



Goserelin Acetate (Zoladex®) - For Men

Pronounced: GO-suh-REH-lin ASS-uh-TATE

Classification: Gonadotropin-Releasing Hormone Analog

About Goserelin Acetate (Zoladex®) - 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 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. Goserelin acetate is a type of LHRH agonist.

How to Take Goserelin Acetate

Goserelin acetate is given as a subcutaneous (SQ, under the skin) implant injection every 4 weeks. There is also a long acting formulation (called a depot), which is given by SQ injection, every 12 weeks at a higher dose.

Possible Side Effects of Goserelin Acetate

There are a number of things you can do to manage the side effects of goserelin acetate. Talk to your care team 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:

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.

Injection Site Irritation

This medication can cause irritation and injury at the site of injection, including pain, bruising, or bleeding. Contact your care provider if you develop abdominal pain, abdominal distension, shortness of breath, dizziness or if you are difficult to arouse.

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 healthcare provider 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.

Less common, but important side effects can include:

- **Initial 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 to worsen. Your healthcare team can tell you what to look for in your particular case and what to do about it.
- **High Blood Sugar:** 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.
- **Heart Problems:** This medication can cause slow or abnormal heartbeats or an abnormal heart rhythm called QT prolongation. Goserelin acetate can also cause or worsen pre-existing heart problems including congestive heart failure, restrictive cardiomyopathy, decreased heart function, and heart attack. Notify your healthcare provider if you have sudden weight gain or swelling in the ankles or legs. If you develop chest pain or pressure, pain in the left arm, back, or jaw, sweating, shortness of breath, clammy skin, nausea, dizziness or lightheadedness, call 911 or go to the nearest emergency room.
- **Allergic Reactions:** In some cases, patients can have an allergic reaction to this medication. Signs of a reaction can include: shortness of breath or difficulty breathing, chest pain, rash, flushing or itching or a decrease in blood pressure. If you notice any changes in how you feel during or after the injection, let your nurse know immediately.

Sexual and Reproductive Changes

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.

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