

Side Effects of Hormone Therapy for Prostate Cancer

Prostate cancer treatment can decrease a man's hormone levels, which can result in the following symptoms caused by the body's lack of testosterone:

- Hot flashes with severe sweating
- Osteoporosis (loss of bone mass that makes bones break easily)
- Decreased libido (desire for sex)
- Erectile dysfunction (problems with having or maintaining an erection)
- Fatigue
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- Depression or irritability

These symptoms may also occur in men without prostate cancer, as part of the aging process. 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 treatment

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

Most research into how to prevent and treat osteoporosis has been conducted with women because osteoporosis is much more common in women than men. Doctors are exploring if osteoporosis treatments should be different for men because men's hormone levels are different. Some treatments that may help prevent or slow osteoporosis in men are described below. Treatments may be given alone or in combination.

Calcium and vitamin D. Supplements of calcium and vitamin D have been shown to reduce bone loss in men and women over 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 supplements.

Bisphosphonates. The following drugs may reduce bone loss in men:

- Alendronate (Fosamax), which is given orally and used to treat osteoporosis in women and men

- Pamidronate (Aredia), which is given intravenously (IV), and recently has been shown to reduce bone loss in people with cancer
- Zoledronate (Zometa), which is given intravenously (IV), and recently has been shown to reduce bone loss in people with cancer
- Risedronate (Actonel), which is given orally, and recently has been approved for treating women with osteoporosis

Estrogen. Estrogen may be even more important in preserving bone mass than testosterone. Men's bodies normally have low levels of estrogen, so maintaining these levels may help prevent osteoporosis. However, this treatment requires further study before it is proven to be effective.

Reducing the risk of osteoporosis

The following actions may help reduce the risk of developing osteoporosis:

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

In addition, your doctor may recommend a bone density test or offer medications, such as the bisphosphonates mentioned above.

Treatment of hot flashes

Up to 75% of men receiving hormone treatments for prostate cancer have hot flashes. The following treatments may help:

- Antidepressants, such as venlafaxine (Effexor) and sertraline (Zoloft), have been shown to reduce hot flashes and help with the mood problems or irritability often associated with changes in hormone levels.
- A nonhormonal medication, gabapentin (Neurontin), may be helpful in treating 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 agents, such as megestrol acetate (Megace), are very effective in reducing hot flashes in women. There is concern that the use of these agents in men may be connected to a rising prostate-specific antigen (PSA) level, which may indicate prostate cancer, so this drug may not be a safe treatment for men. Nonetheless, if monitored by a doctor, progesterone agents may be reasonable to try.
- Clonidine (Catapres), a blood pressure medication, has not shown to be very useful for treating hot flashes in men, even though it has shown to reduce hot flashes for women.