

Egyptian Herbal Monograph

Volume 3

Medicinal Plants used in Egypt

Egyptian Drug Authority (EDA)

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Urtica dioica L.

حريق - قريص

1. Names & Synonyms (1)

Urtica dioica L.

Family: Urticaceae.

Syns. : *Urtica tibetica* W.T. Wang, *U. galeopsifolia* Wierzb. ex Opiz.

Arabic: hhurray حريق - Qurrays قريص

English name: Stinging nettle (2-4), Nettle (3, 4).

2. Parts used for medicinal purpose

Dried roots /rhizomes (2-5) or leaves/ herb (3-7).

3. Major chemical constituents

Herb/ leaves:

-**Amines:** Acetylcholine, betaine, choline, lecithin, histamine, serotonin and a glycoprotein (8).

-**Flavonoids:** Flavonol glycosides (e.g. isorhamnetin, kaempferol, quercetin), isoquercitrin, astragalin and rutin (7-9).

-**Inorganics:** Up to 20% minerals, including calcium, potassium and silicon (8,9).

-**Lignans:** Several lignans, including (-)-secoisolariciresinol (8).

-**Other constituents:** Choline acetyltransferase, scopoletin, β sitosterol and tannin (8).

Rhizomes (8):

-Lectin (agglutinin) composed of six isolectins, Coumarin (scopoletin).

-**Triterpenes:** β -sitosterol its glucoside, and six stearyl derivatives; two phenylpropane derivatives and six lignans.

Roots (10-12):

Polysaccharides: Glycans, glucogalacturonans, arabinogalactan acid, fatty acid: (10*E*, 12*Z*)-9-hydroxy-10, 12-octadecadienoic acid, lectins, ceramides, terpenes diols, and terpenes diols glucosides.

4. Medicinal Uses (Indications)

- A. Relief of lower urinary tract symptoms related to benign prostatic hyperplasia after serious conditions have been excluded by a medical doctor (2-5).
- B. As a diuretic (2-4, 6, 7). To increase the amount of urine to achieve flushing of the urinary tract as an adjuvant in minor urinary complaints (6), as irrigation therapy for inflammatory diseases of the lower urinary tract and for prevention and treatment of kidney stones (12).
- C. Relief of minor articular pain. Supportive therapy to help relieve rheumatic complaints (2-4, 7) and for the symptomatic treatment of arthritis and rheumatic conditions (6,7).

5. Herbal preparations correlated to medicinal use

- 1. **Comminuted herbal substance as herbal tea** for oral use as a decoction or an infusion (5, 6):
 - 1.1 1.5 g of the root as a decoction (5).
 - 1.2 2-4 g of the comminuted herb or leaves as an infusion (6).
- 2. **Dry root extract**, extraction solvent ethanol 20% V/V (5).
- 3. **Dry root extract**, extraction solvent ethanol 70% V/V (5).
- 4. **Liquid root extract**, extraction solvent ethanol 30% V/V (5).
- 5. **Liquid leaves extract**, extraction solvent ethanol 96% (V/V) (6).
- 6. **Dry leaves extract** (4.7-6:1), extraction solvent water (6).
- 7. **Dry leaves extract** (5-10:1), extraction solvent water (6).
- 8. **Dry leaves extract**, extraction solvent ethanol 50% (V/V) (6).
- 9. **Leaves tincture** 1:5 (25% (7) - 45% (8) ethanol).

Herbal preparations (2-9) 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

Indication A

Adults and elderly (5)

Preparation 1.1.: 1.5 g as herbal tea 3-4 times daily.

Preparation 2: 240 mg, 3 times daily.

Preparation 3: 150-190 mg, twice a day.

Preparation 4: Maximum 5 ml daily, divided into 3 or 4 single doses.

There is no relevant use in children and adolescents under 18 years of age.

Duration of use: Long-term use, no longer than 6 months (5,13), is possible.

Method of administration: Oral use (5).

Indications B, C (6)

Adults and elderly

Preparation 1.2.: 2-4 g as herbal tea 3-6 times daily (the daily dose 8-12 g) (8,12).

Preparation 5: 30-40 oral drops as a single dose, 3-4 times daily.

Preparation 6: 750 mg as a single dose, 2-3 times daily.

Preparation 7: 450 mg as a single dose, 3 times daily.

Preparation 8: 540 mg as a single dose, 2 times daily.

Preparation 9: 2-6 ml, 3 times daily (7,8).

Duration of use (6)

Indication B: Not to be used for more than 2- 4 weeks.

Indication C: Not to be used for more than 4 weeks.

If the symptoms persist during the use of the medicinal product, a doctor or a pharmacist should be consulted.

Method of administration: Oral use (6).

7. Contraindications

- Hypersensitivity to the active substances and to other plants of the same family (5,6).
- Nettle leaves are contraindicated in condition where a reduced fluid intake is recommended (e.g. severe cardiac or renal disease) (6).

8. Special warnings and precautions for use

- If complaints worsen or if symptoms such as fever, spasms or blood in the urine, painful urination, or urinary retention occur during the use of the medicinal product, a doctor or a pharmacist should be consulted (2,5,6).
- When articular pain is accompanied by swelling of joint, redness or fever a doctor should be consulted (6).
- Use of nettle leaves in children under the age of 12 years is not recommended (6).

9. Interactions with other medicinal products and other forms of interaction (4)

- **Anticoagulants (heparin, warfarin) and anticoagulant herbs:** Nettle may decrease the effect of anticoagulants.
- **CNS depressants (alcohol, barbiturates, sedative/hypnotics ,antipsychotics, opiates) and sedative herbs:** Nettle may lead to increased central nervous system depression.
- **Diuretics:** Use of nettle may increase the effects of diuretics, resulting in dehydration and hypokalemia.
- **Iron salts:** Nettle tea may interfere with the absorption of iron salts.
- **Lithium:** Nettle combined with lithium may result in dehydration, lithium toxicity .

10. Fertility, pregnancy and lactation

The use during pregnancy and lactation is contraindicated (2-4) owing to its effects on androgen and estrogen metabolism (2).

11. Effects on ability to drive and use machines (5,6)

No studies on the effect on the ability to drive and use machines have been performed.

12. Undesirable effects

- If adverse reactions occur, a doctor or a pharmacist should be consulted.
- Gastro-intestinal complaints such as nausea, heartburn, feeling of fullness, flatulence, diarrhoea may occur (2, 4, 5-8).
- Allergic reactions *i.e.*, pruritus, rash, urticaria may occur (2,4, 5-7).

13. Overdose (5,6)

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

21/06/2022.

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