

Gynecology

Lucrin Usage

Lucrin is a medication used to suppress hormone production from the ovaries temporarily. This aims to lower the level of estrogen and progesterone (the woman's sex hormones, made by the ovaries) and thereby stop blood loss, shrink any fibroid (fibroids), and make any endometriosis or adenomyosis inactive. This brochure will give you a brief explanation of how this medicine works, what side effects to expect, and what to expect while taking it.

What's Lucrin?

Lucrin is a so-called GnRH agonist administered by injection as a liquid into the subcutaneous fatty tissue. This medicine contains the same hormone that is usually released by your brain and is responsible for the functioning of the ovaries. After this injection, your brain will temporarily stop producing the GnRH hormone. Your ovaries will then also stop producing eggs and the sex hormones estrogen and progesterone. As a result, no endometrium will be built up, and you will stop menstruating. This hormonal phase is comparable to menopause, but with the big difference, your hormone production in the ovaries starts again when you stop the medication. This low hormonal state often causes side effects (see below), which is why we almost always add some hormones in pill form (this is called "add-back"). In general, this still achieves the desired result but with far fewer side effects.

Why would I take Lucrin?

The most common reason for using Lucrin is to lower sex hormones, stop blood loss, and reduce pain symptoms. There are several reasons when this is desired:

- *In preparation for a planned operation* for fibroids, adenomyosis, or endometriosis to suppress menstruation and/or pain until the operation. Sometimes, it is desirable to suppress menstruation until surgery, thereby increasing your blood content (Hb) to have a better starting value for the operation. It may also be desirable to make the fibroids or the uterus smaller and reduce the blood flow so that the incision can be made smaller and less blood loss during the operation. It is also sometimes necessary as a post-

operative treatment (for example, to suppress endometriosis in the recovery phase after surgery).

- *To bridge the transition* to suppress the bleeding and/or pain symptoms of your condition
- *To gain insight into the cause of pain symptoms* and suppress them for a certain period of time to confirm or exclude a diagnosis such as adenomyosis or endometriosis.
- To suppress the growth of fibroids or endometriosis/adenomyosis until a possible *fertility treatment* like, for instance, IVF.

How do I get Lucrin administered?

Lucrin is a subcutaneous injection that must be administered once a month or once every 3 months. You can administer this injection yourself, or your GP or a nurse can do this. If your doctor decides to add back, this is usually in the form of a tablet that you must take every day.

Lucrin only works temporarily, so after stopping Lucrin your hormones will be re-released, and your periods will start again. Any symptoms will increase, and if fibroids occur, they will grow again.

- Lucrin 3.75 mg syringe, once a month (28 days), works 4-6 weeks
- Lucrin 11.25 mg syringe, 1 time per 3 months (3 x 28 days), works 3-4 months

What are the side effects?

Lucrin causes your sex hormones to become very low. This often causes side effects such as:

- hot flashes
- less desire to make love or dry vagina
- mood swings such as depression, nervousness, or irritability
- weight gain, mainly due to fluid retention
- muscle pain or joint pain
- dry skin and hair
- reduced visibility
- palpitations or high blood pressure and
- Osteoporosis with prolonged use (not applicable with add-back).

Research has shown that if Lucrin is partially compensated with sex hormones in tablet form, the effect on blood loss and shrinkage of fibroids remains the same, but there are far fewer side effects. It is therefore often our advice to use these tablets, in addition to the Lucrin injections. This allows you to use Lucrin for a more extended period. Our patients generally describe the side effects as quite bearable. However, these tablets can also sometimes have side effects. Sometimes you have to search for the combination that suits you best. On our website, there are also some stories from experts (www.uterinerepaircenter.nl).

When are these tablets (add-back) needed?

To counteract the side effects, we recommend combining Lucrin with add-back tablets. These tablets make up for the substantial hormone deficiency. The side effects are lessened, while the effect is still adequate. It depends on your treatment when it is best to start with the add-back tablets.

If you have the pill or a Mirena coil, we advise you to continue with this for 1 month and then start with the add-back. If you do not have the pill or Mirena IUD you can start after 4 weeks. You do not need to take any add-back tablets in the first month because Lucrin has a stimulating effect.

Is Lucrin dangerous?

There is a great deal of experience with using GnRH agonists such as Lucrin, barring any side effects, and complications are very rare.

- During the first two weeks, the symptoms may increase. If you are receiving Lucrin because of severe endometriosis with endometriosis growing around and in the bowel, make sure you have a bowel movement regularly per week. If you have severe constipation or more than >2 days not going to the toilet, please contact us immediately.
- If you are taking Lucrin without any additional hormones (such as livial or femoston or estrogens) you may develop osteoporosis if you are taking it for more than six months. For this reason, we usually give add-back hormones (usually in combination with Vitamin D-calcium chewable tablets to prevent osteoporosis. If you do not want to or are not allowed to use Lucrin for a period longer than 6 months, we will make additional bone scans (so-called dexa-scans) to keep a close eye on the bone density.
- Lucrin does not increase cancer risk and decreases the risk of, e.g., hormone-sensitive breast cancer or ovarian or uterine cancer.

When should I not use Lucrin?

There are not many reasons not to use Lucrin. There is an interaction with Lithium, and there are sometimes some concerns about thrombosis and depressive symptoms.

If you have had a previous thrombosis or are at increased risk, can you use Lucrin? Yes, if you have had a previous thrombosis, you may use Lucrin, but we are cautious about administering hormone tablets. Sometimes this will require additional assessment by a specialist coagulation specialist.

If you have had previous depressive symptoms, can you use Lucrin? Yes, if you have had previous depressive symptoms, you can use Lucrin. However, it is particularly advisable to also start the hormone tablets immediately in order not to suppress the hormones too much. Not everyone gets an increase in symptoms. There are also plenty of examples where patients do not get depressive symptoms with Lucrin while getting them with the hormonal contraceptive pill.

How long should I continue with the hormone tablets?

Depending on the Lucrin dosage, you should continue with the hormone tablets for 4 weeks or 3 months after the last Lucrin injection.

- Lucrin 3.75 mg syringe (monthly injection): 4 weeks
- Lucrin 11.25 mg syringe (three monthly injections): 3 months

Do I need additional contraception?

In principle, Lucrin suppresses your ovulation, and therefore you cannot become pregnant. Please note that Lucrin is not a registered contraceptive. And it is important to realize when Lucrin starts suppressing ovulation and when it stops.

- *Starting Lucrin:* Lucrin suppresses ovulation but not in the first month. This means that from the 2^e month you are using Lucrin you will not be able to ovulate. This means that you will need to take additional contraception in the first month.
- *Stop taking Lucrin:* If you are taking the monthly injections, then you should resume using additional contraception (condoms) 1 month after taking the last monthly injection (3.75 mg). If you are taking the 3 monthly injections (11.25 mg), you should use additional contraception 3 months after the last injection.

What else can I expect?

When you first start Lucrin it will have little effect in the first month. You can also expect to have blood loss like a period in the first month (the flare-up). Only in the second month does your hormone production decrease, and the bleeding stop. However, some women still experience blood loss in the second month. Only in the third month does the effect reach its maximum, and the loss of blood usually stops. This means that you have to take this medicine for at least 3 months to expect the intended effect.

As far as suppressing the growth of fibroids or adenomyosis or suppressing endometriosis is concerned, these are still growing and/or acting under the influence of main estrogens (female hormone). During the first month, you will not notice any effect. During the 12 weeks, the pain and swelling may even increase slightly. After 3 months, the uterus will decrease slightly in size, and the pain caused by the endometriosis or adenomyosis is expected to subside. After 5 months, you often see the optimal effect of the suppression.

Furthermore, it is important to note that there are different manufacturers of Lucrin. In our experience, there is a difference between the original brand Lucrin and other variants. This is why we prefer to send you the original Lucrin injections via the outpatient pharmacy of the Amsterdam UMC, location VUMC.

Appendix: schematic representation of the effect of Lucrin and hormone tablets on the hormones in comparison with a natural menstrual cycle

