Prostate Cancer Prevention Newsletter

Improving Health and Reducing Prostate Cancer Risk for Men in their 40s, 50s, and Older!

Prevent Prostate Cancer by 2015

Volume 2, Issue 1
March 2006

APCaP
Alliance for Prostate Cancer Prevention

Fewer Black Men Using Prostate Cancer Screening

Black Men also have a higher incidence and mortality rate for prostate cancer: Is there a link between low screening and higher mortality rates?

According to the National Cancer Institute, the risk of prostate cancer is dramatically higher among blacks, compared with intermediate levels of risk among whites, and the lowest risk levels among native Japanese. Research has also shown that survival is associated with ethnicity, with 5-year survival being higher for whites compared to blacks for localized, regional, or metastatic prostate cancer. Some research indicates that black men have a 50 percent higher incidence of prostate cancer and more than double the mortality rate than white men. Conflicting data have been published regarding the causes of these outcomes, but some evidence shows that access to care and economics may influence prostate cancer mortality among black men.

New research suggests that black men with a family history of the disease, who are most at risk for aggressive prostate cancer, are the least likely to get screening even during peak ages of risk. According to a study published in the February 2006 issue of *Cancer*, only 25 percent of black men during peak ages of 60-69 are screened using the common blood test that measures prostate specific antigen levels, and 36 percent get annual digital rectal exams. Black males are diagnosed with prostate cancer at an average age of 65. However, annual prostate cancer screening for black men is actually recommended by age 40.

This study, funded by the National Institute of Health and concluded in 2004, indicates that just under 50 percent of all high-risk black males get blood tests and 38 percent get physical exams. Sixty-five percent of black males without a family history get the blood test and 45 percent get physical exams. By comparison, 81 percent of white males age 60-69 get blood tests and 68 percent get physical exams.

African American men have twice the incidence and mortality rate compared to Caucasians

"Healthy black men who have several first-degree relatives with prostate cancer are much less likely to have ever gotten a prostate screening than black men without a family history and white men in the general population," said Dr. Sally Weinrich, a nursing professor involved with the study. "However, these are the men who have a higher-than-average risk because of their positive family histories. Hereditary forms of prostate cancer are usually diagnosed at an earlier age than non-hereditary prostate cancer."

"Black men have the right to be informed about prostate cancer screening options," she said. "We need additional research to study the reasons why black men with a positive family history have lower screening rates than black men in general." Physicians should ask men specific questions about their family history. Men should also ask their families questions about who has had cancer and at what age they were diagnosed, according to experts.

Because black men have a higher incidence and mortality rate with prostate cancer, the current research raises the question about whether or not there is a potential link between black men receiving less prostate screening and their higher mortality rate. More research is needed to explore this potential association. The bottom-line is that more black men need prostate cancer screening, and the public health system needs to address how to provide this population with better health care for prostate cancer disease.

www.apcap.org

1-888-50-APCAP or 1-888-502-7227

APCaP seeks the collaboration of public/private business leaders, legislators, health providers/ administrators, researchers, federal/state/local health officials, and prostate cancer advocates into coordinated cohesive forums to enhance and promote prostate cancer awareness, education, research, and primary/secondary prevention programs. This diversified stakeholder group seeks to reach out to men in their 40's and 50's, and their wives or partners, to educate them about the basics of prostate cancer and what can aid in its prevention. APCAP accomplishes this through physician lectures, a newsletter, and website. APCaP also evaluates and implements ambitious plans that are designed to eliminate prostate cancer as a health threat in the United States by 2015.

Newsletter Editor:
Jeannine Walston of Healing Focus, www.healingfocus.org

Vitamin D Reduces Prostate Cancer Risk

Daily doses of Vitamin D may reduce the risk of prostate cancer, as well as colon, breast, and ovarian cancer, according to a review in the February 2006 *American Journal of Public Health*. The findings resulted from a systematic review of more than 60 published studies from 1966 to 2004 on the association between vitamin D and cancer, including 26 studies of prostate cancer. The study found that residents of the northeastern section of the United States, who are exposed to less sunshine, and African-Americans with dark skin pigments, which prevent sunshine-induced biosynthesis of vitamin D, were at an increased risk of vitamin D deficiency, which is linked to higher risk of cancer.

Foods rich in vitamin D include cod liver oil, eggs, milk, and foods labeled as vitamin D supplemented. But normal amounts of these products are likely not enough to provide the 1,000 IU daily dose recommended by the researchers of the current study. For example, one glass of milk may offer only 100 IU of vitamin D. Vitamin D supplements may be needed to enhance supplementation from dietary sources.

Authors of the study call for prompt public health action to increase intake of vitamin D as an inexpensive tool for prevention of diseases that claim millions of lives every year. “A preponderance of evidence, from the best observational studies the medical world has to offer, gathered over 25 years, has led to the conclusion that public health action is needed,” said Dr. Cedric Garland of the University of California at San Diego, who led the study.

Did You Know?

- 1 in 6 men will be affected by prostate cancer
- Only 50% of men over 50 have prostate cancer screening each year
- When detected and treated in its early stages, the five year survival rate for prostate cancer is 100%

Taxotere for Prostate Cancer: Chemotherapy via the European Yew Tree

In 2004, the Food and Drug Administration (FDA) approved Taxotere (docetaxel) injection in combination with prednisone, a steroid, for the treatment of patients with advanced metastatic prostate cancer. This is the first drug approved for hormone refractory prostate cancer that has shown a survival benefit.

Taxotere works by inhibiting tubulin, a protein essential to cell division, to prevent cancer cells from dividing and growing in number. Taxotere belongs to the taxane class of chemotherapy drugs. The active ingredient in Taxotere is derived from the needles of the European yew tree (*Taxus baccata*) pictured to the right.

The safety and effectiveness of Taxotere for advanced metastatic prostate cancer was established in a randomized, multi-center global clinical trial with over 1,000 patients comparing chemotherapy using Taxotere in combination with prednisone to mitoxantrone in combination with prednisone in men with metastatic, hormone–refractory prostate cancer. Taxotere, in combination with prednisone, given every three weeks, showed a survival advantage of approximately 2.5 months over the control group in the trial.

The most common adverse events reported were nausea, alopecia (hair loss), and bone marrow suppression. In addition, fluid retention and peripheral neuropathy (tingling sensations in the extremities), known effects of Taxotere, were also observed.

Taxotere was first approved for metastatic breast cancer in 1996. Today, the drug has been specifically indicated by FDA for a few types of breast cancer and non-small cell lung cancer. In addition, Taxotere is used off-label for many other types of cancer and often in combination with other cancer drugs. Taxotere continues to be tested in clinical trials for various stages of many types of cancer.

Prostate Cancer Family History and the Importance of Early Diagnostic Testing

Since the early 1990s, the presence of a prostate cancer gene or genes in families has been suspected due to a link between a family history of prostate cancer and a man's risk of developing the disease. Prostate cancer that is believed to have a genetic basis that is passed down through families is called hereditary prostate cancer (HPC).

Researchers have identified a variety of different genes that may play a role in prostate cancer. No one gene or set of genes can explain all cases of HPC. Different genes may be important in different racial, ethnic, and geographic populations. Most scientists believe that cancer develops from a combination of mutations to various genes. These mutations may be inherited or acquired from environmental influences, such as diet or smoking, or from random mistakes in the replication or repair of DNA.

Researchers hope that more data about specific genetic abnormalities of HPC will lead to the identification of one or more specific genes involved in the development of prostate cancer. This would enable doctors to identify families that carry the mutated forms of these genes, and therefore to identify men who are at high risk for developing the disease. Men with HPC tend to develop the disease far sooner than other men, even as young as their late thirties or early forties. By the time these men start routine screening for prostate cancer, it may already be too late to cure it. Until more is learned about HPC, men with a family history of the disease should talk with their doctor about yearly diagnostic testing beginning at age 40.

Broccoli, Cauliflower, and Cabbage Help Repair Damaged DNA

The health benefits of eating green vegetables, especially those in the cruciferous category, such as broccoli and other greens, has previously been established through research studies. However, for the first time new research reveals the mechanism of cellular action by which some vegetables help repair damaged DNA, which might contribute to the inhibition of tumor cell development.

In the February 2006 *British Journal of Cancer*, researchers at Georgetown's Lombardi Comprehensive Cancer Center reported laboratory test results indicating that compounds in broccoli, cauliflower, and cabbage, and another in soybeans, increased the levels of certain proteins that repair damaged DNA.

"It is now clear that the function of crucial cancer genes can be influenced by compounds in the things we eat," says Eliot M. Rosen, MD, PhD, professor of oncology, cell biology, and radiation medicine at Georgetown's Lombardi Comprehensive Cancer Center. "Our findings suggest a clear molecular process that would explain the connection between diet and cancer prevention."

Rosen's research was on both prostate and breast cancer cell lines. In this study, Rosen exposed prostate and breast cancer cells to increasing doses of the chemical compound in broccoli, cauliflower, and cabbage, along with the compound found in soybeans, which boosted production of the BRCA1 protein, as well as its sister repair protein, BRCA2. Mutations in either of these genes can lead to development of breast, prostate, and ovarian cancers. Since decreased amounts of the BRCA proteins are seen in cancer cells, higher levels might prevent cancer from developing, according to Rosen. More research, including studies in people, is needed to gather additional information about the relationship between these foods and their ability to repair damaged DNA, as well as their potential to inhibit tumor cell development.

Grapefruit Repairs DNA in Prostate Cancer Cell Lines

Naringenin, a flavonoid found in grapefruit and oranges, helped to repair damaged DNA in prostate cancer cell lines in a study reported in the February 2006 *Journal of Nutritional Biochemistry*.

Grapefruit and oranges contain flavonoids, pigments found in plants, which might offer health benefits through the promotion of healthy cells. American and Chinese researchers reported that one specific flavonoid, naringenin, has anti-cancer effects beyond that of an antioxidant.

DNA repair is an important factor in the prevention of cancer since it prevents the growth of abnormalities in cells. As men get older, their cells become more susceptible to oxidative stress, which in turns leads to increased DNA damage. And since the risk of prostate cancer increases with age, men and their families might consider strategies to help protect cells and reverse DNA damage.

"Induction of DNA repair by naringenin may contribute to the cancer-preventive effects associated with an increased dietary intake of fruits containing flavonoids," wrote scientists from UCLA and Sun Yatsen (Zhongshan) University. More studies are needed, including tests in people, to gather additional information about the potential benefits of fruits toward DNA repair in prostate and other types of cancer.

Prevent Prostate Cancer by 2015

More News on the Healing Potential of Fruits

Lupeol, an antioxidant found in some fruits including strawberries, mangoes and figs, may have the ability to kill existing cancer cells and prevent new tumors from initiating or progressing, according to animal study results reported in the December 2005 *Cancer Research*.

Hasan Mukhtar and the University of Wisconsin School of Medicine and Public Health research team reported that mice showed a slowing down of the cancer process when they were injected with lupeol. Their research indicates that lupeol may be effective in preventing prostate cancer by localizing the cancer to an isolated area. Further research is needed to evaluate if lupeol can repair damaged biochemical pathways to prevent cancer from spreading.

Mukhtar said his ultimate goal is to develop a cocktail fruit platter that may slow down the cancer process, or perhaps a pill. “If people do not consume fruit, we can put the agent into a capsule,” Mukhtar said. “Just like one-a-day pills, it could be a one-a-day cancer preventative pill.” Further research and development is needed to assess if a cancer prevention or treatment pill is possible. All of the research needs confirmation in studies with people.

Mukhtar and his team previously studied pomegranate juice for the prevention of prostate cancer. They found that the juice, which contains more antioxidants than red wine or green tea, also inhibits prostate carcinogenesis, or cancer growth. In contrast to green tea, which may prevent breast, lung and prostate cancer, among others, pomegranate juice has only been shown to slow the progression of prostate cancer.

MedlinePlus Health Information

MedlinePlus is an online resource with information about health issues. MedlinePlus brings together authoritative information from the National Library of Medicine, the National Institutes of Health, and other government agencies and health-related organizations. MedlinePlus has extensive information about drugs, an illustrated medical encyclopedia, interactive patient tutorials, and the latest health news.

Information on MedlinePlus about prostate cancer includes the latest news, several overviews about the disease, diagnosis and symptoms, treatments, prevention and screening, research, and other related issues.

MedlinePlus features an interactive tutorial about prostate cancer developed by the Patient Education Institute, Inc.

MedlinePlus can be found at www.nlm.nih.gov/medlineplus.

“Your skin is enlarged.”

Lifestyle Changes for your Health

The following lifestyle suggestions may help prevent cancer recurrence, and may extend length and quality of life by preventing and controlling chronic diseases, including cancer, heart disease, diabetes, and stroke. Please note that any major lifestyle changes should only be done after consulting with your doctor.

- Decrease fat intake to 20 percent of total daily calorie intake
- Increase fiber intake
- Eat fatty fish 2 to 3 times weekly
- Increase fruit and vegetable intake to 7 or more servings daily
- Take a multivitamin daily
- Eat 2 to 3 servings of soyfood daily
- Avoid obesity
- Exercise at least 30 minutes daily
- Practice stress reduction techniques
- Drink several cups of green tea daily

Turmeric and Veggies Against Prostate Cancer

The curry spice called turmeric holds potential for the treatment and prevention of prostate cancer, especially when used with certain vegetables, according to animal study results reported in the January 2006 *Cancer Research*.

The scientists analyzed turmeric, also known as curcumin, along with a naturally occurring substance called PEITC particularly abundant in a class of vegetables that includes watercress, cabbage, winter cress, broccoli, Brussels sprouts, kale, cauliflower, kohlrabi and turnips.

Ah-Ng Tony Kong, a professor of pharmaceutics at Rutgers University involved with the study, explained, "The bottom line is that the PEITC and curcumin, alone or in combination, demonstrate significant cancer-preventive qualities in laboratory mice, and the combination of PEITC and curcumin could be effective in treating established prostate cancers." Since this research was done in animals, more studies are needed to confirm these findings in people.

Fiber and Prostate Health

Studies indicate that men who consume a high fiber diet have more balanced hormones that inhibit prostate tumor growth. Fiber also helps to decrease transit time through the gastrointestinal system, which allows the body to get rid of harmful carcinogens more rapidly. Fiber is the term used for the indigestible substances found in plant foods.

There are many sources of fiber, including whole grains, fruits and vegetables, and beans and legumes. Fiber should be increased gradually to avoid gastric distress. Many food products have the amount of fiber content listed on the label. The following lists some foods and their fiber count. Approximately 25 to 35 grams of fiber should be consumed daily.

Food	**Fiber Grams**
Popcorn	2.7
Brown Rice (1 cup)	3.3
Barley (1 cup)	6.5
Fiber One Cereal (1/2 cup)	14
Bran Chex (2/3 cup)	5
All Bran (1/2 cup)	10
Apple with Skin	2.8
Orange	2.9
Pear with Skin	5.8
Black Beans (1/2 cup)	6.5
Kidney Beans (1/2 cup)	6.9
Pinto Beans (1/2 cup)	5.9
Chickpeas (1/2 cup)	4.4
Lentils (1/2 cup)	5.2
Lima Beans (1/2 cup)	6.8
Broccoli (1 cup raw)	2.2
Cabbage (1 cup raw)	1.5
Carrots (1 cup raw)	4.6
Green Beans (1 cup raw)	3.5
Peas (1/2 cup cooked)	4.3
Corn (1/2 cup cooked)	3.0
Wasa Crispbread	
Fiber Plus (1-1.5)	4.3
Sesame Rye (1-1.5)	3.6
Kavil Crispbread Thick (1-1.5)	3.0

Information from Fiber and Prostate Health and Lifestyle Changes for your Health comes from Mary-Gissel Ulbrich, a dietician at Morristown Memorial Hospital in New Jersey.

Alcohol's Potential Relationship to Cancer Growth

For the first time, laboratory scientists have demonstrated a model that may explain how alcohol stimulates tumor growth. A study reported in the January 2005 *Cancer* suggests that alcohol fuels the production of a growth factor that stimulates blood vessel development in tumors.

According to the American Cancer Society, for almost a hundred years, mounting epidemiological evidence has linked alcohol use to an increased risk of cancers of the stomach, esophagus, liver, breast, and colon. Researchers had not previously developed an adequate model to explain how ethanol or a metabolite of ethanol could cause cancer. Some hypotheses included dietary imbalances, impaired nutrient metabolism and detoxification due to alcohol consumption, activation of precancerous enzymes, and suppression of the immune system, among others.

Data reported last year indicates that ethanol increases cellular production of vascular endothelial growth factor (VEGF), an important signaling protein in blood vessel growth, particularly in tumors. Jian-Wei Gu, MD, from the University of Mississippi Medical Center and colleagues investigated the possible mechanism between ethanol-induced blood vessel growth and VEGF in an animal study. During their laboratory research, embryos exposed to ethanol had more than eight times the level of cancer cell invasion of blood vessels compared to the control group exposed to a saline solution. The embryos exposed to ethanol experienced increases in tumor size, tumor blood vessel density, cancer cell infiltration of blood vessels, and VEGF levels. The authors say their findings "support the hypothesis that the induction of angiogenesis and VEGF expression by ethanol represent an important mechanism of cancer progression associated with alcoholic beverage consumption."

Several studies have been published about the relationship between alcohol and cancer growth in people, including reports specific to prostate cancer. While some previous research has not shown a link between alcohol use and increased prostate cancer risk, a few studies suggest a potential association. In addition, other studies suggest a lowering of prostate cancer risk from red wine consumption. More research is needed to test the types of alcoholic beverages consumed, frequency, and the relationship with other lifestyle factors such as smoking, diet, and exercise.

Information about the research study from the January 2005 *Cancer* can be found on the ACS website at www.cancer.org. More details about other published studies on this topic can be found by searching the National Library of Medicine's PubMed system at www.pubmed.gov.

Uncovering Research Through PubMed

A service of the National Library of Medicine and the National Institutes of Health
www.pubmed.gov

The National Library of Medicine (NLM), a part of the National Institutes of Health, maintains a database called PubMed. This database includes over 16 million citations from MEDLINE and other life science journals for biomedical articles dating back to the 1950s. MEDLINE is an indexing service for research in medicine and related fields maintained by the NLM.

PubMed, available at www.pubmed.gov, is an excellent resource for anyone wanting to uncover research information about health topics such as prostate cancer prevention. For example, the term "prostate cancer/ prevention and control" can be searched through PubMed. As of February 22, 2006, 2038 items appear through this search from January of 2006 to 1966. Users may wish to enter the "Limits" section and search by study type, human versus animal studies, or perhaps only items with abstracts that briefly summarize research findings. Some abstracts link to full text articles, but many full articles are only available through journal subscriptions, a university library, or related facility. Try searching prostate cancer prevention and other important health subjects on PubMed today.

www.apcap.org

Alliance for Prostate Cancer Prevention

Prevent Prostate Cancer by 2015

Alliance for Prostate Cancer Prevention
15248 South Tamiami Trail, Suite 1000
Fort Meyers, FL 33908
1-888-50-APCAP or 1-888-502-7227
Email: info@apcap.org

This newsletter is made possible in part by a generous grant from Sanofi-Aventis.

RETURN THIS FORM TO RECEIVE OUR FREE QUARTERLY NEWSLETTER

Name: _____ **Company:**_____

Address:_____

City:_____ **State:**_____ **ZIP:**_____

Phone:_____ **Fax:**_____ **Email:**_____

Tax deductible donation to APCaP, a not-for-profit 501 (c) (3) organization

Amount: **$25**_____ **$50**_____ **$75** _____ **$100**_____ **$250**_____ **Other**_____

Visa/MasterCard #_____ **Exp. Date**_____ **Check #**_____

Signature_____

Mail to: APCaP 15248 South Tamiami Trail, Suite 1000 Fort Meyers, FL 33908