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FILE: **Fennel (*Foeniculum vulgare*)**

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RE: **Experimental Studies on Fennel Seeds**

Tanira, M.O.M., A.H. Shah, A. Mohsin, A.M. Ageel, and S. Qureshi. 1996. Pharmacological and Toxicological Investigations on *Foeniculum vulgare* Dried Fruit Extract in Experimental Animals. *Phytotherapy Research*, Vol. 10, pp. 33-36.

The ripe fruit of fennel (*Foeniculum vulgare*) is used in folk medicine of the Arabian Peninsula as a diuretic, stimulant, appetizer, digestive, and infantile febrifuge. In order to investigate its pharmacological properties, the ethanol extract of the dried ripe fennel fruit was subjected to a number of tests in laboratory rats.

Diuretic activity was tested by dosing the rats orally with fennel extract. Results showed a highly significant diuretic effect after 5 and 24 hours of administration. Urine output was almost double that of the control rats'. In "hot plate" tests, analgesic activity was statistically significant after 90 and 150 minutes of administration. In another test, antipyretic (fever-reducing) activity was noted at 30 and 90 minutes (but not at 150 minutes). Administration of the extract (500 mg/kg) caused a 33% increase in bile secretion compared to controls. The same amount of extract showed marked mitodepressive activity, a property of cytotoxicity. *In vitro* tests showed the antimicrobial effects of the extract, which prevented the growth of *Staphylococcus aureus* and *Bacillus subtilis*.

Given orally in doses of 0.5, 1, and 3 g/kg, the extract caused no deaths in the rats. The 3 g/kg dose produced side effects, such as reduced locomotor activity and piloerection (erection of hair due to action of arrectores pilorum muscles). No signs of acute toxicity were observed. —*Ginger Webb*