It’s a challenge to manage side effects from hormone changes.

Having prostate cancer is a challenge. Coping with treatment and treatment side effects adds to the challenge. It will help if you understand the hormone changes taking place in your body. We’ll also share ways to deal with these changes.

How do prostate cancer treatments change a man’s body?

Prostate cancer treatments block your main male hormone—testosterone (say: tes TAHS ter ohnn). In your teen years, your body started to produce lots of this hormone. It caused hair on your body and face to grow, your voice to deepen, and your muscles to get bigger. It also caused you to start having erections, produce sperm, and have a desire for sex.

But, testosterone can also cause prostate cancer cells to grow. Treatment for prostate cancer—particularly chemotherapy and hormone therapy—will lower your level of testosterone and starve the cancer. This is the good news for treating the cancer. The bad news is that most men have side effects from low levels of testosterone. Some men have just a few side effects. Other men have very strong side effects.

What are the major side effects from lower testosterone levels?

The most common side effects from hormone treatment:

- **Hot flashes**—These occur because blood vessels are less stable. They can suddenly dilate (relax and get larger). Then the blood flows quickly into the veins, heating up the body and causing sweating.
- **Breast swelling**—All men have a little of the female hormone, estrogen. But, when testosterone gets low, the estrogen is dominant. The little bit of estrogen may cause male breasts to swell and become tender. The hormone treatment does not create estrogen.
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- **Lower sex drive**—Less testosterone means less desire for sex. Your penis may also not get hard (not get erect).
- **Mood swings**—You may have sudden mood swings and some men can have depression.
- **Changes in weight, muscles, and bones**—You may gain weight even as you lose muscle mass and bone strength. These changes may not reverse themselves after treatment ends. That means that your muscles size and bone strength may not return to pre-treatment levels.
- **Other changes to your body** can include thinning of your body hair and shrinkage of your penis and testicles.
- **Higher chance of high cholesterol, diabetes, high blood pressure, heart disease and dementia**—The chances of you getting one of these medical problems is low, but the hormone treatment increases that chance.

Symptoms may start as soon as hormone medicine starts or at any time during treatment. Some symptoms come and go. Others may be permanent.
- Hot flashes and mood swings may come and go, and usually end when treatment ends.
- Some changes in muscle strength, bone mass, and erections may be permanent.

**How can I cope with hormone changes?**

**General Tips and Tools**
- **Don’t suffer in silence.** Share your feelings with close friends and family. If you know someone with prostate cancer, talk with him. It can be helpful to share with someone who knows what you are feeling. Consider joining a support group either in person or online.
- **Be gentle on yourself.** These changes are not your “fault.” Hormone changes can cause sudden mood swings along with the other side effects listed above. Hormone changes can also cause depression. It’s important to tell your doctor if you’re feeling depressed.

- **Eat healthy and stay active.** Reducing your portions and limiting sweets and high fat foods may help you keep your weight down. Exercising as often as possible is very important for your weight, muscle health, and bone health. It will also make you feel better and reduce fatigue from the hormone treatment.
- **Think about sexual changes as a chance to learn new ways to show affection.** Most men are distressed by changes in their sex drive and their ability to get an erection. Some men and their partners use humor to help cope. Some learn to ask for and share more hugs and kisses. [See the “Sexual Side Effects” guide for ways to deal with changes and concerns.]
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Tips to Cope with Hot Flashes

• **Cool off with water.** Put a cold, wet cloth around your neck or take a cool shower or bath.
• **Cool off with a fan.** Keep small fans near favorite places to sit and near your bed.
• **Cool off with sensible clothing.** Comfortable, loose clothing made from ‘breathable’ fabric such as cotton or light wool works best. Dress in layers that can be removed or added as your body temperature changes.
• **Keep track of “trigger” foods or drinks.** For some, alcohol, caffeine, cayenne pepper and hot drinks trigger hot flashes. Cool off by drinking cold water or sucking ice chips. Try eating several small meals during the day instead of a few large ones.
• **Try to manage stress.** Feeling anxious or upset can make hot flashes worse. Find and use ways to relax that work for you. There are many books, classes, CDs and DVDs that teach how. [See also the guide on “Coping with Cancer Stress.”]
• **Consider alternative therapies.** Some find acupuncture or Vitamin E supplements helpful. Discuss these with your doctor before starting.
• **Talk with your doctor about medicines that may help.** These medicines are sometimes used to help with hot flashes: Belladonna, Effexor, Celexa, Neurontin, and Megace. If hot flashes are keeping you awake at night, be sure to let your doctor know. Medicine may help.

Tips to Cope with Breast Changes.
When testosterone levels fall and breasts enlarge, men often feel embarrassed. This swelling can be painful as well.
• **Ask your doctor about ways to bind your breasts.** Sometimes a woman’s sports bra will work. These flatten breasts and may help relieve tenderness and swelling.
• **If nipples are sore, wear soft fabrics and loose shirts.**
• **Medicine or applying a hot or cold pack may help.** Over the counter medicines such as Acetaminophen (brand name: Tylenol) or ibuprofen (brand name: Advil, Motrin) may relieve breast tenderness.
  — If breast tenderness is severe, sometimes medications like Tamoxifen or even a short course of treatment with radiation to the breasts can help with the tenderness.

Tips to Keep Blood Sugar, Blood Pressure and Cholesterol in Good Control
Know your numbers! We mean your blood sugar, blood pressure, and cholesterol numbers. You and your doctor can work together to keep them within normal ranges. The best way to control your numbers is to eat healthy and stay active. This means:
• **Stay aware of how many calories your body needs and stick to the limit.** For most men, about 2000—2500 calories per day is about right. Your age, body size, exercise level, and health conditions affect the calories you need.
• **Let grains, fruits, and vegetables be your main foods.** Whole grains, such as whole wheat
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flour, and other grains such as brown rice are the most healthful. When choosing fruits and vegetables, look for the ones that are colorful—dark green, red and orange. These are packed with vitamins and minerals.

- **Eat low fat protein.** This includes low fat meat, chicken, turkey, fish, beans, and tofu. If you eat beef, lamb, or pork, buy lean cuts and cut off any fat.
- **Limit hard fat such as butter, margarine or lard.** Use canola oil or olive oil instead. Nuts also contain healthy oils.
- **Limit sugary snacks.** This includes ice cream, candy, cakes, doughnuts, and cookies. It may be hard to resist these treats at first. But if you cut down, your desire for sweets will decrease. When you crave a sweet treat, try dried fruit. Try frozen yogurt in place of ice cream.
- **Limit salt (sodium).** Most of us eat too much salt since food companies load up canned, processed and restaurant food with it. Learn to read labels and limit your total daily amount to 2000 mg (milligrams). All food labels list the amount of salt followed by ‘mg.’ Don’t worry about how much a milligram is. Just pay attention to the numbers.
- **Stay active.** Try for at least 30 minutes of exercise, such as walking, every day. You can break it up into a few small walks or go for one longer walk. Swimming, bike riding, gardening, and dancing are other good examples. Ask a friend or partner to join you to make it more fun.

Tips to Cope with Muscle Changes

An exercise program that has both aerobic exercise (running, fast walking, swimming, biking, rowing) and resistance exercises (weight lifting) is the best. This type of program will increase muscle mass and decrease body fat. An added benefit of lifting weights is that it also makes your bones stronger. Talk with your healthcare team before you start an exercise program. Physical therapists and licensed personal trainers can help put together a program that is right for you.

For tips to cope with sexual changes, see the guide for “Sexual Side Effects.”

You can find some information about both healthy foods and exercise at the website for the [United States Department of Agriculture](https://www.usda.gov).
When should I call or see my doctor or nurse?

Check with your doctor, nurse, or healthcare team when:

- **You have questions or concerns.** Your healthcare team can work with you to address concerns and may be able to put you in touch with others who have had similar treatments.
- **Your symptoms are making life hard for your body or mind.**
- **You feel depressed.**
- **You’re not sleeping well.**
- **You want a referral to a counselor to help you cope better with your cancer treatment or a referral to a dietician to help you plan and prepare healthy foods.**

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This guide contains general information and is not meant to replace consultation with your doctor or nurse.

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