

# Saw Palmetto for Prostate Disorders

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**Saw palmetto is an herbal product used in the treatment of symptoms related to benign prostatic hyperplasia. The active component is found in the fruit of the American dwarf palm tree. Studies have demonstrated the effectiveness of saw palmetto in reducing symptoms associated with benign prostatic hyperplasia. Saw palmetto appears to have efficacy similar to that of medications like finasteride, but it is better tolerated and less expensive. There are no known drug interactions with saw palmetto, and reported side effects are minor and rare. No data on its long-term usage are available. The herbal product also has been used to treat chronic prostatitis, but currently there is no evidence of its efficacy. (Am Fam Physician 2003;67:1281-3. Copyright© 2003 American Academy of Family Physicians.)**

**S**aw palmetto, also known as *Serenoa repens* or *Sabal serrulatum*, is an herb that is most commonly used to treat problems related to benign prostatic hyperplasia (BPH). The medicinal element of saw palmetto is taken from the partially dried ripe fruit of the American dwarf palm tree, which is indigenous to the coastal regions of the southern United States, from the Carolinas and Florida to California.

BPH is a nearly universal result of the aging process in men. As the prostate gland enlarges, it can cause both obstructive and irritative symptoms; however, the size of the prostate gland is not predictive of the symptoms that patients experience.

Saw palmetto is widely used in other countries; for example, it is used in 50 percent of treatments for BPH in Italy and in 90 percent of such treatments in Germany.<sup>1</sup> The active part of the plant is the sterols and free fatty acids found in the berry. The particular solvent used in the extraction process affects the resulting formulation of the product. The most widely studied form of saw palmetto is Permixon, which uses the solvent hexane; other formulations have used ethanol, methanol, and liquid carbon dioxide as solvents. Historically, saw palmetto was administered with nettle root and pumpkin seeds, and some modern formulations include these elements.

It is unclear which components are the most active, and the mechanism of action is

not fully understood. Some of the mechanisms proposed include anti-inflammatory activity,<sup>2</sup> blocked conversion of testosterone to dihydrotestosterone (DHT),<sup>3,4</sup> and prostate epithelial involution similar to effects noted with the use of finasteride (Proscar).<sup>5</sup>

## Relief of Symptoms

Treatments for BPH can be evaluated by their effect on symptoms such as diminished urine stream, post-void dribbling, overflow incontinence, and urinary retention, or by less useful measures such as urine flow rate, changes in prostate size, and residual volume. In a Cochrane Review, investigators conducted a meta-analysis of randomized controlled studies comparing saw palmetto with placebo or other drugs.<sup>6</sup> [Evidence level A: systematic review of randomized controlled trials RCTs] The review combined the results of 21 trials with durations of four to 48 weeks. The 21 studies included a total of 3,139 men with a mean age of 65 years (range: 40 to 88 years). According to the International Prostate Symptom Scale, these men had moderate symptoms, with an average urologic score of 14.4 points out of a possible 35 (moderate BPH symptoms range from eight to 19).<sup>6</sup> In the 13 studies that reported symptom scores, saw palmetto improved symptom scores, individual symptoms, and flow measures more than placebo. Patients and physicians were more likely to report improvement in symptoms with saw palmetto treatment than with placebo. In the

See page 1226 for definitions of strength-of-evidence levels.

TABLE 1

**Key Points About Saw Palmetto**

Efficacy	Reducing symptoms of BPH: effective Treatment of chronic prostatitis: evidence lacking
Adverse effects	Mild gastrointestinal distress: infrequent Not known to interfere with the diagnosis of prostate cancer
Interactions	No known drug interactions
Dosage	Varies; most studies have used 160 mg twice daily or 320 mg once daily
Cost	\$6 to \$20 per month, depending on brand, for a dosage of 160 mg twice daily
Bottom line	Safe herbal medicine; effective for treatment of symptoms of BPH

*BPH = benign prostatic hyperplasia.*

12 studies that reported nocturia results, saw palmetto reduced nocturia by 25 percent compared with placebo.

In two studies, saw palmetto and finasteride had similar positive effects on urinary symptom scores and peak urine flow. Adverse effects caused by saw palmetto were mild and infrequent and comparable to side effects from placebo. Withdrawal rates among patients receiving placebo, saw palmetto, and finasteride were 7.1, 8.9, and 9.0 percent, respectively.

Results similar to those in the Cochrane Review were produced by a more recent review.<sup>7</sup> [Evidence level A: RCTs] Saw

palmetto has not been compared with surgical approaches in the treatment of BPH. Saw palmetto is also widely used for treatment of chronic prostatitis, although scientific evidence of benefit is lacking.

### Contraindications, Adverse Effects, and Interactions

The primary side effect occurring in humans is gastrointestinal distress, which is mild and can be minimized by taking saw palmetto with food. Saw palmetto is believed to be quite safe, although formal toxicology studies have not been completed. One study<sup>8</sup> found no mutagenic or teratogenic effects in rats and dogs that were fed saw palmetto in a dosage of 2 g per kg daily for six months, and this dosage was well tolerated. No clinically relevant changes in laboratory parameters have been found in human clinical trials.<sup>9</sup>

There has been some concern that saw palmetto could mask prostate cancer by lowering prostate-specific antigen (PSA) levels. However, a randomized study<sup>10</sup> of more than 1,000 patients did not demonstrate this effect on PSA levels. The same study showed that finasteride decreased PSA levels by 41 percent.

### Dosage

Clinical studies have used a dosage of 160 mg twice daily or 320 mg once daily of a lipophilic extract containing 80 to 90 percent of the volatile oil. A daily dosage of 480 mg was not found to be any more effective in a six-month study of dosages.<sup>8</sup> Teas are not considered to be effective because they do not contain the volatile oils. The whole berries can be used at the recommended dosage of 1 to 2 g daily.<sup>11</sup> As with most herbal medications, the recommended dosage for saw palmetto may vary because of the lack of standardization of such products in the United States.

Herbal medication products that are commonly available for purchase may not be the same as those used in clinical studies and, therefore, may not produce the same results. There are no known drug interactions with

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saw palmetto. The cost for typical saw palmetto products ranges from \$6 to \$20 per month at a dosage of 160 mg twice daily.

### Final Comment

Saw palmetto is an effective treatment for the symptoms of BPH. It appears to be as effective as finasteride and is better tolerated, less expensive, and less likely to decrease PSA levels. No research has evaluated the effect of saw palmetto on long-term outcomes in patients with BPH. *Table 1* reviews the efficacy, safety, tolerability, and cost of saw palmetto.

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