



## Benign Prostatic Hyperplasia (BPH)

The prostate is a small gland, approximately the size of a walnut, surrounding the neck of the bladder and urethra in men. Its major function in life is to contribute to seminal fluid, or cum. As it enlarges or swells, which it does normally in most men as they age as a response to the male hormone testosterone, it can put pressure on the urethra, or urine tube, acting a bit like a clamp on a garden hose. This condition is known as benign prostatic hyperplasia (BPH). This name has replaced the older terminology benign prostatic hypertrophy. but they refer to the same condition.

Half of all fifty-year-old men have some degree of BPH. A man with BPH has to urinate more often because the bladder empties incompletely, and hence refills more rapidly to full signaling another trip to the bathroom. As the prostate enlarges, the clamp squeezes the hose, and as a result the urine stream has less force and the size of the stream decreases. Also, as the prostate enlarges there is an increased risk of urinary tract infection due to the partially full bladder which makes a great place for bacteria to multiply, and the increased back pressure on the kidneys may lead to kidney damage.

Men with BPH often experience some dribbling of urine into the under-shorts after putting the penis away. This is again the result of incomplete emptying of the urine tube as you shake or squeeze – that urine left in the tube then slowly dribbles out once you get underway.

If the prostate enlarges too much, urination may become difficult, requiring a lot of straining to get the stream started, or even requiring a sitting position to urinate. If the prostate enlarges suddenly, often the result of taking a cold medication (like an antihistamine), the urine stream may be shut off completely with rapidly increasing discomfort as the bladder stretches painfully. This often requires an emergency trip to the physician to relieve the blockage of the swollen prostate by inserting a Foley's catheter into the urethra.

If the BPH becomes serious enough to cause obstruction many doctors will advise some form of surgical or non- surgical intervention to open up the urine outflow again.

**Helpful Nutritional supplements:**

- In 1941, Dr. William Cooper and James Hart wrote about using **flaxseed oil** in the treatment of BPH.<sup>1</sup> In this study, nineteen men were given 2,000 mg of flaxseed oil per day. The dose was given for three days and then reduced to 1,300 mg per day for several weeks. After that time, a maintenance dose of less than 1,000 mg was used. All patients began retaining less urine; 63% had no residual urine at the conclusion of the testing. Night time urination problems stopped in 68%. All patients noted less fatigue and leg pain along with an increase in sexual libido. Dribbling was eliminated in 95% of the cases. Urine stream was more forceful and the size of the prostate was reduced. Unfortunately, there has been no recent follow-up to this preliminary research.
- Researchers have noticed that the portion of the seminal fluid for which the prostate is responsible is high in the **mineral zinc**. In a study of nineteen males, those with BPH had normal levels of zinc in the blood, which did not increase when zinc supplements were given. However, their semen zinc levels increased.

This group was given 150 mg of zinc for two months, and then decreased to 50–100 mg. In fourteen of the nineteen men (74%), the prostate shrunk in size. This was verified by rectal palpation, X-ray, and endoscopy.<sup>2</sup> Unfortunately, this study was never published, and there is no other study using men as subjects. Animal studies have confirmed this finding, but only using locally injected zinc. While the research supporting zinc is therefore very weak, some doctors of natural medicine nonetheless recommend its use.<sup>3</sup>

Because zinc competes with copper for absorption, individuals who take 30 mg or more of zinc per day for more than a few months should balance the zinc with copper in order to prevent copper deficiency. For 30 mg per day of zinc, 2 mg per day of copper is usually taken. For 60–90 mg per day of zinc, 3–4 mg per day of copper is a reasonable amount. Zinc intake in excess of 300 mg per day may impair immune function. Zinc has been reported to increase glycosylation with diabetes, and may elevate the Hg A1C. Zinc also competes for absorption with iron, calcium, and magnesium. A multimineral supplement will prevent mineral imbalances that can result from taking high doses of zinc for extended periods of time.

- Another group of researchers looked at the amino acid content (the building blocks of protein) of prostate fluid. They determined that the fluid contained high amounts of **three key amino acids: glycine, alanine, and glutamic acid**; a controlled study of forty-five men with BPH was then done. After three months, 66% of the patients treated with this amino acid mixture showed reduced urinary urgency, 50% had less delay in starting urine flow, 46% had less difficulty in maintaining flow, and 43% had reduced frequency. No side effects were observed,<sup>4</sup> however individuals with kidney or liver disease should not consider high intakes of amino acids without consulting their doctor.

- **Beta-sitosterol** is another nutrient that may benefit men with BPH. One double-blind study of 100 men showed that beta-sitosterol, taken either as 20 mg of beta-sitosterol three times per day or a placebo for six months, improved urine flow, reduced the size of the prostate, and led to subjective feelings of improvement of BPH.<sup>5</sup>

**Helpful Herbs:** In Europe, herbal supplements have become one of the leading methods for managing early stages of BPH. Successful treatment of BPH with herbs is an ongoing process, and as such, men with BPH will need to take these helpful herbs indefinitely. As always, I suggest that any nutritional support for BPH should be done after consulting with your doctor.

- The fat-soluble extract of the **Saw Palmetto Berry** has become the leading natural treatment for BPH. This extract, when used regularly, has been shown to help keep symptoms in check.<sup>7</sup> Saw palmetto may inhibit 5-alpha-reductase, the enzyme that converts testosterone to its more active form, dihydrotestosterone (DHT). Saw palmetto also blocks DHT from binding in the prostate.<sup>8</sup> Studies have used 320 mg of the standardized (85% liposterolic acids) herbal extract, capsules, or tablets per day.

In a recent study, a group of 305 patients with mild to moderate symptoms of BPH was given 160 mg of saw palmetto twice a day for three months; the study reported an 88% success rate.<sup>9</sup>

Since saw palmetto reduces levels of 5-alpha-reductase, an additional benefit of this herb may be reduced risk of developing prostate cancer. While no tests have been done to show that reducing this enzyme's activity will reduce prostate cancer risk, lower levels of this enzyme are

detected in men in countries with lower incidence of prostate cancer.<sup>10</sup>

- An extract from the bark of the African pine tree **Pygeum africanum** has also been used for BPH. Approved for use in Germany, France, and Italy, pygeum has anti-inflammatory and decongesting properties that help with early-stage BPH.<sup>11</sup> Studies have used 50–100 mg of pygeum (standardized to 13% sterols) herbal extract, capsules, or tablets twice per day. Pygeum africanum contains three compounds that help the prostate: pentacyclic triterpenoids have a diuretic action; phytosterols act as an anti-inflammatory; ferulic esters help rid the prostate of any cholesterol deposits that accompany BPH.

- Another herb for BPH is a concentrated extract made from the roots of the **nettle plant (Urtica dioica)**. The root extract may increase the volume and maximum flow of urine in men with early-stage BPH.<sup>12</sup> It has been successfully combined with both saw palmetto and pygeum for treatment of BPH. An appropriate amount appears to be 120 mg nettle root extract, capsules, or tablets twice per day or a 2–4 ml tincture three times daily.

### **Western Medicine Offerings:**

- **Alpha Blockers – (Flomax, Uraxotrol, Hytrin, Cardura, etc.)** these serve to relax the muscles around the urinary outflow tract of the bladder. Their effect is noted quickly, often within several weeks, but only while taking them regularly. Unfortunately there are a small percentage of men who suffer from impotence with this class of medications, and because Hytrin and Cardura are also used to treat high blood pressure, these two can cause lightheadedness and dizziness, especially when standing up. Because of these side effects, some men may not be able to take Alpha Blockers.

- **Finasteride – (Proscar)** – an anti-androgen, it inhibits 5-alpha-reductase, the enzyme that converts testosterone to its more active form, dihydrotestosterone (DHT), which is felt to fuel the growth of the prostatic stroma. Taken once daily, it too may cause impotence in some men. This medication may take several months to see full effect, and is only effective while taking it regularly. Some recent research has caused concern for long term use of Proscar - it can lead to

more aggressive forms of prostate cancer, so use of this medication in particular must be carefully discussed!

• **Procedural Interventions** – if medications fail, or symptoms are too advanced, many options are available today. From less invasive Water Induced Thermotherapy, Transurethral Microwave Thermotherapy, High Frequency Focused Ultrasound, Interstitial Laser Coagulation, to the more invasive and traditional Transurethral Resection of the Prostate (TURP), Transurethral Laser Ablation, and open prostatectomy. Obviously these are for a much more advanced stage of BPH, and carry the risks of anesthesia, when it is used, and of the surgical procedure itself. These need thorough discussion with your physician before selecting them as an option.

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