

## Medicine, Science and Health: BPH and Saw Palmetto

Benign Prostatic Hyperplasia (BPH) is, for a lot of men, one of the sure signs that they are getting older. It affects many men over the age of forty, more than half of men over the age of sixty and possibly upwards of 90 percent of men in their seventies and eighties.

BPH refers to the enlargement of the prostate. During the course of a man's life time the prostate experiences two main periods of growth – one occurring early in puberty when the prostate doubles in size and the second phase beginning around the age of 25. As the prostate continues to grow so the symptoms of BPH may develop although usually problems do not occur until someone reaches his 40's at the earliest.

Essentially, BHP is an overgrowth of cells in the prostrate gland. As the prostate enlarges so the layer of tissue surrounding it stops it from expanding but causes the gland itself to press against the urethra. The bladder wall gradually becomes thicker and irritable which in turn means that the bladder starts to contract even when it only contains small amounts of urine which, of course, leads to a more frequent, and often urgent, need to urinate. Eventually, the bladder weakens and loses the ability to empty itself properly. Not only do men report symptoms of having to urinate more frequently, often during the night so their sleep is disrupted, but the urine flow itself may decrease or become a "stop- start" flow, and they are often left with the feeling that they haven't completely emptied their bladder.

As symptoms worsen, drugs such as tamsulosin and finasteride are often prescribed. An alternative is saw palmetto. Saw palmetto (*Serenoa repens* or *sabal serrulatum*) is a herbal product, originally used by Native Americans as a treatment for urinary problems. The saw palmetto plant itself (or American dwarf palm tree) is indigenous to the coastal regions of the southern United States. The active components (the sterols and free fatty acids) are extracted from the plant's dark purple berries.

Exactly how saw palmetto works is not, however, completely understood. Various studies have shown that saw palmetto appears to have the same efficacy as conventional medications in treating the symptoms of BHP, but is better tolerated and less expensive. For example, a review carried out by the independent Cochrane Collaboration combined the results of 21 trials with durations of 4 to 48 weeks in which a total of 3139 men had participated. The mean age of the participants was 65 years with an age range of 40 to 88 years. By using the International Prostate Symptom Scale, the men within the reviewed studies had moderate symptoms. In the 13 studies that reported symptom scores, saw palmetto improved symptom scores, individual symptoms, and flow measures more than the placebo. In the 12 studies that reported nocturia (night time urination) results,

saw palmetto reduced nocturia by 25 percent compared with placebo.

With no known drug interactions and with any reported side effects being minor and rare, it is hardly surprising that saw palmetto has become an extremely popular over the counter supplement for prostate health. Indeed, in Germany, Austria, Italy, and other European countries, saw palmetto is an accepted medical treatment for BPH. In the USA over 2 million men take saw palmetto as a treatment for BPH.

However, a recently published study in the New England Journal of Medicine has cast doubt over the efficacy of saw palmetto. The research study (a double-blind trial) was carried out by a team of doctors, led by Dr Stephen Bent, at the San Francisco VA Medical Center and the Northern California Kaiser Permanente Division of Research. The 225 participants, all over the age of 49 had moderate to severe symptoms of BHP. The researchers randomly assigned the men to either one year of treatment with saw palmetto extract (160 mg twice a day) or placebo. They were then assessed regularly to see if there had been any change in their condition, or in urinary function.

The team looked specifically at 2 primary outcome measures - changes in the scores on the American Urological Association Symptom Index (AUASI) and the maximal urinary flow rate. Secondary outcome measures included changes in prostate size, residual urinary volume after voiding, quality of life, laboratory values, and the rate of reported adverse effects. However, they found that there was no statistically significant difference between the group taking saw palmetto and those taking the placebo at any time point during the study, with the change in symptoms over the time period of the study being almost identical between the groups.

The researchers also looked at particular groups of patients, comparing those with more and less severe symptoms and those with larger and smaller prostates - but again they did not find any difference in any of the subgroups between those taking saw palmetto and those taking the placebo. The research team inevitably concluded that saw palmetto did not improve symptoms or objective measures of BPH.

References:- Bent S, Kane C, Shinohara K, Neuhaus J, Hudes ES, Goldberg H, Avins AL. Saw palmetto for benign prostatic hyperplasia. N Engl J Med. 2006 Feb 9;354(6):557-66. Saw Palmetto: Berry Good for the Prostate, Wellness Letter, December 2005: National Kidney and Urologic Diseases Information Clearinghouse Benign Prostatic Hyperplasia