Ovulation induction

Ovulation induction is a simple treatment that uses medication to stimulate the ovaries and encourage ovulation. It is used mainly to help women who don't ovulate or for a short period of time for couples with unexplained infertility who are not ready to try to IUI or IVF. There are two main types of drug used in ovulation induction and your doctor will advise which one is right for you.

Clomiphene

Clomiphene citrate was the original 'fertility pill'. It works by encouraging a boost of natural follicle-stimulating hormone (FSH) to encourage the ovaries to ovulate. Natural conception still occurs because you still have sex to become pregnant.

Letrozole

Letrozole is an alternative and has a different mechanism of action, but the outcome is still the same - a boost in FSH to encourage ovulation. It has a slightly lower risk of twin pregnancies and potentially fewer side effects.

Some women will respond to one drug and not the other, your doctor will decide which is best to start you on.

Overall, about 20-30% of women aged 37 and under have a child over a course of three to four cycles of Clomiphene or Letrozole.

With both medications there is a slightly increased chance of twins, of about 5%, triplets are extremely rare. Monitoring by checking the body's response to the medication using a blood test or an ultrasound scan can reduce this risk.

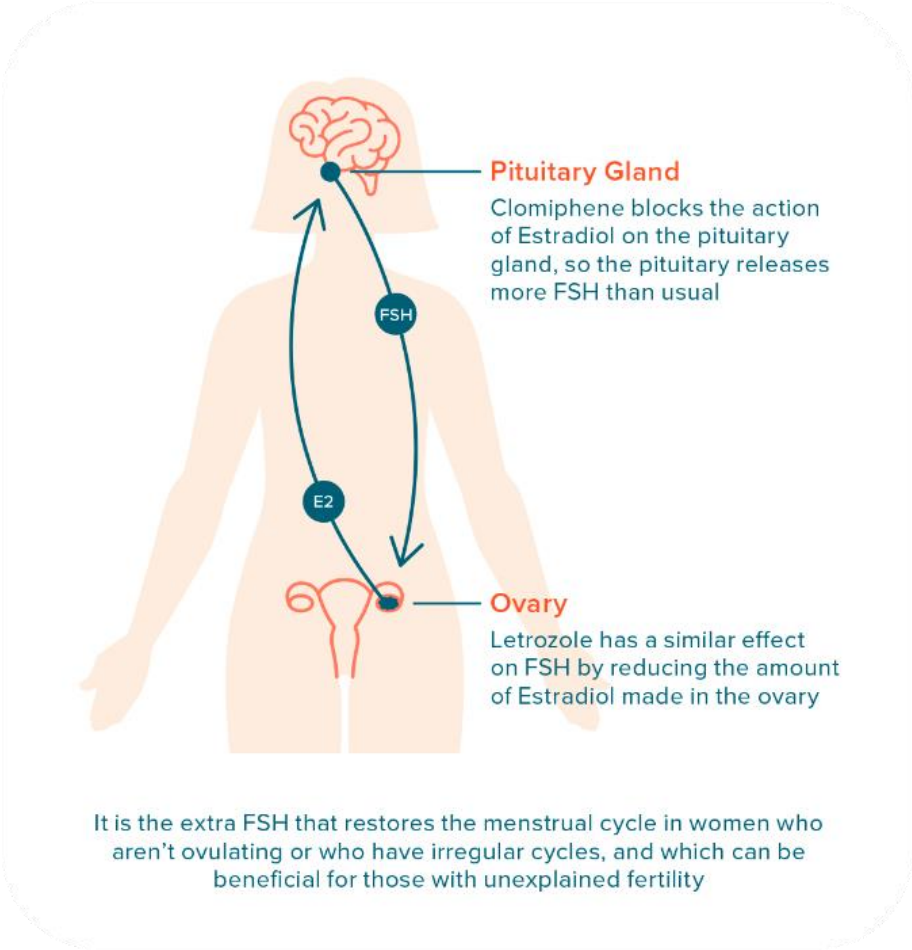
Clomiphene and Letrozole options

At Fertility Associates, we offer you two approaches to Clomiphene or Letrozole treatment:

- **Monitored OI cycle:**
  Some people like to start off with a **monitored** cycle so that they have more guidance from the medical staff on how it works. A monitored cycle involves an ultrasound scan and blood test to track follicle growth, typically around the mid-cycle. Based on the results, your team will advise you of the optimum time to have sex based on when you are predicted to ovulate.

- **Fertility Boost™** – the 4 cycle **reviewed** package:
  With **Fertility Boost™** you are provided with a clear set of instructions for when to take the medication, the range of days to have sex, and a single blood test to confirm you ovulated. **Fertility Boost™** gives you up to four cycles of ovulation induction for a set price so that you can budget more easily. There is no refund if you become pregnant on the first, second or third cycles as long as the pregnancy is ongoing. If it doesn't continue, you can resume the remainder of **Fertility Boost™** package when you are ready.

Clomiphene and Letrozole – how it works



Step by step

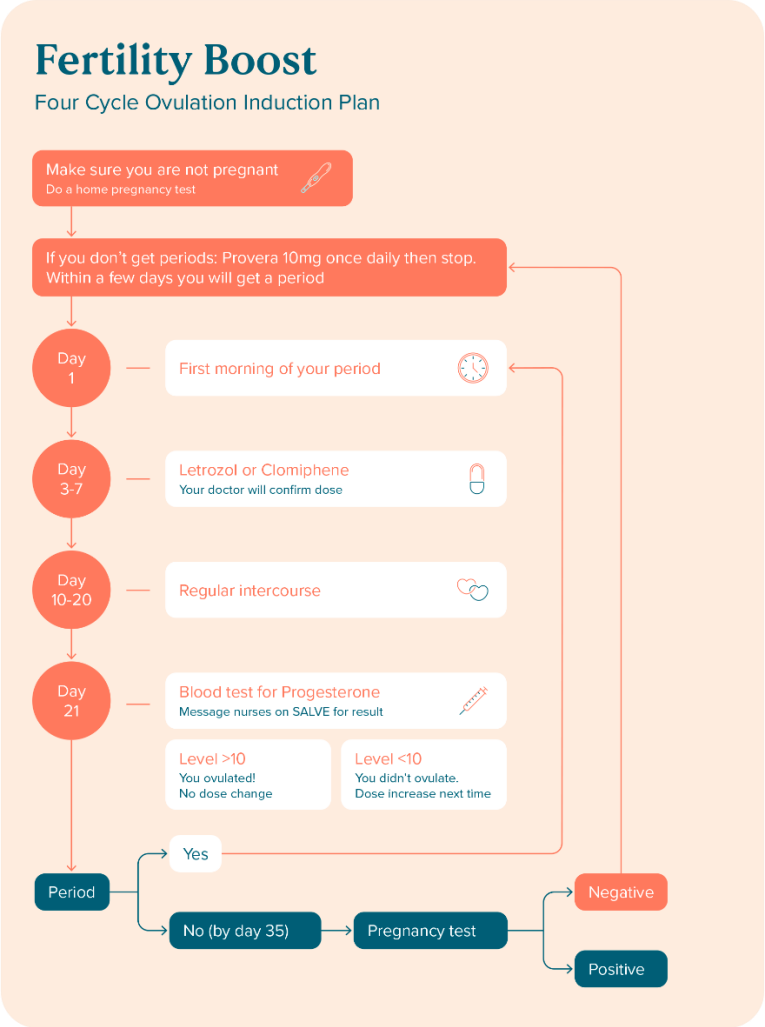
Day 1 – The first day of your period

Day 1 is the first day of your cycle that you wake up with your period. If your period starts in the afternoon then the next day is Day 1. Please message your local nursing team on Salve to register your Day 1 as a new treatment cycle. If you prefer, you can call and leave a voice message. You will be contacted with instructions by your nursing team.

If you do not have periods, your doctor will arrange for you to take Provera or Norethisterone tablets to induce a period.

For **Monitored OI** cycles, we load instructions into your Salve app on when to start Clomiphene or Letrozole, and when your first blood test and scan will be.

For **Fertility Boost™** you follow the pathway below:



Monitored cycle and Fertility Boost™ – how do they compare?

	Monitored cycle	Fertility Boost™
Blood test pre ovulation	✓	×
Ultrasound scan	✓	×
Timing	Specific	Broad
Trigger may be used	✓	×
Blood test to confirm ovulation	✓	✓
Who it suits?	Best for patients who want close input	Best for patients who can self-manage
	Those who need more nursing support.	Those who need less nursing support.
Cost	$635 per cycle	$990 for four cycles or ongoing pregnancy, whichever comes first.

Too many follicles? Or not enough?

Although the dose of Clomiphene or Letrozole is designed to stimulate one to three follicles to mature, sometimes more will develop*. The same person can also respond differently to the same dose in different treatment cycles.

A relatively low dose is usually chosen in the first cycle of treatment to reduce the chance of too many follicles maturing. For some, this dose will be too low to stimulate any follicles to develop, and they will need to use a higher dose in the next cycle of treatment. Occasionally it may take two or even three cycles to decide on the right dose for an individual. There will also be those who do not respond to Clomiphene or Letrozole *at all* and who will need other types of hormone treatment to induce ovulation.

*Note: If you develop too many follicles the chance of triplets or quadruplets may be too high, so we will advise you to use a condom as barrier contraception, or not to have sex. A lower dose will be tried in the next treatment cycle.

Having sex

It is important to have intercourse close to ovulation. If you are having a monitored cycle the blood tests and scans will give us a range of days when you will ovulate. The size of the follicle at ovulation can differ between women, and even between different cycles in the same woman. We recommend you have sex once your largest follicle is expected to be 18 mm in diameter, and then every day for the next three to five days. Having regular sex over the days when ovulation may occur is more important than trying to predict the actual day of ovulation.

With **Fertility Boost™**, you should have sex every couple of days from day 10 of the cycle, onwards. The sperm of most men can survive for two or more days in good quality cervical mucus, so it is important to have sex leading up to ovulation as well as afterwards. We discourage the use of LH urine tests to try to detect ovulation. Clomiphene and Letrozole raise the level of LH as well as FSH and may cause the urine test to show a ‘false positive’ result.

Triggering ovulation

Women having Clomiphene or Letrozole usually have a natural surge of the hormone LH that triggers ovulation. In some women this does not happen reliably. Ovulation can be triggered with an injection of hormone hCG. If you are on a monitored programme, we will tell you whether you need an hCG trigger, and how and when to give it. Triggering ovulation is not an option in the **Fertility Boost™** program.

Blood tests and scans

Blood tests are done by your local pathology lab. Please ensure you have the blood taken in the morning so we can receive the results the same day.

Ultrasound scans will be arranged either at your nearest Fertility Associates clinic, or for regional patients at a local radiology service.

Waiting for the pregnancy test

Most people say that waiting to see whether you are pregnant is the most stressful part of treatment. Please feel free to make an appointment to speak with a counsellor if you would like some extra support during this time or see our wellness pages for some helpful information on how to look after yourself.

Clomiphene and Letrozole: problems, risks, side effects and solutions

Problems and solutions

There aren't any tests to predict the right dose of Clomiphene or Letrozole for a particular woman, so common problems are:

- The initial dose isn't high enough to be effective. This can be picked up by blood tests or an ultrasound scan. The solution is to increase the dose the following month.
- The initial dose causes too many follicles to grow, increasing the risk of multiple pregnancy, such as twins or triplets. This can be picked up by blood tests or an ultrasound scan (monitored cycles only). The solution is to reduce the dose and sometimes timing the following month.
- Clomiphene partially blocks the action of oestradiol in all types of tissue, including the cervix. This means it may reduce the quality of cervical mucus around the time of ovulation which may make it harder for sperm to swim through the mucus on their way to the egg. It is hard to measure this, although some women are good at detecting their mucus around ovulation. Letrozole does not affect cervical mucus.

Risks and side effects

Multiple pregnancy

- Blood tests and ultrasound scans, (monitored cycles only), can enable us to see how many follicles are growing in the ovary, but they are not perfect. In addition, for many women the aim is to grow two to three follicles.
- As a consequence, up to 10% of pregnancies from Clomiphene treatment are twins, and about 1% are triplets. The chance of twins is lower with Letrozole – below 5%. Twins are associated with significantly greater risks in pregnancy for both the mother and babies for a wide range of adverse outcomes.

Other side effects

You may experience some side effects with these treatments. If you have any concerns please discuss them with your nurse.

- About 10% of women using Clomiphene experience hot flushes because of the way Clomiphene blocks the action of oestradiol.
- Other side effects can include nausea and breast tenderness.
- Mood swings are common but seldom severe, but if so, please **talk to us**.
- Headaches and blurred vision are rare side effects.