Kava (Piper methysticum)

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By Barrie R. Cassileth, MS, PhD [1]

Kava is a plant indigenous to the Pacific Rim and the Hawaiian Islands whose root and rhizome are used to prepare a non-fermented beverage with relaxant effects that is used for social and recreational purposes.

ALSO KNOWN AS: Kava-kava, kawa, kavain, rauschpfeffer, intoxicating long pepper, tonga, yagona, yaqona.

BACKGROUND: Kava is a plant indigenous to the Pacific Rim and the Hawaiian Islands whose root and rhizome are used to prepare a non-fermented beverage with relaxant effects that is used for social and recreational purposes. Kava roots are chewed or ground into a pulp and added to cold water, and the resulting brew—reported to mimic the effects of an alcoholic beverage—has been used as a ceremonial drink in the Pacific Islands for hundreds of years. While kava is considered a sacred plant in the South Pacific and is used in a variety of ceremonies, it is also used in traditional medicine to relieve anxiety, stress, fatigue, and insomnia, and to treat urinary tract infections and menopausal symptoms. It is believed that kava was introduced to the West by Captain James Cook in 1768. Over the past two decades, kava has gained popularity in Western countries, where it is promoted in supplemental form for anxiety, insomnia, and stress. It is available in health food stores and on the Internet in the form of tablets, capsules, liquid extracts, and tinctures.

RESEARCH: Kavalactones, the compounds thought to be responsible for kava's activity, produce skeletal muscle relaxation, non-narcotic anesthetic effects, and local anesthetic effects. In vitro and in vivo studies suggest that these compounds induce mitochondrial dysfunction, oxidative stress, and apoptosis of human hepatocytes (Hep2G).[1,2] Animal studies suggest that kava's vasodepressor activity is mediated by a GABA receptor-sensitive pathway.[3] Kavapyrones also demonstrated additive effects with the serotonin 1A agonist, ipsapirone; these effects contribute to kava's sleep-inducing and anxiolytic properties.[4] Kava consumption has been associated with low cancer incidence,[5] but one of its constituents has been shown to stimulate the growth of melanoma cells.[6] Several clinical trials indicate that kava is superior to placebo for reducing anxiety.[7,8] However, reports of hepatotoxicity have led to restrictions on the use of kava-containing products.[9,10]
Possible mechanisms for kava’s hepatotoxicity include inhibition of cytochrome P450, reduction in liver glutathione content, and inhibition of cyclooxygenase (COX) activity.[10,11] Nonetheless, recent studies using aqueous extracts of kava suggest that it is a safe and efficacious anxiolytic agent.[12,13] Further, case analyses of 14 patients with hepatic injury resulting from kava use revealed low quality products, overdose, prolonged use, and co-medication as the causative factors.[14] Additional studies are needed.

**ADVERSE REACTIONS:** As mentioned above, hepatotoxicity has occurred with kava use.[15] Urticaria has been reported following consumption of kava.[16] Kava overdose resulted in altered mental status and ataxia.[17] Reversible kava dermopathy characterized by a scaly eruption has been reported in heavy kava drinkers.[18]

**HERB-DRUG INTERACTIONS:** Kava may have additive effects when administered concurrently with benzodiazepines.[19] Kava inhibits cytochrome P450 2E1, 1A2, and 2D6, and can affect the metabolism of drugs that are metabolized by these enzymes.[20-22] Kava may potentiate the sedative effects of anesthetics.[23]

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<th><strong>TAKE HOME POINTS</strong></th>
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<td>Existing data indicate kava's effectiveness as an anxiolytic agent.</td>
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<tr>
<td>Several cases of hepatotoxicity have been reported with use of kava.</td>
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<td>Kava can interact with some prescription medications, such as benzodiazepines (eg, diazepam [Valium], alprazolam [Xanax]).</td>
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**COMMENTS:** Current data support kava’s efficacy against anxiety. It is also considered by some as an alternative to benzodiazepines and antidepressants, the current treatments for anxiety. However, kava and kava-containing products were withdrawn from Canadian, French, and British markets due to concerns about hepatotoxicity. The FDA also issued an advisory about the potential risks of liver injury associated with consumption of kava. Despite this warning, kava continues to be promoted as a relaxant and as an anxiolytic. It should be noted that initial research results stemming from a World Health Organization (WHO) recommendation to study aqueous extracts of kava support the benefits of this herb. Further studies are needed to confirm these findings.

**References:**

**REFERENCES**


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