

Kava: A South Pacific Herb for Anxiety, Tension, and Insomnia

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Kava (*Piper methysticum*) is a shrub that grows on many islands throughout the South Pacific, including Hawaii.¹ The single most widely used herb in the South Pacific, kava is an integral part of the culture and society of many Polynesian and Micronesian peoples, with a long and revered tradition of ritual and ceremonial use. A drink made from the root, also called kava, is drunk at the beginning of all formal civil ceremonies and is given as a welcome to all visiting royalty or highly honored guests.¹ Kava was, and still is, used in almost all phases of life in the islands, such as preparing for a journey or ocean voyage, at initiation and completion of work, and to remove curses, and less formal kava drinking is a common part of many social gatherings.^{2,3}

The sacred nature of kava warranted that the preparation and use always be done with respect.³ The Polynesians prepared the kava beverage by chewing or grinding the dried rhizome, macerating it in cold water, straining off the liquid, and diluting it with water or coconut milk according to traditional procedures.^{3,5} The resulting beverage was calming and relaxing without producing cognitive disturbances. The drink initially caused the mouth to go numb, followed by a mellow, tranquil, and sociable attitude, with the kava drinker attaining a state of contentment and greater sense of well-being.^{2,3}

Captain James Cook was the first Westerner to record the use of kava in the account of his voyage to the South Seas in 1768. Subsequent explorers noted the relaxing, soothing effects of the kava drink, and its ritual use as a mild sedative to produce a state of well-being has been described by numerous anthropologists.¹ In addition to its use as a sedative and mood enhancer, kava has a long history of traditional medicinal use for a wide range of conditions – to counteract fatigue, for asthma and rheumatism, as a cure for cystitis, and to inhibit as well as treat gonorrhea.^{1,3}

ISOLATION OF ACTIVES

Published reports on the properties of kava led to studies aimed at isolating the psychotropic active principle.⁴ Modern research confirms that kava root contains several active ingredients, known as kavalactones, that produce physical and mental relaxation and feelings of well-being, without causing addiction or harmful side effects. In animal studies, kavalactones (also known as kavapyrones) have exhibited anxiolytic, analgesic, anticonvulsant, and muscle relaxant effects, and seem to protect the brain during times of ischemia.^{2,4,6} Studies have indicated that the kavalactones appear to act primarily on the limbic system, the ancient part of the brain associated with emotions and other brain activities.^{2,4} Kavalactones have also been shown in vitro to inhibit the uptake of noradrenaline, whereas serotonin uptake was only slightly affected.⁷ The inhibition of noradrenaline uptake may be responsible for or, at least, contribute to the psychotropic properties of kava.

KAVA FOR THE RELIEF OF ANXIETY AND INSOMNIA

Anxiety disorders are one of the most common psychiatric illnesses in the United States, affecting 12.6% of the general population in any given year.⁸ Anxiety disorders include obsessive-compulsive disorder, agoraphobia, social phobia, simple phobia, post-traumatic stress disorder, generalized anxiety disorder, and panic disorder; the latter two being the most likely to be encountered by practitioners.⁹ Patients with acute anxiety present with symptoms such as heart palpitations, breathlessness, fatigue, nervousness, nausea, and chest pain. Physiologically, the symptoms of anxiety are the direct manifestation of peripheral autonomic nervous system discharge, with noradrenergic neurotransmitters playing a prominent role. Benzodiazepine medications, tricyclic antidepressants, and fluoxetine are typical prescription drugs given to these patients.⁹ However, as side effects are common with these types of medications, herbs such as kava provide a safe, effective alternative.

Kava root extract is currently a commonly prescribed remedy for anxiety throughout Europe.¹ In Germany, the use of kava as a mild sedative has been documented by the Commission E of the Institute for Drugs and Medical Devices. The Commission E reviewed the published data on kava's traditional use, chemistry, pharmacology, toxicology, and human clinical studies and approved kava as an over-the-counter medicine for use in "conditions of nervous anxiety, stress, and restlessness."¹¹ Kava preparations appear to have an efficacy comparable to that of benzodiazepines, but without the potential for physical and psychological dependency and sedative and hypnotic effects.^{2,4} Paradoxically, people taking kava show increased attentiveness and concentration while feeling relaxed.

While kava is prescribed for those with diagnosed anxiety, it is also helpful in relieving the everyday stress and strain of a fast-paced lifestyle. Because it is noted for promoting relaxation while leaving mental acuity intact, it is particularly useful for management of daytime anxiety.^{1,2} Kava also promotes normal, restful sleep, and helps relax skeletal muscles.

DOSAGE AND CONTRAINDICATIONS

Several clinical trials have used a special kava extract standardized to contain 70% kavalactones; however, this high percentage of kavalactones may be sacrificing some of the other constituents that may contribute to the pharmacology of kava. More important than the actual percentage of kavalactones is the total dose and the assurance that the full range of kavalactones is present. The recommended dosage stated in the Commission E monograph is a total daily dose of kava equivalent to 60 to 120 mg of kavalactones for a period not to exceed 3 months without medical supervision.¹ On the basis of clinical studies, the dosage recommendation for anxiolytic effects is 45 to 70 mg of kavalactones 3 times daily.^{5,10} However, daily intake of kavalactones should be limited to 300 mg per day.

The use of kava is contraindicated in pregnancy, nursing, and endogenous depression.¹ However, studies of large groups of patients taking kava extract have demonstrated a low incidence of side effects, which were mild in nature and reversible.⁴ Heavy, chronic consumption of the beverage is associated with a skin rash or a temporary discoloration of skin, hair, and nails that disappears with cessation or reduction of kava intake.^{1,11} In rare cases, allergic skin reactions can occur. There have also been reports of impaired visual accommodation, pupil dilation, and disturbances of oculomotor equilibrium.^{4,12} The Commission E monograph also warns about using kava with other central nervous system-acting substances, such as alcohol, barbiturates, and psychopharmacological agents; and further warns that kava may adversely affect motor reflexes and judgment for driving and/or operating heavy machinery.¹

HUMAN STUDIES

In a recent randomized, double-blind, placebo-controlled study done in Germany, the efficacy of kava was assessed in 58 people with anxiety syndromes not caused by mental disorders.¹⁰ The patients in the kava group received 100 mg of a kava extract standardized to 70% kavalactones 3 times a day (210 mg kavalactones/day) for 4 weeks. Compared to the placebo group, the kava group demonstrated a significant reduction in anxiety symptoms based on several methods of assessment. The researchers concluded that the kava extract was clinically effective in reduction of states of anxiety, tension, and excitedness. No adverse reactions were noted.

Another recent randomized, placebo-controlled, double-blind study was conducted for 25 weeks on 101 outpatients suffering from anxiety and tension of non-psychotic origin.⁹ The daily dose was 300 mg of kava extract, standardized to 70% kavalactones (210 mg kavalactones/day). Based on several methods of assessment, the results of the study indicate that the efficacy of the standardized kava extract was significantly superior to placebo, with long-term treatment showing even greater efficacy than short-term treatment. The researchers concluded that the results support the use of the kava extract “as a treatment alternative to tricyclic antidepressants and benzodiazepines in anxiety disorders, with proven long-term efficacy.” The overall tolerability of the extract was excellent.

INTEGRATING SYSTEMS OF BOTANICAL MEDICINE

While standardized extracts of kava appear to influence anxiety states via the limbic system and possible inhibition of the uptake of noradrenaline, other organ systems that contribute to fatigue, irritability, insomnia, and nervousness do not benefit directly from kava. Integrating the holistic perspective of traditional Chinese medicine adds dimension to what would otherwise be a one-dimensional approach to managing emotional disorders. Combining kava with Chinese herbs that nourish and invigorate the system as a means of reducing anxiety and insomnia supports the cardiovascular system, liver function, and lipid metabolism while providing concentrated levels of plant antioxidants that reduce free radical damage.^{13,14}

“SETTLE THE SPIRIT” WITH CHINESE HERBS

Ancient Chinese medicine treated disturbances of the “spirit” (i.e., emotional unrest, sleeplessness, and restlessness) as manifestations of functional disorders in and among the organs of the body, especially the cardiovascular system and the liver.¹³ Their understanding of the underlying causes of anxiety parallels conventional explanations. Chinese herbs frequently used include rehmannia root (*Rehmannia glutinosa*), red sage root (*Salvia miltiorrhiza*), polygala root

(*Polygala tenuifolia*), poria sclerotium (*Poria cocos*), licorice root (*Glycyrrhiza uralensis*), and schizandra berry (*Schizandra chinensis*).^{13,14} Current research into the phytochemistry of each of these plants supports their traditional use:

- Rehmannia promotes balanced blood sugar with recent evidence suggesting support of the adrenal cortex.¹⁴
- Red sage has demonstrated its ability to relax the system and reduce platelet aggregation, thereby improving the circulation of blood.¹⁴
- Polygala root possesses constituents that bind to benzodiazepene receptors in brain cells producing an anxiolytic effect.¹⁴
- Schizandra is a rich source of antioxidants that protect the heart and support liver function.¹⁴
- Poria has demonstrated sedative properties, regulates water balance, and improves the assimilation of food, thus affording more energy (augmented ch'i) to the body.¹⁴
- Licorice is another rich source of antioxidants and phytoestrogens that support the adrenal glands.¹⁴

By combining kava with traditional Chinese herbs, the anxiolytic effects of kava are reinforced by providing support to multiple organ systems within the body. The addition of B-complex vitamins, vitamin C, and absorbable forms of calcium and magnesium like those found in glycines further supports the central nervous and muscular systems, thus further reinforcing the positive outcome of kava extracts.¹⁵

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