



## Damiana

<b>Description</b>	<p>Damiana leaves have been traditionally used as a respiratory, neurological, and sexual medicine by the indigenous cultures of Mexico. This yellow-flowering shrub typically grows in climates that are hot and humid, including Central and South America, and in the state of Texas. Commercially introduced in the United States in 1874, damiana has historically been used as an aphrodisiac and has been claimed to induce euphoria.</p>
<b>Claims</b>	<ul style="list-style-type: none"><li>• Acts as an aphrodisiac</li><li>• Relieves anxiety and induces relaxation</li><li>• Alleviates depression</li></ul>
<b>Theory</b>	<p>Although there is a clear lack of scientific evidence to support any of the theories for the efficacy attributed to damiana, its seeming ability to induce mild euphoria could support a logical theory that in relatively small quantities, damiana could lead to relaxation and could calm anxiety. Conceivably, those suffering from sexual dysfunction resulting from stress or emotional troubles could benefit from supplementation with this herb.</p>
<b>Scientific Support</b>	<p>It is important to note that only one scientific study exists in the literature (as discussed in the next paragraph) that directly examines any physiological functions or effects of damiana. The essential oil from damiana leaves contains small fragrant substances known as terpenes. A small body of research exists which associates terpenes with several other substances comprising the sexual communication chemicals known as pheromones. Out of four studies mentioning terpenes in relation to sexual behavior, three involve insect mating behavior, while one study found that male white-tailed deer produce terpene-containing pheromones in greater amounts during the breeding season (not exactly compelling "love potion" evidence unless you're a deer or a bug). Furthermore, damiana leaves also contain alkaloids that have been associated with insect pheromones in a variety of studies. Despite this possible link, scientific studies have not been conducted to associate any causative effect of damiana with regards to pheromone production in humans. Perhaps the most viable scientific evidence for the age-old use of damiana as an aphrodisiac involves a single recent study demonstrating that damiana extract binds to the progesterone receptor in human breast cancer cells. Despite the fact that oregano extract was found to bind tightly as well, the ability of damiana extract to affect progesterone detection may explain claims that damiana supplementation can increase libido (importantly, many progesterone-binding extracts can have either a neutral or antagonistic effect instead of an agonistic effect). A variety of scientific studies associate progesterone deficiency, particularly in post-menopausal women, to decreased libido. Thus, if the binding of damiana extract to progesterone receptors indeed mimics the action of progesterone, damiana could theoretically lead to increased libido in women with a progesterone deficiency. Furthermore, because progesterone is one of the major hormones involved in the female reproductive cycle, by the above rationale, one may infer that by possibly affecting progesterone detection, damiana extract could ease the cyclical depression and anxiety often associated with the menstrual cycle. However, due to the lack of any controlled clinical trials, all of the above is pure speculation.</p>

<b>Safety</b>	Damiana leaves have a mild laxative and stool-softening effect, especially when used at high doses. At high doses, damiana has been reported to cause mild euphoria. Since the scientific community has not rigorously studied damiana, the herb is not recommended for women who are pregnant or lactating, for children, or for anyone with a serious medical condition or who is taking prescription medication.
<b>Value</b>	Both capsule and liquid extract forms of damiana cost approximately \$25-\$30 for one month's supply – quite often the herb is combined with other ingredients in a variety of "sexual health" formulas. There is an absence of any controlled studies comparing results after taking damiana versus placebo. Additionally, since potential drug interactions and safety have not been investigated, there seems to be little justification for taking damiana when other remedies exist that are much more reliable and well-documented.
<b>Dosage</b>	It is generally recommended that 400-800mg of damiana be taken three times daily, but dosage recommendations may vary based on the combination of other ingredients in a particular product.
<b>References</b>	1. Auterhoff H, Haufel HP. Contents of Damiana drugs. Arch Pharm Ber Dtsch Pharm Ges. 1968 Jul;301(7):537-44. 2. Lowry TP. Damiana. J Psychoactive Drugs. 1984 Jul-Sep;16(3):267-8. 3. Zava DT, Dollbaum CM, Blen M. Estrogen and progestin bioactivity of foods, herbs, and spices. Proc Soc Exp Biol Med. 1998 Mar;217(3):369-78.