbal medicines.

15. Additional Information

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16. Date of compilation/last revision

20/02/2024

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