Curcumin May Help Prevent Prostate Cancer Risk

By Greg Arnold, DC, CSCS, August 23, 2010, abstracted from “Curcumin interrupts the interaction between the androgen receptor and Wnt/b-catenin signaling pathway in LNCaP prostate cancer cells” printed online August 3, 2010 in Prostate Cancer and Prostatic Diseases

Link - http://www.nowfoods.com/BasicArticles/080336.htm

Prostate cancer is the second most deadly cancer in men (lung cancer is the number one killer). It caused the death of nearly 31,000 men in 2002 (1), with 234,460 new cases and over 27,000 deaths in 2006. The 5-year survival rate is 100% if found early but plummets to 34% if found after it has spread (2).

Fortunately, nutrition offers a number of ways to help maintain prostate health and include vitamin D (3), green tea (4), flaxseed (5), soy (6) and vitamin E (7). Other lifestyle choices, such as getting more exercise (8) and minimizing starchy food intake (9), may also help. Now a new lab study (10) has found that curcumin, the ingredient in curry that has been suggested to benefit liver (11) and mental health (12) may also have prostate benefits.

In the study, researchers exposed curcumin in amounts ranging from 15-30 microMolar (equal to 33 mg per day in humans; due to very limited absorption, the normal amount achieved in supplementation is 0.1 micromolar) (13) to prostate cancer cells called LNCaP cells (14). Curcumin was able to significantly reduce activity on prostate cells of a receptor called Androgen Receptor, whose uncontrolled activity has been found to be a primary contributor to the progression of prostate cancer (15). In addition to the Androgen receptor, curcumin also significantly affected the activity of a protein called beta-catenin, which directly affects the activity of the Androgen Receptor (16). Specifically, 15 microMolar decreased the interaction between Androgen Receptor and beta-catenin by 20%, 20 microMolar decreased interaction by 50%, 25 microMolar decrease interaction by 85%, and 30 microMolar decreased interaction by 90%.

For the researchers, “These findings suggest that curcumin...might have a significant role in mediating inhibitory effects on prostate cancer cells.”

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