



Leuprolide Acetate (Lupron®, Lupron Depot®, Eligard®, Prostav®, Viadur®) - For Men

Pronounced: LOO-proe-lide

Classification: Luteinizing Hormone Releasing Hormone (LHRH) Agonist

About Leuprolide Acetate (Lupron®, Lupron Depot®, Eligard®, Prostav®, Viadur®) - For Men

Most [prostate cancers](#) need supplies of the male hormone testosterone to grow. Testosterone is an androgen produced by the testes and adrenal glands. The production of testosterone can be stopped by surgically removing the testicles or through medication therapy. A hormone called luteinizing hormone (LH), which is produced by the pituitary gland stimulates the production of testosterone by the testicles. Agonists of the LH releasing hormone (i.e. LHRH agonists) stop the production of luteinizing hormone by the pituitary gland. This reduces the production of testosterone in men. The cancer cells may then grow more slowly or stop growing altogether. Leuprolide acetate is a type of LHRH agonist. These may also be called gonadotropin-releasing hormone blockers (GnRH blockers).

How to Take Leuprolide Acetate

Leuprolide acetate is given as an injection under the skin, (called subcutaneous or SQ) every 4 weeks. There is also a long-acting formulation (called depot), which is given every 3, 4 or 6 months into the muscle (intramuscular, IM). Leuprolide acetate can also be administered as an implant (Viadur) that is inserted under the skin in the upper arm and lasts for 12 months.

Possible Side Effects of Leuprolide Acetate

There are a number of things you can do to manage the side effects of leuprolide acetate. Talk to your care team nurse about these recommendations. They can help you decide what will work best for you. These are some of the most common or important side effects:

Tumor Flare

When starting an LHRH agonist, the body initially has a temporary increase in testosterone levels. This "flare" can lead to a temporary increase in the tumor size, causing symptoms related to the cancer to worsen. Your healthcare team can tell you what to look for in your particular case and the treatment necessary. The symptoms typically diminish 3 to 4 weeks after your first injection was given.

Hot Flashes

There are a few things you can do to help with hot flashes. Several medications have been shown to help with symptoms, including clonidine (a blood pressure medication), low doses of certain antidepressants (such as venlafaxine and fluoxetine), and gabapentin. Talk to your healthcare team about these prescription products to determine if they are right for you.

Non-medical recommendations include:

- Keep well-hydrated with eight glasses of water daily.
- Drink ice water or apply an ice pack at the onset of a hot flash.
- Wear cotton or lightweight, breathable fabrics and dress in layers so you can adjust as needed.
- Exercise on a regular basis.

- Try practicing meditation or relaxation exercises to manage stress, which can be a trigger.
- Avoid triggers such as warm rooms, spicy foods, caffeinated beverages, and alcohol.

Muscle, Back, or Joint Pain/Aches

This medication can be associated with joint or muscle aches and pains. If it is bothersome, it may be treated with medications. Be sure to discuss which pain relievers you can safely take with your oncology team, as these are not without their own side effects. Non-medical therapies, such as acupuncture, yoga, gentle stretching and exercise may also help reduce this side effect.

Depression

Leuprolide acetate can cause depression. Contact your care providers if you develop depressive symptoms including irritability, lack of interest in normal activities, insomnia or hypersomnia (sleeping too much), changes in appetite, hopelessness, and sadness.

Weakening of the Bones (Osteoporosis)

Men who take hormone therapy for extended periods of time are at risk for **bone thinning** (osteoporosis). You may be advised to take calcium and vitamin D supplements to help prevent bone loss. Weight-bearing exercise and a healthy diet rich in calcium and vitamin D can also help protect your bone health. You may have a bone density scan (DEXA scan) to assess your bone health. If your physician determines that you are at high risk of developing osteoporosis, they may recommend additional treatment with a type of medication called a bisphosphonate to help strengthen the bones.

Impotence and Loss of Sex Drive (Libido)

These side effects typically go away once the medication is stopped. You may notice a lack of ability to have and maintain an erection, loss of sex drive or a decrease in size of the testicles. Talk to your healthcare team about options to treat these symptoms.

Breast Tenderness or Increase in Breast Tissue

An increase in breast tissue (gynecomastia) or breast tenderness may develop. Your healthcare team can suggest medications to relieve the tenderness. In rare cases, radiation can be given to relieve the tenderness.

Injection Site Reactions

The injection can cause a reaction that may cause pain, discomfort or redness. Talk to your healthcare provider if you are concerned about these symptoms.

Fatigue

Fatigue is very common during cancer treatment and is an overwhelming feeling of exhaustion that is not usually relieved by rest. While on cancer treatment, and for a period after, you may need to adjust your schedule to manage fatigue. Plan times to rest during the day and conserve energy for more important activities. Exercise can help combat fatigue; a simple daily walk with a friend can help. Talk to your healthcare team for helpful tips on dealing with this side effect.

Less common, but important side effects can include:

- **High Blood Sugar and Diabetes:** This medication can cause elevated blood sugar levels in patients with and without diabetes. Your oncology care team will monitor your blood sugar. If you develop increased thirst, urination or hunger, blurry vision, headaches or your breath smells like fruit, notify your healthcare team. Diabetics should monitor their blood sugar closely and report elevations to the healthcare team.
- **Abnormal Heart Rhythms:** This medication can cause slow or abnormal heartbeats or an abnormal heart rhythm called QT prolongation. Notify your oncology care team right away if you feel abnormal heartbeats or if you feel dizzy or faint.
- **Heart Problems, Heart Attack, and Stroke:** This medication can increase the risk of stroke and heart attack. If you experience symptoms of these problems, you should contact your healthcare provider immediately or go to an emergency room. Symptoms can include swelling, redness or pain in an extremity, chest pain or pressure, pain in your arm, back, neck or jaw, shortness of breath, numbness or weakness on one side of the body, trouble talking, confusion, or mental status changes. This medication can cause an abnormal heart rhythm called QT prolongation. Notify your healthcare

provider if you feel abnormal heartbeats or if you feel dizzy or faint.

- **Seizures:** This medication can increase your risk for seizures, especially in patients with a history of seizures or epilepsy. Be sure your healthcare team is aware of any anti-seizure medications you are taking. Report any seizure activity to your healthcare team immediately.
- **Ureteral obstruction:** This medication can cause ureteral obstruction. If you experience any problems urinating, contact your healthcare provider immediately.
- **Spinal cord compression:** This medication can rarely cause a spinal cord compression. Report any loss of bowel or bladder control, severe or increasing numbness between the legs, inner thighs, and back of legs, new difficulty walking, and/or loss of sensation in the feet to your healthcare team immediately

Reproductive Concerns

This drug can affect your reproductive system, resulting in sperm production becoming irregular or stopping permanently. In addition, you may experience erectile dysfunction or a decreased desire for sex during treatment. Talk to your urologist about options for treating erectile dysfunction.

Exposure of an unborn child to this medication could cause birth defects, so you should not father a child while on this medication. Effective birth control is necessary during treatment, even if you believe you are not producing sperm. You may want to consider sperm banking if you may wish to have a child in the future. Discuss these options with your oncology team.

OncoLink is designed for educational purposes only and is not engaged in rendering medical advice or professional services. The information provided through OncoLink should not be used for diagnosing or treating a health problem or a disease. It is not a substitute for professional care. If you have or suspect you may have a health problem or have questions or concerns about the medication that you have been prescribed, you should consult your health care provider.