

# **Egyptian Herbal Monograph**

## **Volume 2**

### **Medicinal plants used in Egypt**

**Egyptian Drug Authority (EDA)**

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## Medicinal Plants Used in Egypt

*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/m<sup>3</sup>, (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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