# **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 3, Issue 1 March 2007



# 2007 CANCER RATES FROM THE AMERICAN CANCER SOCIETY

The American Cancer Society (ACS) announced in January 2007 that cancer deaths declined in the United States for the second year in a row, which they referred to as a milestone event that indicates dramatic progress is being made against the disease. ACS reported, "The decline is strong evidence that decades of groundbreaking research, effective public health policies and public education has been worthwhile. Our hard work toward preventing cancer, catching it early, and making treatment more effective is paying dramatic, lifesaving dividends."

According to the ACS report, there were 3,014 fewer cancer deaths in 2004 than in 2003, a significantly larger decrease than the 369 fewer deaths reported the previous year. "The death rate from cancer has been falling by slightly less than 1 percent a year since 1991, but until 2003 the actual number of deaths kept rising because the population was growing and aging. Then, in 2003, the cumulative drop in death rates finally became large enough to outpace aging and population growth," wrote Denise Grady in a January 18, 2007 *New York Times* article "Second Drop in Cancer Deaths Could Point to a Trend, Researchers Say." Grady stated that although the drop is notable, "it still pales in comparison with the number of cancer deaths, 553,888 in 2004."

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These figures, as well as estimates for the current year, come from ACS's publication <u>Cancer Facts & Figures</u> 2007. Based on the latest data, ACS epidemiologists predict that approximately 1.44 million Americans will be diagnosed with cancer and 560,000 will die from the disease in 2007.

ACS calculated their numbers using a new process involving incidence data from cancer registries covering about 86 percent of the U.S. population, compared to the previous method, which used data from registries covering about 10 percent of the population. While the new method predicted a similar number of total cancer cases for 2007, there were several cancer sites around the country for which the predictions by the new method differed substantially from predictions made by the old method.

The new method of calculation resulted in a 5.5 percent decrease of estimated prostate cancer cases, although prostate cancer alone still accounted for 29 percent of cancer in men. A January 2007 *CA: A Cancer Journal for Clinicians* article reported, "The lower case estimate for prostate cancer by the new method is in part due to regional differences in prostate cancer incidence rates covered by the 2 methods... perhaps reflecting regional differences in utilization of prostate specific antigen (PSA)." Some areas of the country contain a population of men that use PSA screening more than other parts of the U.S. The authors explain that the new method reflects average annual age-standardized prostate cancer incidence rates for 1999 to 2003 in 41 states.

(*Continued on Page 5*)

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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.

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## **Not So Fishy Findings**

Some men that eat a lot of oily fish have a lower risk of prostate cancer, according to research published in the October 2006 *International Journal of Cancer* by scientists at Sweden's Karolinska Institute.

Prostate cancer is by far the most common form of cancer in Sweden. However, in countries such as China and Japan, the incidence rate is much lower. Research indicates that dietary habits likely contribute to variable prostate cancer rates in different countries. **EPA and DHA**, two Omega-3 fatty acids, which are found in abundance in oily fish such as salmon, herring and mackerel, appear to inhibit cancer growth.

Scientists asked 1,500 Swedish men with prostate cancer about their eating habits, and then compared the answers with a healthy control group. The results indicate that men who eat salmon more than once a week have a 43 percent less chance of developing prostate cancer compared to men who never eat salmon.

Blood tests were also analyzed to find any genetic factors associated with prostate cancer. **Results show that men who carried a special variant of the COX-2 gene were the only ones to benefit from the protective properties of oily fish. The group of men with this gene variant that ate salmon had a 72 percent lower chance than men who never ate oily fish.** Omega-3 fatty acids have an anti-inflammatory effect that helps counter cancer development in men with the gene variant. Even for men that don't carry the gene, study investigators say that Omega-3 fatty acids may still offer other health benefits.

Is all salmon healthy? Other research suggests that farmed salmon contains high levels of toxic contaminants. Some researchers have warned that the type of fish and their environment (such as a farm, stream, or lake versus the sea) determines whether the health risks outweigh the benefits. Although debate exists about the accuracy and level of harm associated with heavy metal toxicity in some fish such as salmon, some scientists have warned against eating farmed raised salmon due to their high levels of toxins such as mercury. As an alternative, line caught salmon from the sea appears to contain less contaminants and provide a balanced risk-benefit ratio.

# **Prostate Cancer Linked to Familial Breast Cancer**

African-American men with prostate cancer had a greater chance of having a brother with prostate cancer, and a sister with breast cancer, than those who did not have prostate cancer, according to a study in the November 2006 *Urology*.

Previous research has shown that men with a family history of prostate cancer, and African-American men even without a family history of prostate cancer, are at a higher risk for the disease. **This study marks the first time a link has been identified between the disease and a family history of breast cancer**. Furthermore, breast cancer diagnosed among both sisters and mothers of men with prostate cancer was more often diagnosed at a younger age, which suggests premenopausal breast cancer. Both breast and prostate cancer typically occur in older populations.

Researchers at the University of Michigan Comprehesnive Cancer Center used data from the Flint men's health study, a population-based study of African-American men ages 40-79 who live in Flint, Michigan. They analyzed data from 121 men with prostate cancer, and 179 men without the disease. Their findings indicate that men with prostate cancer were 4.8 times more likely to have a brother diagnosed with the same disease, and about four times more likely to have a sister diagnosed with breast cancer.

The researchers propose that their findings "give potential to identifying new genes associated with prostate cancer or breast cancer." The study results indicate that assessing prostate cancer risk among African-American men includes knowing the family history of prostate and breast cancer, especially among siblings. Being aware of potential genetic ties could demonstrate a need for more prostate cancer screenings.

## **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%
- African American men have twice the incidence and mortality rate compared to Caucasians

## Dear Reader...

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# All Blown Up: Inflammation and Prostate Cancer

Inflammation on the body's surface is typically associated with pain, swelling, redness, and heat. The inflammatory process that occurs within the body may be less apparent, but more dangerous. **Two markers of inflammation called interleukin-6 (IL-6) and Creactive protein (CRP) can be measured in the blood.** In response to infection or trauma, immune cells secrete IL-6 and stimulate synthesis of CRP in the liver.

Increased levels of IL-6 and CRP are significantly associated with prostate cancer incidence and mortality almost a decade prior to diagnosis, according to researchers at the Harvard School of Public Health that presented their findings at the November 2006 American Association for Cancer Research (AACR) meeting. They also found that elevated CRP in these men was associated with a twofold increased risk of developing fatal prostate cancer, compared to men with the lowest levels of the protein.

Some studies have already shown that high levels of IL-6 and CRP can be associated with a poor prognosis in prostate cancer patients, but this is one of only a few studies to examine whether these markers can predict risk before symptoms develop and cancer is diagnosed. The findings come from a prospective study within the Physician's Health Study of 516 men who later developed prostate cancer, and 516 matched controls that did not.

They found that high levels of CRP in the blood was associated with a higher incidence of prostate cancer development among all patients and associated with a two-fold increased risk of developing lethal prostate cancer. IL-6 levels were not associated with prostate cancer risk overall. But when they separated out men by body mass index, those who had a healthy weight and high IL-6 in their blood had a 40 percent higher risk of developing prostate cancer. IL-6 and CRP were more strongly associated with prostate cancer risk and death from prostate cancer in normal weight men. Because IL-6 is secreted from adipose fat tissue, levels of the cytokine are naturally higher in overweight and obese men.

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# One, Two, Three Steps Toward Cancer Prevention

ACS's 2006 Nutrition and Physical Activity Guidelines for Cancer Prevention offer recommendations for individual choices toward improved health. Major report recommendations include maintaining a **healthy diet throughout life, adopting a physically active lifestyle, and limiting consumption of alcohol**.

The report states that although prostate cancer is related to male sex hormones, just how nutritional factors might increase risk remains unclear. Several studies suggest that diets high in certain vegetables, including tomatoes, cruciferous vegetables, soy, beans, and other legumes, or fish may be linked with decreased risk. There is some evidence that foods or supplements containing antioxidant nutrients, such as vitamin E, selenium, beta-carotene, and lycopene, may also lower risk. The effects of vitamin E and selenium are currently being studied in a large clinical trial.

Several studies correlate eating large amounts of red meats or dairy products with an increased risk of prostate cancer. A high-calcium intake, primarily through supplements, has also been linked to an increased risk for more aggressive types of prostate cancer.

Although the link between obesity and prostate cancer risk is not clear, **recent studies suggest that being overweight is linked to a worse outcome in men already diagnosed with prostate cancer.** Exercise, especially vigorous exercise, may offer some benefit for prostate cancer.

For now, ACS's best advice to reduce the risk of prostate cancer is to eat 5 or more servings of a wide variety of vegetables and fruits each day, limit intake of red meats and dairy products, and maintain an active lifestyle and healthy weight.

ACS's report recommends that adults engage in at least 30 minutes of moderate to vigorous physical activity, above usual activities, on 5 or more days of the week. Approximately 45 to 60 minutes of intentional physical activity are preferable.

ACS's Nutrition and Physical Activity Guidelines for Cancer Prevention, which are updated every 5 years, can be found at www.cancer.org. The full article written for health care professionals was published in the September/October 2006 *CA: A Cancer Journal for Clinicians.* 

# The Gender Divide: Health Disparities Between Men and Women

# Did you know that men are more likely than women to suffer an early death?

A November 14, 2006 *New York Times* article "Health Disparities Persist for Men, and Doctors Ask Why" by Roni Rabin discussed the need for increased attention to men's health. **Statistics indicate that men die on average about 5 years earlier than women. American men have an average life expectancy of 75.2 years, with 69.8 years for black men. That compares with 80.4 years of average life expectancy for women.** 

The *Times* article reported that **men also die at higher rates for just about every disease**, according to Dr. Demetrius J. Porche, editor of *American Journal of Men's Health*. Men die of just about every one of the leading causes of death at younger ages than women, including influenza, diabetes, and AIDS. Alzheimer's disease is the exception since it's mortality rate is higher for women than men.

Heart disease also impacts more men than women, according to Dr. Steven Nissen, the Chairman of the Cleveland Clinic's Department of Cardiovascular Medicine. Dr. Nissen explained in the *Times* article that heart disease is not rare in men in their 30s and 40s, while it is extremely unusual for women of the same age.

And unfortunately cancer is no exception to this trend.

Statistics indicate that one in two men, versus one in three women, will be diagnosed with the cancer at some point in life.

### To our male readers, have you been to the doctor

**lately?** The *Times* reported that research based on a 2000 survey by the Commonwealth Fund found that almost a quarter of all men had not seen a doctor during the previous year, compared with only 8 percent of women, and that one in three men had no regular doctor, compared with one in five women. More than 50 percent of men had not gone in for a routine checkup or cholesterol test during the previous year. Even if something was bothering them, the survey found, men often expressed reluctance to seek medical help. Nearly 40 percent said they would delay care for a few days, and 17 percent said they would wait at least a week.

### Why are some men not addressing their health?

"Scientists and advocates who are concerned about men's health are encouraging men themselves to take the first steps by accepting responsibility for their health status, seeking preventive care and making changes in habits, if necessary," reported Dr. William Pollack, director of the Center for Men at McLean Hospital, to the *Times*. He went on to say that men are socialized to be strong, independent, and not ask for help. "Men think that being vulnerable is the worst thing. But to recognize there might be something wrong with you, you have to acknowledge: you're vulnerable."

Prevent Prostate Cancer by 2015

# 2007 Cancer Trends from the American Cancer Society (Continued from Page 1)

The old method reflected 9 regions tracked through SEER, the National Cancer Institute (NCI) Surveillance, Epidemiology, and End Results Program that collects and publishes cancer incidence and survival data from population-based cancer registries covering approximately 26 percent of the U.S. population.

Calculating the exact number of prostate cancer cases may require a more precise formula such as a true population based cancer registry. Since part of APCaP's mission is to help educate men about prostate cancer prevention, we would like nothing more than to see a decrease in prostate cancer cases. However, some experts are predicting prostate cancer rates will increase in the coming years. As Dr. Alfred I. Neugut, the director of cancer prevention and control at Columbia University Medical Center noted in the *Times* article, the number of prostate cancer cases will increase as baby boomers reach the age when men are diagnosed with the disease. Dr. Neugut referred to prostate cancer as "the bane of the next century."

# The High Cost of Cancer

# What is the cost of cancer?

## Costs of Prostate Cancer Treatments

Cancer treatments often cost thousands of dollars, which may or may not be covered by health insurance. A study published in the February 2007 *Cancer* examined patterns of health care use, and compared costs related to prostate-related treatments over five and a half years in over 4,500 men. **The cumulative cost of prostate cancer, according to the study, was \$42,570 over five years on average.** 

The study investigators at the University of California at San Francisco found that prostate-related costs varied by treatment type, risk and age. In the first six months after diagnosis, each patient's cost was directly impacted by treatment type. Watchful waiting, or closely monitoring a patient's condition but withholding treatment until symptoms appear or change, cost \$2,568. External beam radiation, which uses a machine to aim high-energy radiation at the cancerous tissue, cost \$24,204. The mean cost during the first six months was \$11,495.

Subsequent annual cost was found to average \$7,740, and ranged from \$5,843 for watchful waiting to \$12,590 for androgen deprivation therapy. Cumulative mean cost over 5.5 years for all risk groups was \$42,570. Watchful waiting cost the least at \$32,135. Brachytherapy, a procedure in which radioactive material sealed in needles, seeds, wires, or catheters is placed directly into or near a tumor, cost \$35,143. External-beam radiation cost \$59,455. Androgen deprivation therapy cost the most at \$69,244. In their calculations, study investigators included prostate cancer treatment failure and adverse effects that cost patients money.



## Costs of Time

People affected by cancer often spend a lot of time receiving treatments, which can translate to a real financial burden for cancer patients. A study published in the January 2007 *Journal of the National Cancer Institute* estimated patient time costs associated with cancer care in patients aged 65 years and older in the United States. Researchers identified over 750,000 cancer patients from Medicare files who were matched to Medicare enrollees without cancer. Frequency of service use was calculated using Medicare claims data from 1995 to 2001. For each service category, time estimates were combined with service frequency and a patient time value of \$15.32 per hour. Patient time costs for cancer care varied by tumor site and phase of care.

Net patient time cost averaged \$842 during the initial year of prostate cancer care, and \$3,309 during the last year of life. In 2005, patient time costs for the initial phase of care totaled \$2.3 billion.

These figures illustrate that cancer prevention strategies must be emphasized to take steps toward reducing the cost of cancer. The study also indicates that early detection requires less time (and costs) for patients compared to time and costs spent treating advanced cancer.



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#### **Prostate Cancer Prevention Newsletter**

# Link Between Obesity and Prostate Cancer

A recent study suggests that **obesity is associated with an almost 80 percent increased risk of a Gleason score between 8 and 10, suggesting cancer metastasis.** A Gleason test analyzes prostate cancer tissue. Published in the October 2006 *Cancer Epidemiology, Biomarkers and Prevention*, researchers at the Fred Hutchinson Cancer Research Center analyzed information from 10,000 men regarding the effect of obesity on prostate cancer risk. Their findings also indicate that in men with an immediate relative with prostate cancer, the distribution of body fat plays a part in an increased prostate cancer risk. Men described as "apple-shaped" due to fat stored in the abdominal area may have double the increased risk of both lowand high-grade prostate cancer.

What is the difference between being overweight versus obese? A person with a Body Mass Index (BMI) of between 25 and 29.9 is overweight, whereas someone with a BMI of 30-plus is obese. BMI is derived through analyzing height and weight measurements. Your doctor should be able to calculate your BMI.

Data presented at the November 2006 AACR meeting also suggests that **men who are overweight or obese years before being diagnosed with prostate cancer are more likely to die of the disease than those who are of normal weight.** Researchers at Brigham and Women's Hospital, and the Harvard School of Public Health, examined 23 years of data from the Physician's Health Study, which began in 1982 as a randomized, double-blind trial of aspirin and beta-carotene. More than 22,000 U.S. male physicians were recruited for the trial to study the role of aspirin and beta-carotene in preventing heart disease and cancer. About 15,000 men provided blood samples at enrollment, body weight and height, and BMI. Approximately 99 percent of the original participants were tracked through questionnaires for 23 years, including cause of death.

By the end of 2005, 2,367 men had developed prostate cancer, while 265 died of the disease. They found that 39 percent of the participants were overweight, and 3.4 percent were obese at the beginning of the study. **Higher BMI was positively associated with the risk of dying** from prostate cancer. They also showed that the risk of dying from prostate cancer increased 8 percent for each point increase in BMI.

"Some people might think that what they do today has little to do with cancer risk, especially for prostate cancer," said researcher Jing Ma, M.D., Ph.D, "and some individuals probably wouldn't believe that obesity has anything to do with prostate cancer. But we have found that if a man develops prostate cancer, being obese could put him at a higher risk of dying from the cancer. There is something many men can do about that."

# Inflammation and Prostate Cancer (Continued from Page 4)

The researchers noted that the predictive power of these two markers for determining prostate cancer risk and mortality needs to be confirmed in other prospective studies. "Understanding the role of inflammation in prostate cancer is important because inflammatory pathways could potentially be targeted for prevention and treatment," said Jennifer Rider Starck, the study's lead author.

**Chronic prostatic inflammation appears to be associated with prostate cancer growth,** according to research in the September 2006 *Journal of Urology*. Investigators at Case Western Reserve University studied 177 patients who were suspected of having prostate malignancies. Initial biopsies showed 144 of the patients had chronic inflammation, and that the remaining 33 did not. Over 5 years of follow-up, researchers noted outcome differences in both group. Twenty-nine men (or 26 percent) with chronic inflammation were diagnosed with prostatic adenocarcinoma, a type of cancer that begins in cells that line organs such as the prostate. However, only 2 patients (or 6 percent) without inflammation had that diagnosis. These findings suggest that there is a strong association between chronic prostatic inflammation and premalignant and malignant prostate changes.

What reduces inflammation in the body? More studies are needed in this area. Based on available information, a healthy diet, reduced stress, and regular exercise appear to help reduce inflammation associated with cancer.



## Prevent Prostate Cancer by 2015

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