

## What is Anovulation?

Some women have irregular menstrual cycles and don't produce an egg each month. This is called **anovulation**. An 'irregular cycle' by definition is one which varies by more than five days from one month to the next. **Polycystic ovary syndrome (PCOS)** is by far the commonest cause of anovulation. However anovulation is also a cause of infertility in women without PCOS who are over or underweight or very stressed.

Polycystic ovaries are found in 20% of women. Not all these women have anovulation and many are in fact fertile. Diagnosis is based on both pelvic ultrasound and a blood test for hormone levels. On the scan, the ovaries usually have the characteristic appearance shown below with many small follicles 2 to 9 mm in size, distributed around the edge of the ovary. The small follicles usually contain eggs but are dormant. Some women have less obvious ultrasound findings so we rely on the hormone profile findings and symptoms to make the diagnosis of PCOS.



Typical appearance of a polycystic ovary

## Treatment

The initial treatment of choice for women with anovulation and PCOS is **ovulation induction**. This is dependent upon a normal semen analysis in the male partner and the fallopian tubes being open.

As a first line approach we prescribe a simple fertility drug called **Clomifene (Clomid)**. The tablets are taken for 5 days from day 2 to day 6 of your cycle.

In your first cycle of treatment we will advise ultrasound scan **follicle tracking** from day 8 or 9 of the cycle, to check that the ovaries are responding to the drug and there is a developing follicle. The egg is usually released naturally once the follicle is greater than 17mm in size and you will be advised to have intercourse at around this time.

Once we have confirmed that your ovaries respond to Clomid in a safe and predictable way (by producing one, or occasionally two follicles in each cycle) the drug can be taken safely for up to 5 more cycles without the need for further follicle tracking or medical review. We recommend the use of home ovulation detection kits in subsequent cycles to time ovulation more accurately. About 70% of patients with anovulation respond to Clomid and conceive within 6 cycles of treatment.

When there is no response to Clomid or conception has not occurred after 6 cycles, we advise you to book a review consultation in clinic to discuss other options. These are:

### ***Clomid with Metformin***

Metformin is a drug taken in tablet form which lowers the insulin level. It works in anovulatory women with polycystic ovaries who have insulin resistance. It is particularly effective in women who have an increased body weight and is taken every day of the cycle. We advise follicle tracking during the first cycle of treatment with Clomid and Metformin to ensure the ovary is responding to the drug combination in a safe and predictable way.

### ***Ovarian Diathermy***

This is a minor surgical procedure which involves having a laparoscopy under general anaesthetic. The surgeon identifies the ovaries and 'drills' 5 small holes in each. Within 24 hours of the operation the woman's hormone profile has reverted to a more 'normal' pattern and in 50% of cases spontaneous ovulation is restored. We monitor response to diathermy by performing follicle tracking in the cycle immediately following the surgery.

### ***Injections of FSH +/- LH (gonadotrophins)***

These are taken from day 3 or 4 of the cycle. These drugs are more potent than Clomid and require follicle tracking every cycle as the risk of more than one follicle developing and multiple pregnancy is higher than with Clomid. We prescribe a drug called Ovitrelle to help release the egg once the largest follicle has reached 17mm or greater. After ovulation, progesterone pessaries are prescribed to be taken every night for 14 days. About 70% of women prescribed injections of fertility drugs for anovulation conceive within 6 cycles of starting treatment. At Embryoland IVF Center Athens, the risk of multiple pregnancy on this treatment is extremely low as we step up the dose of the drug very slowly.

### ***Weight Loss and Exercise***

Women who are over or under weight compromise their chances of successful treatment with ovulation induction treatment. Your Consultant will check your height and weight ratio (body mass index) and may recommend deferring any form of treatment if your BMI is less than 19 kg/m<sup>2</sup> or greater than 30 kg/m<sup>2</sup>. There is good evidence that regular exercise improves many of the metabolic changes and tendency to weight gain associated with having PCOS and we encourage our patients to exercise for around 40 minutes at least 3 to 4 times a week. If you are trying, to conceive your consultant will advise on which are safe forms of exercise to take.