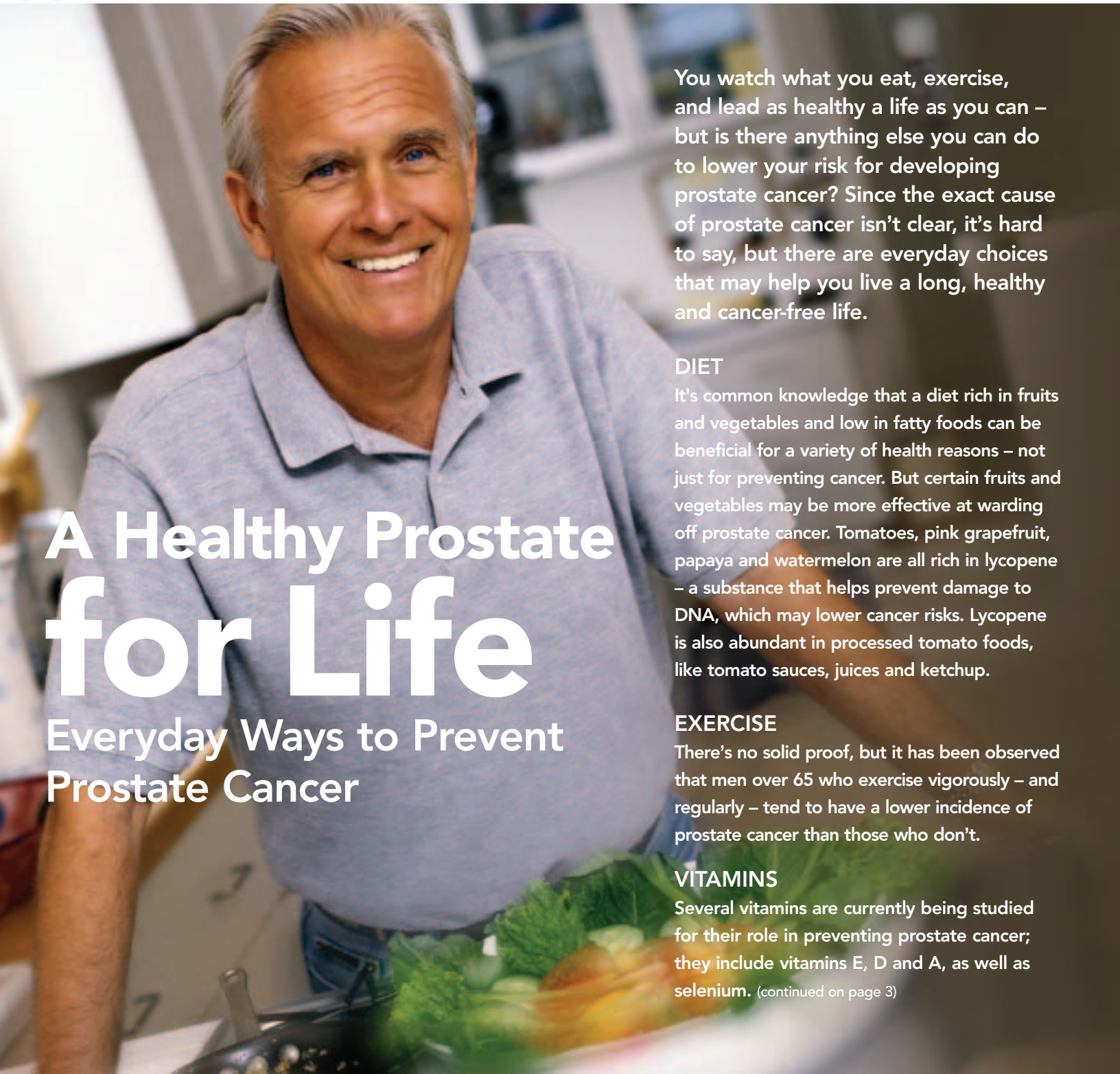
Fall 2007

Precision

A quarterly newsletter from the University of Florida Proton Therapy Institute

UNIVERSITY OF FLORIDA PROTON THERAPY INSTITUTE



A Healthy Prostate for Life

Everyday Ways to Prevent Prostate Cancer

You watch what you eat, exercise, and lead as healthy a life as you can – but is there anything else you can do to lower your risk for developing prostate cancer? Since the exact cause of prostate cancer isn't clear, it's hard to say, but there are everyday choices that may help you live a long, healthy and cancer-free life.

DIET

It's common knowledge that a diet rich in fruits and vegetables and low in fatty foods can be beneficial for a variety of health reasons – not just for preventing cancer. But certain fruits and vegetables may be more effective at warding off prostate cancer. Tomatoes, pink grapefruit, papaya and watermelon are all rich in lycopene – a substance that helps prevent damage to DNA, which may lower cancer risks. Lycopene is also abundant in processed tomato foods, like tomato sauces, juices and ketchup.

EXERCISE

There's no solid proof, but it has been observed that men over 65 who exercise vigorously – and regularly – tend to have a lower incidence of prostate cancer than those who don't.

VITAMINS

Several vitamins are currently being studied for their role in preventing prostate cancer; they include vitamins E, D and A, as well as selenium. (continued on page 3)

Proton Therapy

& Prostate Health

Each year, more than 200,000 men in the United States are diagnosed with prostate cancer. Some choose surgery, some choose hormone therapy, and others choose what's called "watchful waiting." For a growing number of prostate cancer patients, however, proton therapy has become the treatment of choice – and for good reason.

Unlike traditional radiation treatment, proton therapy delivers an effective, targeted dose of highly charged protons precisely to the site of the tumor. Since the treatment is so localized, a higher – and potentially more effective – dose of radiation can be employed. Surrounding tissue is spared, and the chances for successful treatment are optimized.

Best of all, proton therapy allows prostate cancer patients to continue living a relatively normal life during treatment. Sessions typically last just a few minutes each, and a lower incidence of side effects such as incontinence, impotence and fatigue means patients can continue working, living or just relaxing in their free time.

More information about treating prostate cancer – and other cancers – with proton therapy is available at floridaproton.org.

The National Association for Proton Therapy, Proton Therapy Takes Aim in Prostate Cancer Battle, *available http://www.proton-therapy.org/prostate.htm [accessed 9 Aug 2007*

Signs & Symptoms

Recognizing prostate cancer as early as possible

In its earliest stages, prostate cancer often produces no obvious symptoms, making regular screenings even more important. There are, however, specific symptoms that may signal a more advanced stage of prostate cancer.

THESE INCLUDE:

- **A need to urinate frequently, especially at night;**
- **Difficulty starting urination or holding back urine;**
- **Weak or interrupted flow of urine;**
- **Painful or burning urination;**
- **Difficulty in having an erection;**
- **Painful ejaculation;**
- **Blood in urine or semen; or**
- **Frequent pain or stiffness in the lower back, hips, or upper thighs.**

The National Cancer Institute, Early Prostate Cancer: Questions and Answers, *available http://www.cancer.gov/cancertopics/factsheet/Detection/early-prostate [accessed 6 Aug 2007]*

The ABCs of PSAs

Understanding the results of your Prostate-Specific Antigen test

The Prostate-Specific Antigen, or PSA, is a protein produced by the cells of the prostate gland. The higher the amount of PSA in your bloodstream, the more likely the presence of prostate cancer – however, there are a host of possible reasons for elevated PSA levels, so test results alone are not conclusive. Instead, doctors may use the test results to decide whether to check for other signs of cancer.

Most often, the PSA test is administered along with a digital rectal exam, or DRE. When combined, the two tests are approved by the FDA to help detect prostate cancer in men over 50. The PSA test may also be used as a monitoring tool for men who've had prostate cancer in the past.

While there are no definitive "normal" levels of PSA, doctors use the following numbers as a guide when interpreting test results:

0 to 2.5 ng/ml (nanograms of PSA per milliliter of blood) is low
2.6 to 10 ng/ml is slightly to moderately elevated
10 to 19.9 ng/ml is moderately elevated
20 ng/ml or more is significantly elevated

The benefits and drawbacks of the PSA test are still being studied by doctors and researchers. Ask your doctor about the screening method that's right for your age, medical history and symptoms, if any.

The National Cancer Institute, The Prostate-Specific Antigen (PSA) Test: Questions and Answers, *available http://www.cancer.gov/cancertopics/factsheet/Detection/PSA [accessed 10 Aug 2007]*

Healthy Prostate for Life

(continued)

Unfortunately, conclusive results are still elusive, and experts disagree about the effectiveness of vitamins in preventing cancer – there's also some concern about unintended effects of taking vitamin supplements.

DRUG THERAPY

Recently, researchers have begun to examine the possibility of preventing prostate cancer with drugs. Some of these decrease the production of testosterone in the prostate, while others lower testosterone in the entire body. The catch? Testosterone-lowering drugs can have a host of undesirable side-effects, making them an unpopular choice for prevention.

Of course, the best way to keep tabs on your prostate health is to undergo regular screenings. Your doctor's recommendations may vary according to your age and overall health.

American Cancer Society, Detailed Guide: Prostate Cancer Can Prostate Cancer Be Prevented?, *available http://www.cancer.org/docroot/CRI/content/CRI_2_4_2X_Can_prostate_cancer_be_prevented_36.asp [accessed 9 Aug 2007]*

Success Story

One patient's experience with proton therapy

When Orlando resident **Gary Goetsch** was diagnosed with prostate cancer at age 69, he'd already had experience with proton therapy – a few years earlier, his daughter had received the treatment for a brain tumor at the top of her spinal cord. Her treatment was performed at Loma Linda University Medical Center in California.

Immediately, he turned to the University of Florida Proton Therapy Institute. "I'm so thankful we have a facility like this in Florida," Goetsch says. "I didn't have to travel far for the therapy, and it changed my life."

Goetsch is among the 56,000 people worldwide who have undergone proton therapy for cancer treatment, and he's had great success. "I just wish more people knew about this treatment."

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UNIVERSITY OF FLORIDA
PROTON THERAPY INSTITUTE

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Welcome to The University of Florida Proton Therapy Institute

A revolution in cancer treatment – close to home.

Expert Answers

Our own doctors and specialists answer your questions about prostate health and proton therapy

Q: ***What makes proton therapy different than other radiation treatments for prostate cancer?***

A: Unlike traditional radiation treatments, which expose more of the patient's body to radiation, proton therapy targets the cancer with more precision. Since the tissue surrounding the cancer receives less radiation, higher doses can be directed to the tumor – for higher success rates with a lower risk of side effects.

Q: ***How does the treatment process work?***

A: Radiation oncologists use advanced imaging techniques to determine the exact location of the tumor to be treated. Proton therapy sessions may take anywhere from six to eight weeks, and the daily treatments are non-invasive, so patients can continue with their everyday activities.

Q: ***What are the success rates like?***

A: Early studies from proton treatment centers show excellent disease-free survival rates. Those rates, combined with proton therapy's low incidence of side effects, make it an ideal choice for many prostate cancer patients.