

## **Soy Protein Isolates May Help Prevent Prostate Cancer**

Cancer Weekly -- July 31, 2007 -- Research findings, "Isoflavone-rich soy protein isolate suppresses androgen receptor expression without altering estrogen receptor-beta expression or serum hormonal profiles in men at high risk of prostate cancer," are discussed in a new report. "The purpose of this study was to determine the effects of soy protein isolate consumption on circulating hormone profiles and hormone receptor expression patterns in men at high risk for developing advanced prostate cancer. Fifty-eight men were randomly assigned to consume 1 of 3 protein isolates containing 40 g/d protein: 1) soy protein isolate (SPI+) (107 mg/d isoflavones); 2) alcohol-washed soy protein isolate (SPI-) (<6 mg/d isoflavones); or 3) milk protein isolate (0 mg/d isoflavones)," scientists writing in the Journal of Nutrition report.

"For 6 mo, the men consumed the protein isolates in divided doses twice daily as a partial meal replacement. Serum samples collected at 0, 3, and 6 mo were analyzed for circulating estradiol, estrone, sex hormone-binding globulin, androstenedione, androstenediol glucuronide, dehydroepiandrosterone sulfate, dihydrotestosterone, testosterone, and free testosterone concentrations by RIA. Prostate biopsy samples obtained pre-and postintervention were analyzed for androgen receptor (AR) and estrogen receptor-beta expression by immunohistochemistry. At 6 mo, consumption of SPI+ significantly suppressed AR expression but did not alter estrogen receptor-beta expression or circulating hormones. Consumption of SPI-significantly increased estradiol and androstenedione concentrations, and tended to suppress AR expression ( $p=0.09$ )," wrote J.M. Hamilton-Reeves and colleagues, University of Minnesota.

The researchers concluded: "Although the effects of SPI-consumption on estradiol and androstenedione are difficult to interpret and the clinical relevance is uncertain, these data show that AR expression in the prostate is suppressed by soy protein isolate consumption, which may be beneficial in preventing prostate cancer."

Hamilton-Reeves and colleagues published their study in the Journal of Nutrition (Isoflavone-rich soy protein isolate suppresses androgen receptor expression without altering estrogen receptor-beta expression or serum hormonal profiles in men at high risk of prostate cancer. Journal of Nutrition, 2007;137(7):1769-75).