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Hormone Deprivation Symptoms: Men [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board](#) [2], 01/2012

Men who receive hormone therapy for prostate cancer may experience symptoms of hormone deprivation. This is because hormone therapy lowers levels of testosterone and other male sex hormones called androgens. Although hormone therapy helps treat the cancer, it causes the symptoms discussed below.

Relieving side effects, also called symptom management, [palliative care](#) [3], or supportive care, is an important part of cancer care and treatment. Talk with your health care team about any symptoms you experience, including any new symptoms or a change in symptoms.

Symptoms

A lack of testosterone causes the following symptoms:

- Hot flashes with severe sweating
- [Osteoporosis](#) [4] (thinning of the bones)
- Decreased libido (desire for sex)
- [Erectile dysfunction](#) [5] (problems with having or maintaining an erection)
- [Fatigue](#) [6]
- [Depression](#) [7] or irritability

Men without prostate cancer may also have these symptoms as part of aging. In men without prostate cancer, treatments to raise testosterone levels can help relieve these symptoms. Because testosterone helps prostate cancer grow, these treatments are not an option for men with prostate cancer.

Osteoporosis

Men who have received androgen ablation therapy (treatment that stops the production of testosterone) have a higher risk of developing osteoporosis. Androgen ablation therapies include medications that stop the body from producing testosterone or orchiectomy (surgery to remove the testicles).

Most research on osteoporosis has focused on preventing this condition in women because

osteoporosis is much more common in women than men. Doctors are studying if osteoporosis treatments should be different for men because men's hormone levels are different.

Reducing the risk of osteoporosis. The following actions may help lower the risk of developing osteoporosis:

- Perform weight-bearing exercise, such as walking 20 to 30 minutes each day.
- Maintain an ideal body weight.
- Take vitamin D supplements (see below).
- Take calcium supplements (see below).

In addition, your doctor may recommend a bone density test or offer medications, such as those listed below.

Treating osteoporosis. The following treatments help slow or stop bone loss. They may be given alone or in combination.

- Supplements of calcium and vitamin D have been shown to reduce bone loss in men and women older than 65. The recommended levels are 1,000 to 1,500 milligrams (mg) of elemental calcium and 400 to 600 international units (IU) of vitamin D daily. Talk with your doctor before taking any supplements.
- Several drugs may be used to treat osteoporosis in men. Alendronate (Fosamax) is given orally (by mouth) and used to treat osteoporosis in women and men. Pamidronate (Aredia) and zoledronic acid (Zometa) are given intravenously (IV; into a vein) and reduce bone loss in people with cancer. Risedronate (Actonel) is given orally (by mouth) and is approved by the U.S. Food and Drug Administration (FDA) for treating women with osteoporosis. Denosumab (Prolia, Xgeva) is another drug approved by the U.S Food and Drug Administration to maintain bone health and treat osteoporosis in men receiving hormone therapy for prostate cancer.

Hot flashes

Up to 75% of men receiving hormone treatments for prostate cancer have hot flashes.

Treatment of hot flashes. The following treatments may help reduce the number and severity of hot flashes:

- Antidepressants, such as venlafaxine (Effexor) and sertraline (Zoloft), have been shown to reduce hot flashes, as well as help with mood problems or irritability that often comes with changes in hormone levels.
- A nonhormonal medication, gabapentin (Neurontin), may help to treat hot flashes in men.
- Vitamin E supplements (up to 800 IU/day) have been shown to relieve hot flashes for women, but it is uncertain how effective vitamin E supplements are for men experiencing hot flashes.
- Exercise
- Deep breathing and other relaxation techniques
- A cooler room temperature
- Progesterone, such as megestrol acetate (Megace, Ovaban, Pallace), works well to reduce hot flashes in women and may be a reasonable option for men.

- Clonidine (Catapres), a blood pressure medication, has not shown to be very useful for treating hot flashes in men, even though it has been shown to reduce hot flashes for women.

More Information

[Guide to Prostate Cancer](#) [8]

[What to Know: ASCO's Guideline on Hormone Therapy for Advanced Prostate Cancer](#) [9]

[Managing Side Effects](#) [10]

Additional Resources

LIVESTRONG: [Osteoporosis](#) [11]

Links:

[1] <http://www.cancer.net/navigating-cancer-care/side-effects/hormone-deprivation-symptoms-men>

[2] <http://www.cancer.net/about-us>

[3] <http://www.cancer.net/node/25282>

[4] <http://www.cancer.net/node/24407>

[5] <http://www.cancer.net/node/25054>

[6] <http://www.cancer.net/node/25048>

[7] <http://www.cancer.net/node/25480>

[8] <http://www.cancer.net/node/19562>

[9] <http://www.cancer.net/node/29836>

[10] <http://www.cancer.net/node/25238>

[11] <http://www.livestrong.org/Get-Help/Learn-About-Cancer/Cancer-Support-Topics/Physical-Effects-of-Cancer/Osteoporosis>