Date: November 15, 2004

RE: Review of *Urtica* spp. (Nettles)


In this article, the botany, therapeutic uses, chemical constituents, common doses, and safety of nettles (i.e., stinging nettle [*Urtica dioica*] and dog nettle [*U. urens*]) are reviewed. Nettles belong to the Urticaceae family and thrive in damp, shaded soil. However, they can grow almost anywhere. Stinging nettle is a perennial with two subspecies: *U. dioica* ssp. *dioica*, which is native to Europe, and *U. dioica* ssp. *gracilis* (Ait) Seland, which is native to North America. The former has dioecious flowers and stinging hairs on both the upper and the lower leaf surfaces. The latter has monoecious flowers and stinging hairs only on the lower leaf surface. Dog nettle is an annual that is native to Europe and has monoecious flowers and apparently hairless leaves. Unlike stinging nettle, which has rhizomes and spreads by runners, dog nettle has a main root and does not use runners.

Nettles may be used therapeutically in three ways. First, the leaf or fruit may be used internally to treat rheumatism, as a diuretic to treat lower urinary tract inflammation, and to prevent kidney stones. Second, the leaf may be used topically to treat rheumatism and osteoarthritis (the stings relieve joint pain and inflammation). Finally, a modern use is that the root may be used internally to alleviate the symptoms of benign prostatic hyperplasia (BPH).

Nettles appear to have multiple active constituents because individual compounds isolated from nettles do not have greater efficacy than do whole-plant extracts. Apparent active constituents of aboveground parts include UDA, sterols, polysaccharides, and caffeic malic acid. Apparent active constituents of roots include UDA, HOA, lignans, and sterols.
Doses of nettles vary depending on the plant part and the intended use. According to the authors, nettle juice is usually taken three times a day in a volume of 15 mL in 4–6 oz of water. Leaves can be taken in a few ways. Dried leaves that have been powdered or shredded can be added to food as a seasoning. Alternatively, leaves can be steamed for 10–15 minutes and then eaten alone or in soup. For both leaves and roots, 2–5 mL of tincture can be taken three times a day. The typical dosage of freeze-dried herb capsules, which usually come in 240–300 mg amounts, is 1–2 capsules three times a day. For treatment of BPH, 2–3 tsp of root is simmered for 10–15 minutes to create an extract; one cup of the extract is taken three times a day. For producing stings to relieve joint pain and inflammation, the affected area is covered with 2–4 fresh leaves once a day.

No significant adverse effects of nettles have been found in clinical trials. However, men with BPH symptoms should probably avoid use of nettle leaves or fruit because of their diuretic effect.

In conclusion, clinical trials support many of the traditional uses of nettles and indicate new uses, such as for treatment of BPH symptoms. Nettles are highly sustainable for harvest as raw materials and are considered safe. They have diuretic, anti-inflammatory, and anti-BPH effects. Additional research is needed to better understand nettles.

—Darren Early

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