**Beta-Sitosterol (phytosterols) and the Prostate**

Scientific clinical studies indicate that beta-sitosterol consistently improves urinary symptoms related to prostate enlargement. As men grow older, cells in their prostate glands often overgrow, causing a swelling that obstructs the bladder opening, resulting in slowness in urination and bladder emptying. This non-malignant enlargement of the prostate gland causes pressure on the urethra, acting like a clamp. The result is a weak urinary stream, hesitancy, and other uncomfortable urinary symptoms such as increased nighttime frequency and urgency. While a man aged 31 to 40 has only an 8% chance of having benign prostate enlargement, the risk increases to 40-50% in men aged 51 to 60 and to over 80% in men older than 80.¹

For the past several decades, European doctors have routinely prescribed a variety of plant-based drugs to millions of men to treat benign prostate enlargement and lower urinary tract symptoms, especially beta-sitosterol. Beta-sitosterol is now being actively promoted in new prostate health supplement products in the United States.

Multiple randomized studies have confirmed the efficacy of beta-sitosterol in alleviating the types of prostate discomfort that aging men encounter. In a randomized, double-blind, placebo-controlled, study of 200 men with benign prostate enlargement (BPE), half the group received 180 mg of beta-sitosterol daily, while the other half received placebo. After six months, the beta-sitosterol group saw urinary flow improve almost 35%, compared to only 11% in the placebo group.² Significant improvements were also seen in other BPE measures. Another study was performed and the results were published in the British Journal of Urology. The study involved 177 patients with benign prostate enlargement. Patients received 130 mg of beta-sitosterol each day and were monitored for over six months. The results with beta-sitosterol were comparable to those seen with the commonly prescribed drug Proscar®, used to treat benign prostate enlargement.³

A study using the prostate cancer cell line LNCaP (an androgen-dependent tumor) showed that beta-sitosterol decreased cancer cell growth by 24% and induced apoptosis (programmed cell death) fourfold.⁴ Growth of the human prostate cancer PC-3 cell line (androgen-independent) implanted in mice was tested with a 2% phytosterol mixture. In in-vitro studies, beta-sitosterol inhibited the growth of PC-3 cells by 70%. Phytosterols also inhibited the invasion of PC-3 cells into Matrigel-coated membranes by 78% (a measure of cancer invasiveness). The researchers concluded that phytosterol indirectly (in vivo as a dietary supplement) and directly (in tissue culture media) inhibited the growth and metastasis of PC-3 cells.⁵

The use of phytosterols with high beta-sitosterol content clearly has potential for supporting prostate health.

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