

High fiber diet prevents prostate cancer progression

January 9 2013, by Garth Sundem

(Medical Xpress)—A high-fiber diet may have the clinical potential to control the progression of prostate cancer in patients diagnosed in early stages of the disease.

The rate of prostate cancer occurrence in Asian cultures is similar to the rate in Western cultures, but in the West, prostate cancer tends to progress, whereas in Asian cultures it does not. Why? A University of Colorado Cancer Center study published in the January 2013 issue of the journal [Cancer Prevention Research](#) shows that the answer may be a high-fiber diet.

The study compared mice fed with of inositol hexaphosphate (IP6), a major component of high-fiber diets, to control mice that were not. Then the study used MRI to monitor the progression of prostate cancer in these models.

"The study's results were really rather profound. We saw dramatically reduced tumor volumes, primarily due to the anti-angiogenic effects of IP6," says Komal Raina, research instructor at the Skaggs School of [Pharmaceutical Sciences](#), working in the lab of CU Cancer Center investigator, Rajesh Agarwal.

Basically, feeding with the active ingredient of a high-fiber diet kept [prostate tumors](#) from making the new blood vessels they needed to supply themselves with energy. Without this energy, [prostate cancer](#) couldn't grow. Likewise, treatment with IP6 slowed the rate at which

prostate cancers metabolized glucose.

Possible mechanisms for the effect of IP6 against metabolism include a reduction in a protein called GLUT-4, which is instrumental in transporting glucose.

"Researchers have long been looking for genetic variations between Asian and Western peoples that could explain the difference in [prostate cancer progression](#) rates, but now it seems as if the difference may not be genetic but dietary. Asian cultures get IP6 whereas Western cultures generally do not," Raina says.

The research provides the [cover image](#) of this month's issue of the journal.

More information: [cancerpreventionresearch.aacrj...tent/6/1/40.abstract](#)

Provided by University of Colorado Denver

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