

Kava (*Piper methysticum*)

History

- Kava has been cultivated for well over 3000 years and is still used today by a wide range of South Pacific Island societies for spiritual, medicinal, and recreational purposes. Use in these societies is deeply embedded in ritual.
- In weddings and funerals, kava root is often given to attendees to enhance the connection to the spirit world and for fostering peace and lasting friendship.

Most studied use

Reduction of anxiety, and insomnia.

Other common uses

Epilepsy, psychosis, depression, migraines, respiratory tract infections, musculoskeletal pain, urinary tract infections, uterine inflammation, and menstrual discomfort.

Summary of the evidence

- Based on several clinical trials, kava appears to be effective for reducing mild anxiety and stress and is usually well-tolerated.
- There have been numerous well-documented case reports of fulminant liver failure due to kava, however, prompting the FDA to issue a consumer advisory against its use, and prompting the governments of Switzerland, Germany, and Canada to ban its sale.

Pharmacology

- The main active constituents kava pyrones and kava lactones.
- Important kava pyrones include kawain and methysticum.

Mechanism of action

- Kava may act on GABA binding sites and via dopamine antagonism.
- It does not appear that kava affects benzodiazepine receptors.
- Kava appears to produce motor sedation without affecting respiratory processes.

Clinical studies

- A Cochrane systematic review found six studies which used the Hamilton Anxiety score as a common outcome measure.
- Combining the results of these trials suggested a significant reduction in favor of kava compared to placebo ($p = 0.01$).

Adverse effects

- Adverse effects are rare and similar to placebo.
- Reversible yellowing of the skin has been observed after long-term use.

Contraindications/cautions

- There have been more than 50 case reports of fulminant liver failure following ingestion of kava, many requiring liver transplantation and some resulting in death. There have even been cases in which hepatotoxicity was reproduced by rechallenge with kava.
- Kava may have dopamine antagonist properties and so should not be used in patients with Parkinson's disease.

Important drug/herb interactions

- Caution should be used when combining kava with other sedatives such as benzodiazepines or alcohol.

Formulation and dosage

- Extracts and beverages are prepared from the root of the plant.
- The most commonly studies dose is 70 mg tid standardized to 70% kava-lactone content.

References

1. Hepatic Toxicity Possibly Associated With Kava-Containing Products—United States, Germany, and Switzerland, 1999-2002. *JAMA*. 2003;289:36-37.
2. Pittler MH, Ernst E. Kava extract for treating anxiety. *Cochrane Database Syst Rev*. 2003;(1):CD003383.
3. Wheatley D. Kava and valerian in the treatment of stress-induced insomnia. *Phytotherapy Research* 2001; 15(6) 549-551.