

## FLIGHT SURGEON NOTES

After practicing Medicine for over 55 years, I have addressed many questions about the health issues incurred by growing older. By growing older myself, these questions have become more pertinent and more readily answered.

For many years, aging of the human body has been assumed to be the result of simple, entropic decay. Like any machine or mechanical device, the wear and tear of prolonged existence finally wears a person out. But, in truth, “aging” of the human body has a definite beginning. Aging begins promptly after achieving sexual and skeletal maturity, when genetically orchestrated energies of growth and development have been fulfilled. From this peak there is only one path, down. Skeletal bone loss begins in the 20’s and continues for the remainder of life.

One may compare the human body, with its multiple organ systems, to an orchestra that plays to a standing ovation to be followed by the conductor leaving the podium and exiting the room. The musicians in different sections of the orchestra remain and continue playing, but without the maestro’s orchestration the quality of music progressively deteriorates. One of the conditions that occur progressively with advancing age is cancer or tissue with abnormal growth patterns. In the next series of articles, common problems of aging will be discussed. Let’s begin with cancer. **This first discussion will be about cancer of the prostate.**

### **What is the prostate gland?**

The prostate is a walnut shaped gland that is responsible for the production of semen to carry sperm. Located just below the bladder, it surrounds the urethra or tube that carries urine from the bladder. Compare it to a walnut, in which the inner core is a muscular valve to regulate the flow of urine. The outer hull of the walnut is the glandular prostate that produces semen and has the potential of developing into cancer.

Other than skin cancer, prostate cancer is the most common cancer in American men. About 1 man in 7 will be diagnosed with prostate cancer during his lifetime, but only 1 man in 39 will die of this disease. 80% of men who reach age 80 will have prostate cancer cells in their prostate gland and nearly 100% of men in their 90’s will have it. However, the older the patient, the less aggressive the disease behaves. Many years ago, while I worked at a large V.A. Hospital, a number of Spanish-American War veterans died of old age, with no complaints of prostate cancer. However, on routine autopsy, all had microscopic prostate cancer.

### **Symptoms of Prostate Cancer:**

Many of the symptoms attributed to the prostate gland involve the inner muscular portion, which regulates the flow of urine. These symptoms are dribbling urine and difficulties in starting and finishing urination. But, they are rarely related to cancer since it does not involve this muscular area.

Cancer involves the glandular tissue of the outer hull. In its early stages, there are no symptoms of its presence. However, its outer location is most readily detected by a digital exam of the prostate. The “finger wave” exam of the prostate through the rectum remains the method of choice in detection of early prostate cancer. Other tests, such as Prostatic Sensitive Antigen (PSA) are variable and should not be relied on for diagnosis.

**Risk Factors:**

1. Risk for prostate cancer increases with advancing age.
2. African-American males are 1.6 times more likely to develop prostate cancer than Whites and 2.6 times more likely than Asian-Americans. African-Americans are more than twice as likely to die of prostate cancer than Whites and 5 times more likely to die of it than Asian-Americans.
3. Risk increases if there are other men in your family with prostate cancer. A man whose father or brother had cancer is twice as likely to develop prostate cancer.
4. Risk for prostate cancer may increase if there are women in your family with genes (BRCA1 or BRCA2) that increase the risk of breast and ovarian cancer.
5. Obese men who have been diagnosed with prostate cancer may be more likely to have advanced and more aggressive disease.
6. A diet high in dietary fat may be a contributing risk factor.

Prostate cancer varies greatly. It may remain localized and never cause problems. But it may spread through the lymphatic system to other parts of the body. It has a predilection to spread to bone. A nuclear bone scan should be performed when a diagnosis of prostate cancer has been confirmed.

**Diagnosis:**

The diagnosis can only be confirmed by biopsy of the suspected area. The Primary Care Physician is usually the person who detects the problem during a rectal exam. Subsequent care involves other specialists to diagnose and treat prostate cancer, such as Urologists, Oncologists, and Radiologists.

**Treatment:**

Even after a positive diagnosis, there is usually no urgency in surgery, radiation or other types of therapy. Decisions about therapy should be made by physicians who specialize in this problem. The critical advice is early detection by rectal examination and confirmation by biopsy.

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