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## **Green tea may protect the bladder from becoming inflamed**

ANAHEIM, Calif., May 20 ·Herbal agents could be used to treat inflammatory bladder diseases, according to a preliminary study that looked at the ability of green tea to protect bladder cells from inflammation. The University of Pittsburgh School of Medicine study, being presented at the annual meeting of the American Urological Association (AUA) in Anaheim, Calif., found that components of green tea protected bladder cells from damage in culture. The study is Abstract 299 in the AUA proceedings.

Green tea, reported to have many health benefits, is rich in powerful antioxidants that make it a possible remedy for many medical conditions. It is comprised of catechins ·plant metabolites that provide it with many anti-oxidative properties.

"We discovered that catechins found in green tea protected both normal and cancerous bladder cells from inflammation when we exposed the cells to hydrogen peroxide," said Michael B. Chancellor, M.D., professor of urology and gynecology at the University of Pittsburgh School of Medicine. "Although further studies are needed, these results indicate herbal supplements from green tea could be a treatment option for various bladder conditions that are caused by injury or inflammation."

In the study, normal and cancerous bladder cells were exposed to two major catechin components of green tea, epigallocatechin gallate (EGCG) and epicatechin gallate (ECG), for 23 hours. Both significantly protected cell lines from exposure to hydrogen peroxide, which damages or kills cells. The concentrations of EGCG and ECG used in the study were at levels that may be achieved through dietary intake.

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Approximately ten million American adults have problems controlling their bladders. Bladder disease affects both men and women and can include incontinence or interstitial cystitis, a

chronic inflammatory condition that causes frequent, urgent and painful urination and pelvic discomfort.

Co-investigators of the study include Shelby Morrisroe, M.D., Christian Coyle, Ph.D., Brian Phillips, Ph.D., William de Groat, Ph.D., and Naoki Yoshimura, M.D., Ph.D., all with the University of Pittsburgh School of Medicine.

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