A healthy lifestyle guide designed for advanced prostate cancer patients undergoing androgen deprivation therapy

For advice on medical issues, you should always consult your medical practitioner. This booklet contains general information related to certain medical conditions and their treatment. This guide is not intended to offer personalized medical diagnosis or patient-specific treatment advice.
Frequently Asked Questions

What does androgen deprivation therapy (ADT) do?
Prostate cancer develops when cells of the prostate show uncontrolled growth. The growth and function of prostate cells depend on testosterone, a male sex hormone that is made in the testicles. High levels of testosterone may help fuel prostate cell growth. Androgen deprivation therapy is used to lower levels of hormones, including testosterone.

Are there side effects of ADT?
Each patient may experience different side effects of ADT. Men undergoing ADT have reported side effects, including hot flashes, loss of libido, erectile dysfunction, loss of muscle mass and strength, fatigue, depression, and osteoporosis. Talk to your doctor about how ADT may affect you.

Can I lower my risk of the cancer progressing or coming back?
Unfortunately, for most cancers, there is no solid evidence that shows lifestyle changes can reduce the risk of cancer progression or recurrence. However, recent research suggests that men who exercise regularly after treatment may live longer than those who do not. Other research suggests that men who smoke are more likely to have their prostate cancer recur than men who don’t smoke.1 Adopting other healthy behaviors such as eating well and managing a healthy weight might also help. These types of changes can have positive effects on your health beyond your prostate cancer and may help you to live longer.

Living Healthier
An advanced prostate cancer diagnosis may cause many emotions such as confusion, anger, and depression. These types of emotions are normal with any cancer diagnosis. The Advanced Prostate Cancer Patient and Caregiver Burden of Illness Survey was conducted to evaluate the physical and emotional impact of advanced prostate cancer on both patients and caregivers. The survey found that the majority of patients felt afraid and uncertain for the future but were determined to fight.2

Today is the perfect time to make changes that can have positive effects on your life—now, tomorrow, and every day moving forward. Please consult with your doctor or other qualified healthcare professionals before implementing any of the lifestyle changes discussed within this guide.

“YOU CAN’T CHANGE THE FACT THAT YOU HAVE HAD CANCER. WHAT YOU CAN CHANGE IS HOW YOU LIVE THE REST OF YOUR LIFE—MAKING CHOICES TO HELP YOU STAY HEALTHY AND FEEL AS WELL AS YOU CAN.”

American Cancer Society
Muscles are not only critical to posture, balance, and movement, but they help maintain healthy bones. A regular exercise routine can not only boost your physical fitness, but also help to increase daily energy and happiness levels. Please consult with your doctor or other qualified healthcare professionals before implementing any of the lifestyle changes discussed within this document.

Increase Your Energy
As a man living with cancer, you are likely to experience fatigue. Regular exercise can help to reduce this intense fatigue, giving you a better quality of life as you navigate your day-to-day life. Also know that adequate rest and sleep are necessary within any exercise plan or healthy lifestyle.

Maintain Your Muscle Mass
Muscle loss can be prevented through proper and consistent exercise. Hormonal therapies associated with advanced prostate cancer (and the depletion of testosterone) can have a detrimental effect on muscle, leading to muscle loss and higher risk of bone fractures.

Live Life to the Fullest
A recent clinical study of more than 4,000 men with localized prostate cancer suggested that, in general, higher levels of physical activity, including walking, bicycling, and exercising, were associated with increased survival rates in men with prostate cancer.3

In a study of men with localized prostate cancer, men who walked briskly for 90 minutes or more per week lowered their risk of death from any cause by 46%, compared to men who walked less quickly and less often.3

Keep Your Morale High
Like most other aspects of your journey, make sure you involve friends and family in your exercise plan. Having others involved may motivate you to continue exercising, as well as increase your enjoyment of the exercise.

NEW RESEARCH SUGGESTS THAT MEN WITH PROSTATE CANCER WHO LEAD ACTIVE LIFESTYLES HAVE A BETTER SURVIVAL RATE THAN THOSE WHO DON’T.3

In a study of men with localized prostate cancer, men who walked or biked daily for at least 20 minutes after their diagnosis had a 39% decreased risk of dying from prostate cancer and a 30% decreased risk of dying overall, compared to those who were less active.2

“THIS IS OF PUBLIC HEALTH RELEVANCE,” SAYS RESEARCHER STEPHANIE BONN, “AS THE NUMBER OF MEN SURVIVING AFTER A PROSTATE CANCER DIAGNOSIS IS INCREASING WORLDWIDE.”

Stephanie Bonn

* A clinical study of more than 4,000 men with localized prostate cancer, followed for 10 to 15 years.
Building muscle mass through resistance or weight training helps keep your muscles strong, and is an effective way to help change your metabolism. This is particularly important to men who have received hormone therapy due to the increased risk of weakening bones and muscles.

Stretching helps tone your muscles and may help reduce stress. Stress may accelerate prostate cancer development. Flexibility can help make you more mobile and comfortable. Before you begin any exercise routine, it is important to speak to your healthcare provider to see what level of exercise is appropriate for you.

**MAKE IT ROUTINE**

Exercise 2 to 4 times a week and walk every day for 30 to 60 minutes. You should do your best to make this a minimum weekly goal. Remember, the exercises should never be painful or unusually tiring. Before you begin a new routine it is important to speak to your healthcare provider to see what level of exercise is appropriate for you.

**STAY HYDRATED**

Regularly drinking water is recommended, especially during your exercise sessions. For increased bone health, focus on mineral waters rich in bicarbonates and calcium, for example, Perrier or San Pellegrino.

**KEGEL EXERCISES FOR MEN**

Pelvic floor muscles support the bladder, bowel, and affect sexual function. A radical prostatectomy, diabetes, or overactive bladder can weaken your pelvic floor muscles. Kegel exercises strengthen the pelvic floor muscle and may benefit patients with incontinence or erectile dysfunction.

**HOW TO DO KEGEL EXERCISES**

Find the right muscles. To identify your pelvic floor muscles, stop urination in midstream or tighten the muscles that keep you from passing gas. If you contract your pelvic floor muscles, the base of your penis will move closer to your abdomen and your testicles will rise.

Perfect your technique. Once you’ve identified your pelvic floor muscles, empty your bladder and lie on your back with your knees bent and apart. Tighten your pelvic floor muscles, hold the contraction for 3 seconds, and then relax for 3 seconds. For best results, do not to flex the muscles in your abdomen, thighs, or buttocks. Breathe freely.

Repeat 3 times a day. Aim for at least 3 sets of 10 repetitions a day. When your muscles get stronger, try doing Kegel exercises while sitting, standing, or walking.
Eating right can be hard for anyone, but it can be tougher during and after treatment. Before you eat, think about what goes on your plate. As part of your healthy lifestyle, please review the following suggestions from the United States Department of Agriculture’s ChooseMyPlate campaign at choosemyplate.gov.4

### Eat lots of fruits and vegetables. Focus on fruits and vegetables high in antioxidants. (Please see antioxidant rainbow to the right.)

- Increase whole grains. Eat more whole wheat flour, bulgur (cracked wheat), oatmeal, whole cornmeal, and brown rice.
- Drink water or low-fat milk. Stop drinking alcohol, soda, or high-sugar beverages. Drinking alcohol and high-sugar beverages increases the calories in your diet and can cause other health-related problems.
- Reduce red meat. Increase fish, especially fatty fish (salmon, tuna, trout, etc) and soy-based foods. Choose steaming or baking over charbroiling or pan-frying. Monitor the temperature of the meat as it cooks to avoid charring or overcooking.

### Calories Count

Everyone has a personal calorie limit. To calculate your suggested daily calorie requirements, visit any number of online calorie calculators. The American Cancer Society has a calculator that factors in your level of physical activity.

According to the 2010 US Dietary Guidelines for Americans, a sedentary man aged 61 or greater should consume about 2,000 calories per day.5 Increasing your activity level will increase the number of calories you should be eating daily. Consult your physician or nutritionist for a more accurate and personalized calorie target.

### THE COLORS OF THE ANTIOXIDANT RAINBOW

As part of a healthy lifestyle, be sure to include an array of foods rich in antioxidants. Some antioxidants found in certain foods can be divided into groups by color.

<table>
<thead>
<tr>
<th>ANTIOXIDANT</th>
<th>FOOD EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ANTHOCYANINS</strong></td>
<td>POMEGRANATE</td>
</tr>
<tr>
<td>prevent inflammation.</td>
<td>GRAPES</td>
</tr>
<tr>
<td></td>
<td>BLUEBERRIES</td>
</tr>
<tr>
<td></td>
<td>PRUNES</td>
</tr>
<tr>
<td><strong>LYCOPENE</strong></td>
<td>TOMATOES</td>
</tr>
<tr>
<td>is an antioxidant for prostate</td>
<td>GRAPEFRUITS</td>
</tr>
<tr>
<td>health.</td>
<td>WATERMELON</td>
</tr>
<tr>
<td><strong>SULFURAPHANE &amp; ISOThIOCYANATES</strong></td>
<td>BRUSSELSPRIGS</td>
</tr>
<tr>
<td>help to break down</td>
<td>CARROTS</td>
</tr>
<tr>
<td>carcinogens in food.</td>
<td>APRICOTS</td>
</tr>
<tr>
<td></td>
<td>MANGOES</td>
</tr>
<tr>
<td><strong>BETA-CRYPTOXANTHIN</strong></td>
<td>PLANTS</td>
</tr>
<tr>
<td>is converted in vitamin A.</td>
<td>PINEAPPLES</td>
</tr>
<tr>
<td></td>
<td>PAPAYA</td>
</tr>
<tr>
<td><strong>ALLYL SULFIDES</strong></td>
<td>ONION</td>
</tr>
<tr>
<td>can trigger an antioxidant</td>
<td>GARLIC</td>
</tr>
<tr>
<td>reaction in cells.</td>
<td>LEEKS</td>
</tr>
<tr>
<td></td>
<td>CHIVES</td>
</tr>
<tr>
<td><strong>BETA-CAROTENE</strong></td>
<td>CARROTS</td>
</tr>
<tr>
<td>helps with vision.</td>
<td>CANTALOUPE</td>
</tr>
<tr>
<td></td>
<td>APRICOTS</td>
</tr>
<tr>
<td><strong>LUTEIN &amp; ZEAXANTHIN</strong></td>
<td>ORANGES</td>
</tr>
<tr>
<td>aid in eye health.</td>
<td>PEARS</td>
</tr>
<tr>
<td></td>
<td>PEACHES</td>
</tr>
<tr>
<td></td>
<td>NECTARINES</td>
</tr>
<tr>
<td></td>
<td>PAPAYA</td>
</tr>
</tbody>
</table>
**CALCIUM**
Calcium plays a key role in building and maintaining bone strength. Found in: Low-fat dairy products, dark greens, and leafy vegetables.

**VITAMIN D**
Vitamin D plays an important role in calcium absorption and bone health. Found in: Fatty fish (salmon, trout, tuna, etc) and whole eggs.

**EXERCISE**
The best exercise for bone health is weight-bearing exercise, including walking, climbing stairs, dancing, and weight training.

**WATER**
For your bone health, focus on mineral waters rich in bicarbonates and calcium.

**BONE EXAMS**
Bone density scanning is a form of X-ray that is used to measure and track actual or potential bone loss. This test is also referred to as dual-energy X-ray absorptiometry (DEXA) or bone densitometry.

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**Osteoporosis and ADT**
Osteoporosis is a silent disease because it can weaken bones over the years without causing symptoms. For men coping with prostate cancer, weak bones may not seem very important. However, studies have shown a link between ADT for prostate cancer and both osteoporosis and broken bones. It is never too late to improve your bone health: osteoporosis can be treated and prevented. Don’t wait for your doctor to bring up your bone health with you. Men being treated for advanced prostate cancer with ADT should discuss with their doctor whether bone mineral density (BMD) testing is a good idea.

**Vitamins/Supplementation**
As far as bone health is concerned, a well-balanced diet rich in calcium and vitamin D is important. Taking dietary supplements or multivitamins can also help ensure that you meet your body’s daily calcium requirements. Check with your doctor before you begin taking any vitamins or supplements.

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**Recommended Ranges for Key Vitamins and Minerals**

<table>
<thead>
<tr>
<th>Vitamin</th>
<th>Recommended Intake*</th>
<th>Upper Level Intake†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin A</td>
<td>900 μg/day</td>
<td>3,000 μg/day</td>
</tr>
<tr>
<td>Vitamin B1</td>
<td>1.7 mg/day</td>
<td>100 mg/day</td>
</tr>
<tr>
<td>Vitamin C</td>
<td>90 mg/day</td>
<td>2,000 mg/day</td>
</tr>
<tr>
<td>Vitamin D</td>
<td>400 IU/day</td>
<td>2,000 IU/day</td>
</tr>
<tr>
<td>Calcium</td>
<td>1,200 mg/day</td>
<td>2,500 mg/day</td>
</tr>
<tr>
<td>Folic Acid</td>
<td>400 μg/day</td>
<td>1,000 μg/day</td>
</tr>
</tbody>
</table>

*Recommended dietary allowances or adequate intakes to be used as goals for individual intake.
†The maximum level of daily nutrient intake that is likely to pose no risk of adverse effects; represents total intake from food, water, and supplements. Values are for healthy males aged 51 to 70. Source: Institute of Medicine of the National Academies. Dietary reference intakes.

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**Other Medications**
Beyond traditional preventative supplements (e.g., supplemental calcium, vitamin D), your doctor may recommend other medications if supplements are not enough. Discuss other medications with your doctor if you feel you are at particular risk for osteoporosis.

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**Osteoporosis Bone**
Honeycomb pattern with large holes due to osteoporosis, indicating the bone is less strong and at a higher risk for breaking.
Cancer and its treatments can be stressful for you, your family, and your caregivers. Relaxation techniques and other mind/body practices can help calm your mind and sharpen your ability to focus.

**Admit**
Improving your emotional health can positively impact your physical health. Avoid keeping things to yourself. Admit your feelings to family and friends. If needed, ask for advice or support from your family doctor, a counselor, or a religious advisor. See page 17 for additional support resources.

**Balance**
It’s important to deal with negative feelings, but a positive outlook can give your health a boost. Balance the things that make you feel stressed with things you enjoy. Rediscover the things you found fun as a child. Explore new interests or hobbies. Reward and treat yourself well. Balancing challenges with rewards can lead to optimum health in the physical, mental, and spiritual realms.

**Calm**
Remaining calm and avoiding stress are useful ways to help both your physical and emotional health. Consider incorporating relaxation techniques such as deep breathing and meditation into your daily routine. Explore your local library or search online for more information.

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**DEEP BREATHING**
Having plenty of oxygen in our systems is important. Anxiety and stress can make us take short, shallow breaths, which does not allow enough oxygen to enter our bodies. When you feel stress or anxiety sneak up on you, take 3 or 4 deep, cleansing breaths. Inhale through your nose then hold your breath for several seconds. Exhale slowly through your mouth. Laughing and singing are other great ways to trick your body into breathing deeply.

**MEDITATION**
Meditation is a process to relax the body and calm the mind. Pick a quiet place to relax, select an affirming word, and repeat it to yourself for 15 to 20 minutes (eg, peace, love, or hope). As your mind jumps around, simply observe the pattern of your thoughts and gently guide them back to focus on your breath or affirming word.

**GUIDED IMAGERY**
This stress-reducing technique combines deep breathing and meditation. As you practice deep breathing, imagine a peaceful scene or setting, perhaps from a memory. Popular scenes may include gazing at a peaceful lake or strolling an ocean beach. Once you are relaxed, try to wholly focus on that place. Try to engage all of your senses and allow your concerns to fade away.

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Hormone therapy often takes place immediately after an APC diagnosis or could be years after a radical prostatectomy. It is normal to feel anger, confusion, and frustration. Many patients do. A survey of prostate cancer patients demonstrated that the majority of patients noted that they felt afraid and uncertain for the future. Other changes may include sudden fatigue, loss of energy, concentration, and patience. The decisions and logistics surrounding treatments can include increased communications, paperwork, and travel. All of this can lead to increased worry, concern, and stress. It’s important to acknowledge your feelings and develop ways to diffuse anger, release stress, and cope with the situation.
Fortunately, with the right kind of advice and help, it is possible to overcome many of the sexual side effects of cancer treatments.

**HOW ADT CAN IMPACT YOUR SEX LIFE**

Prostate cancer, and the associated treatments, cause physical and emotional changes that may affect a man’s desire and ability to have sex. ADT can reduce desire and may cause erectile dysfunction in some men because it reduces testosterone levels.

- **Reduced Sex Drive**
  If you notice a decreased sex drive and find it troublesome, talk to your doctor about your options. Reduced sexual interest also impacts your partner, so be sure to talk to them about what you are experiencing, which is a common problem in men who are on ADT.

- **Erectile Dysfunction**
  If you are experiencing erectile dysfunction (ED), talk to your doctor about ways he/she can help. ED is common in men receiving ADT treatment and your doctor may have suggestions to support you throughout your ADT treatment.

- **Depression**
  Research has shown that ADT may increase depression in men with prostate cancer. If you are feeling depressed, it is important to discuss your feelings with your partner and your healthcare provider.

**TIP 1:** Practice talking openly about non-sexual topics before you start talking about sex.

**TIP 2:** Write down what you like about sex with your partner. Consider new techniques or fantasies that you find appealing. Practice talking about them.

**TIP 3:** Through prostate cancer support groups, you can meet other couples that are dealing with similar issues, including sexual concerns.

You are not alone, 90% of men receiving ADT experienced sexual dysfunction (decreased sex drive and ED).
6 STEPS TO CAREGIVING

Your caregiver plays an important role before, during, and after your treatment. Share these helpful tips with the caregivers in your life.

ONE: BE OPEN
A prostate cancer diagnosis brings many emotions. Be open to emotions and feelings. If he can’t or won’t share his feelings with you, remind him that talking with someone will help.

TWO: TAKE CARE OF YOURSELF
Balancing caregiving with other daily chores can be challenging. Know your own limitations and don’t forget to take time to relax and recharge.

THREE: THINK POSITIVE
Maintaining a positive attitude can impact everyone around you. Many studies show there is real power in positive thinking.

FOUR: FIND OUT
The more you know, the more empowered you will feel. Come to doctor’s appointments with a list of questions and don’t leave until you have the answers you need.

FIVE: FILE IT
Treating prostate cancer brings lots of logistics. Organize appointments, medicines, receipts, and insurance information for easy reference and access.

SIX: SEEK HELP
Feel comfortable reaching out to family, friends, and support groups for help when you need it.

RESOURCES
Educating yourself and your family about prostate cancer is important in empowering your own treatment. There are many resources available to assist you.*

**Patient Advocates for Advanced Cancer Treatments [PAACT]**
A great source for information and further resources on prostate cancer management for both patients and physicians.
www.paactusa.org
1-616-453-1477

**The Prostate Cancer Foundation**
The leading prostate cancer research organization for all those involved and affected by the disease.
www.pcf.org
1-800-757-CURE (2873)

**Us TOO International**
An organization started by prostate cancer survivors aimed at providing useful information regarding diagnosis and treatment.
www.ustoo.org
1-800-80-US-TOO (808-7866)

**ZERO**
An organization that aims to lower suffering for patients as they navigate their lives during and post treatment and recovery.
www.zerocancer.org
1-888-245-9455

**American Cancer Society**
A nationwide voluntary health organization dedicated to eliminating cancer.
www.cancer.org
1-800-227-2345

**Help for Cancer Caregivers**
A resource geared toward cancer caregivers. The site offers solutions to daily struggles surrounding cancer.
www.helpforcancercaregivers.org

**Cancer.net**
A website that offers advice on coping with cancer as a caregiver, patient, and loved one.
www.cancer.net

**National Cancer Institute**
The nation’s leader in cancer research.
www.cancer.gov
1-800-4-CANCER

*Ferring is providing a list of resources solely for your information and convenience and should not be construed as an endorsement of the organizations listed.

*Help for Cancer Caregivers
A great resource for those looking to watch what they eat and exercise more.
www.choosemyplate.gov

**The United States Department of Agriculture**
A great resource for those looking to watch what they eat and exercise more.
www.choosemyplate.gov

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KEEPPING TRACK OF IT ALL
Keeping track of all your healthcare providers can be challenging. Use this page to list key contacts.

**UROLOGIST**
Name: __________________________
Phone: __________________________
Fax: __________________________
Email: __________________________
Web: __________________________
Notes: __________________________

**ONCOLOGIST/RADIATION ONCOLOGIST**
Name: __________________________
Phone: __________________________
Fax: __________________________
Email: __________________________
Web: __________________________
Notes: __________________________

**FAMILY PRACTICE**
Name: __________________________
Phone: __________________________
Fax: __________________________
Email: __________________________
Web: __________________________
Notes: __________________________

**HEALTH INSURANCE REPRESENTATIVE**
Name: __________________________
Phone: __________________________
Fax: __________________________
Email: __________________________
Web: __________________________
Notes: __________________________

**PSYCHIATRIST/PSYCHOLOGIST/COUNSELOR**
Name: __________________________
Phone: __________________________
Fax: __________________________
Email: __________________________
Web: __________________________
Notes: __________________________

“THE KEY IS TO SEE YOUR LIFE IN A NEW WAY—WITH A NEW SET OF LIFESTYLE CHANGES ALL DESIGNED TO TURN YOU FROM A PROSTATE CANCER SURVIVOR INTO A PROSTATE CANCER THRIVER.”

David Heber, MD, PhD
Prostate Cancer Foundation
PLEASE CONSULT WITH YOUR DOCTOR OR OTHER QUALIFIED HEALTHCARE PROFESSIONAL BEFORE IMPLEMENTING ANY OF THE LIFESTYLE CHANGES DISCUSSED WITHIN THIS DOCUMENT.


Perrier is a registered trademark of Nestle Waters. San Pellegrino is a registered trademark of San Pellegrino S.P.A.

This guide is produced by Ferring Pharmaceuticals to help support patients with advanced prostate cancer. Live Healthy While on ADT was designed to inform and support advanced prostate cancer patients throughout their ADT therapy.