Passionflower is the common name for numerous species of *Passiflora*. Originating in tropical and subtropical regions of the Western hemisphere, passionflower has been used in herbal medicine to treat colic, dysentery, diarrhea, menstrual pain, skin eruptions, conjunctivitis, hemorrhoids, and muscle spasms. A number of studies support passionflower's calming effects on the central nervous system. Recent work suggests that the plant may benefit people who are withdrawing from addictive drugs and may bolster men's libidos. An anxiolytic effect has also been observed.

Passionflower (*Passiflora incarnata*, a.k.a. maypop, apricot vine) is currently thought to be the most medicinally active of the species in the family Passifloraceae. Purple passionflower (*P. edulis*) has often been confused with *P. incarnata*; *P. edulis* is the source of passion fruit. *Passiflora alata* (fragrant granadilla; wing stemmed passionflower) is also called passionflower by some publications, including the U.S. Department of Agriculture's botanical database. Chemical content of the various *Passiflora* species is also poorly established. Researchers disagree on whether its sedative effects are due to indole alkaloids such as harmane, harmaline, and harmol; flavonoids such as apigenin, luteolin, and scopoletin; or a recently isolated trisubstituted benzoflavone. In addition, while one of six alkaloids isolated from *P. incarnata* has been called "passiflorine," believed to be the plant's active principle by some herbalists, the Agricultural Research Service's web site describes passiflorine as inactive, while the Chemical Abstract Service's database's only similar entry is "passiflorin," a steroid-like molecule found in *P. edulis* stems and leaves which would not test positive as an alkaloid.

Ten journal articles on *P. incarnata* have come from a research group at Punjab University of Pharmaceutical Sciences in India since 2001. Focusing on animal experiments, the group has used
painsstakingly fractionated alcohol/water extracts of selected plant parts and has apparently narrowed the field of potential "active principles" of *P. incarnata*, as well as commenting on standardized *Passiflora* products.

This group has not found any bioactivity from extracts of roots or flowers. Inclusion of the whole plant in an extract raised the dose needed for efficacy. Only extracts from *P. incarnata* leaves produced anxiolytic effects. Work on fractionization by this group isolated the trisubstituted benzoflavone mentioned above, which they hope to patent. The group has reported on this novel compound's ability to restore libido in aging male rats, to restore fertility which has been reduced by alcohol or tobacco use, to reduce anxiety while withdrawing from alcohol and, in what may be an error of translation, to restore the libido of male rats which are "addicted to tetrahydrocannabinol." (Tetrahydrocannabinol [THC], a primary active ingredient of *Cannabis sativa* [a.k.a. marijuana], is not addictive.)

Two recent clinical studies from Iran have also been published. One examined a *P. incarnata* extract in conjunction with the drug clonidine for treating symptoms of opium withdrawal. This treatment was compared with clonidine plus placebo in 65 patients. While no significant difference in physical symptoms was found, researchers reported that subjects receiving the *P. incarnata*/clonidine regimen were better able to manage anxiety, irritability, cravings, etc. In the second study, 36 patients with generalized anxiety disorder were treated with either the anti-anxiety drug oxazepam plus a placebo liquid or *P. incarnata* extract plus a placebo tablet. Patients receiving oxazepam had lower anxiety scores than those receiving passionflower for the first 15 days of treatment; after that, there were no significant differences between the groups. However, those in the oxazepam group showed a "higher incidence of job performance impairment."

Passionflower extract is classified as "generally regarded as safe" (GRAS) by the Food and Drug Administration, but there have been some case reports of adverse reactions, including a case of occupational allergic reaction. There have been no reports of herb-drug interactions. Pregnant women are advised to avoid high doses.

— Mariann Garner-Wizard

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