Broccoli Chemicals May Reduce Prostate Cancer Incidence

British researchers recently reported that broccoli consumption results in significant genetic changes associated with protection against prostate cancer.[1] These findings build on numerous observational studies showing that greater consumption of broccoli and other cruciferous vegetables is associated with a reduced risk of prostate cancer.[2,3]

Investigators recruited 22 men, 55-70 years old, with a pre-existing diagnosis of high-grade prostatic intraepithelial neoplasia (PIN), the pre-invasive stage of prostate cancer. Subjects were randomly assigned to consume either a broccoli-rich diet or a control diet for 12 months. Gene expression profiles from prostate tissue samples were analyzed before, during, and after the study period. Men on the broccoli diet experienced "complex changes to signaling pathways associated with inflammation and carcinogenesis in the prostate."[1]

These changes evidently occur when cruciferous vegetable chemicals known as isothiocyanates interact with signaling protein fragments circulating in the bloodstream. In essence, broccoli isothiocyanates promote hundreds of genetic changes, by switching off genes that promote cancer growth, and by switching on genes that fight cancer.

—Dale Kiefer

1. *PLoS ONE.* 2008 Jul 2;3(7):e2568.
2. *Cancer Lett.* 2008 Oct 8;269(2):291-304.
3. *Nutr Cancer.* 2004;50(2):206-13.

White Tea Fights Fat

In an article published online in the journal *Nutrition & Metabolism*, researchers in Germany reveal that an extract of white tea helps prevent the formation of mature adipose (fat) cells in culture, as well as reduces the fat content of these cells, which could help reduce body fat.*

Marc Winnefeld and his associates administered varying concentrations of a solution containing 3% white tea to cultures of human preadipocytes, which differentiate into fat cells in a process known as adipogenesis. Treatment with white tea was shown to reduce adipogenesis without affecting cell viability. In an additional experiment using mature adipocytes, mobilization of fat occurred in cells treated with white tea.

The researchers believe that the polyphenol epigallocatechin-3-gallate (EGCG), along with the methylxanthines caffeine and theobromine that are present in white tea, are responsible for the effects observed in the current study.

–Dayna Dye

* *Nutr Metab (Lond).* 2009 May 1;6(1):20.

More Dietary Potassium as Important as Less Sodium For Cardiovascular Health

New research suggests that *increasing* one's intake of potassium may be just as important as *decreasing* one's intake of sodium for optimal cardiovascular health.* For many years doctors have stressed that in order to maintain healthy blood pressure, people should reduce their intake of table salt, the greatest source of dietary sodium.

Investigators affiliated with Harvard Medical School gathered data from more than 2,000 men and women with pre-hypertension, whose progress was monitored for 10 to 15 years. Sodium to potassium excretion rates from 24-hour urine collections were compared with the incidence of cardiovascular disease events, such as stroke, heart attack, or death from cardiovascular disease.

"A higher sodium to potassium excretion ratio is associated with increased risk of subsequent cardiovascular disease, with an effect stronger than that of sodium or potassium alone," researchers concluded. In essence, this means that it may be just as important to increase potassium intake as it is to reduce sodium intake, in order to protect cardiovascular health.

—Dale Kiefer

* *Arch Intern Med.* 2009 Jan 12;169(1):32-40.