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Androgen Deprivation Therapy for Prostate Cancer

If you or someone you care about has been diagnosed with [prostate cancer](#), it can be an unsettling time. There's so much to learn while you cope with feelings of uncertainty and anxiety.

Treatment options can be confusing, too. Of course, your doctor is the best person to advise your course of treatment. However, you might see reports in the media about the pros and cons of different types of treatment.

In July, JAMA Internal Medicine, a journal published by the American Medical Association, published an article on survival outcomes for men with prostate cancer who undergo androgen deprivation therapy (ADT). The authors said that when given on its own, this therapy did not improve survival rates for men with localized prostate cancer. (This means the cancer is confined to the prostate gland and has not spread to other parts of the body. Nowadays, about 90% of new prostate cancer diagnoses are localized.)

In this post, we'll go over the basics of ADT and the concerns of the study authors.

What are androgens?

First, let's talk about some terminology. What, exactly, are androgens?

Androgens are male hormones, such as testosterone. They give men their male sex characteristics, such as a facial hair and a deeper voice. They're also important for a man's sex drive.

These hormones are primarily made by the testes, but the adrenal glands produce them, too.

The problem with androgens is that they help prostate cancer cells grow.

Androgen deprivation therapy, sometimes called hormone therapy or androgen suppression therapy, is designed to either stop the body from producing androgens or stop androgens from reaching prostate cancer cells.

How is ADT administered?

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There are a few ways to administer ADT. Some methods are used alone and some are used with other types of treatment.

- **Removal of the testes.** In a procedure called an orchiectomy, the testes are surgically removed. As a result, androgen levels decrease considerably, giving prostate cancer cells less “fuel.”
- **Drugs that lower androgen levels.** Drugs such as luteinizing hormone-releasing hormone (LHRH) analogs and luteinizing hormone-releasing hormone (LHRH) antagonists work to decrease the amount of testosterone produced by the testes.
- **Anti-androgens.** These drugs prevent androgens from binding to androgen receptor cells, a process needed for androgens to do their jobs. If androgens can’t bind to the receptor cells, they can’t spur the growth of prostate cancer cells.

What are some side effects of ADT?

Unfortunately, ADT can have many side effects, including [erectile dysfunction](#), loss of sex drive, osteoporosis, fatigue, and depression.

Other side effects are weight gain, weaker muscle tone, and diabetes. Some men develop metabolic syndrome, which can include high blood pressure, high blood sugar, high cholesterol, and excess body fat.

Some of these effects can be treated or managed. Your doctor can give you more information.

Is ADT right for all men with prostate cancer?

The short answer to this question is “not necessarily.” Other treatments, such as surgery or radiation, might be more appropriate. Much depends on a patient’s health status and the stage of his cancer. A doctor can determine what is best for the individual.

Some scientists, such as the authors of the JAMA Internal Medicine study mentioned above, are concerned that ADT may not be helpful for men with localized prostate cancer, especially when the side effects are taken into account.

This conclusion is based on a study of over 66,000 men aged 66 or older with localized prostate cancer. After following the men for an average of 110 months, they found that primary ADT – given on its own without other types of treatments – was not associated with improved overall long-term survival rates or prostate-cancer-specific survival rates.

Researcher Dr. Grace L. Lu-Yao of the Rutgers Cancer Institute of New Jersey told [The New York Times](#), “There are so many side effects associated with this therapy, and really little evidence to support its use. I would stay that for the majority of patients with localized prostate

cancer, this is not a good option.”

What should men do?

If you are concerned about androgen deprivation therapy, be sure to talk to your doctor. He or she can tell you more about the reasons for using it (or not), which side effects might occur, and how you can handle them if they do.

Please click [here](#) to learn more about prostate cancer.

Resources

American Cancer Society

“Hormone (androgen deprivation) therapy for prostate cancer”

(Last revised: March 12, 2014)

<http://www.cancer.org/cancer/prostatecancer/detailedguide/prostate-cancer-treating-hormone-therapy>

JAMA Internal Medicine

Lu-Yao, Grace L., MPH, PhD, et al.

“Fifteen-Year Survival Outcomes Following Primary Androgen-Deprivation Therapy for Localized Prostate Cancer”

(Full-text. Published online: July 14, 2014)

<http://archinte.jamanetwork.com/article.aspx?articleid=1887061>

The New York Times – Well Blog

O’Connor, Anahad

“Study Discounts Testosterone Therapy for Early Prostate Cancer”

(July 14, 2014)

http://well.blogs.nytimes.com/2014/07/14/study-discounts-testosterone-therapy-for-early-prostate-cancer/?_php=true&_type=blogs&_r=0