POLYCYSTIC OVARIAN SYNDROME (PCO/MFO & PCOS)

POLYCYSTIC OVARIES (PCO)

Polycystic ovaries are diagnosed according to the number of eggs visible in an ultrasound. If the doctor finds more than 10-12 small follicles in an ovary and the ovaries themselves are abnormally large, then they are called polycystic ovaries.

MULTIFOLLICULAR OVARIES (MFO)

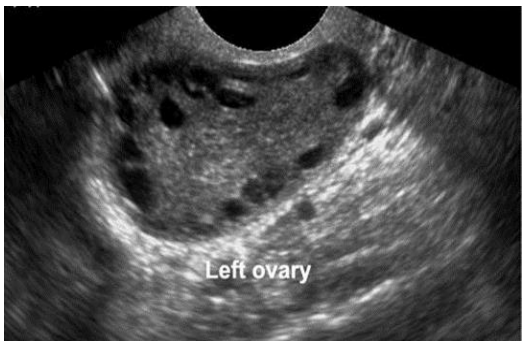
In order to avoid confusion with PCOS, some have decided to call polycystic ovaries "multifollicular ovaries" instead (MFO rather than PCO). One of the main characteristics of MFO is a typically long cycle (35-60 days). This causes the start of ovulation to fluctuate between each cycle, although it always occurs 14 days prior to menstrual bleeding. FMO does however not induce the metabolic and physical changes that PCOS does. It is generally agreed that FMO is related to the hypothalamus; a small part of the brain which highly influences a woman's cycle.

POLYCYSTIC OVARIES SYNDROME (PCOS)

If a woman does not only show more than 10-12 follicles in the ultrasound but also has:

- Infrequent or no ovulation
- More than the normal amount of androgens (male sex hormones)

then the combination is called a syndrome, hence the name Polycystic Ovaries **Syndrome** or PCOS.



SYMPTOMS

Women with PCOS generally contact their doctor on account of cosmetic inconveniences such as pimples (acne prone), pilosity (hirsutism), apple-shaped weight gain, or because of infertility, or irregular, seldom, or no menstruation. Pregnancy can be considerably hindered by few, fewer than normal, or total absence of egg releases. If it takes 4 egg releases to get pregnant and only 2 ovulations a year, it will naturally take at least 2 years to get pregnant. Furthermore, the pains and increased discharge caused by PCOS during ovulation repulses some women from even wanting intercourse, and thereby miss out on the exact moment which could otherwise lead to pregnancy.

MENSTRUAL CYCLE

The menstrual cycle is prolonged to at least 5 weeks (>35 days) but can be up to several months or even years. Most women with PCOS have never had a regular 28-day cycle, though for some the prolongation can be a later, newly come phenomenon. Some women can have a very light form of PCOS which only appears in connection with weight gain.

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OVERWEIGHT

Women with PCOS are more inclined to gain weight and therewith more likely to reach obesity. These women's bodies also tend to have an excess of insulin.

The body produces excess insulin when its cells are less sensitive to the action of insulin than usual and must therefore compensate. Excess insulin leads to various physical imbalances. For example, amongst other things, the increased amount of sugar gets absorbed by the stomach's adipose tissue, thus exacerbating the apple-shaped weight gain.

Overweight and obesity seriously worsen PCOS. In the least severe cases, PCOS first appears with weight gain, e.g., when a woman stops doing physical exercise. The lightest cases of PCOS also show a fairly smooth transition from PCOS with symptoms to PCOS without any symptoms.

MALE SEX HORMONES

A high amount of male sex hormones can lead to breakouts (acne) and increased pilosity (hirsutism). That being said, the extent to which male sex hormones will impact a woman's body depends on the sensitivity of her peripheral tissues. Afterall, not all men grow beards or get pimples either.

PCOS INCREASES THE RISK OF

- Polyps and increased risk of endometrial cancer
- Cardiovascular disease
- Type 2 diabetes

DIAGNOSIS

The diagnosis for PCOS is done by eliminating other possible diseases. Therefore, at least two of the following three criteria must be fulfilled:

- **Irregular periods**: infrequent or no menstruation, a long (>35 days) cycle
- **Excess androgen**: High levels of male sex hormone and/or excess facial and body hair (hirsutism)
- **Polycystic ovaries**: More than 10-12 2-10 mm eggs, enlarging the ovaries.

MFO TREATMENT

If you do not want to get pregnant…

the treatment will focus on normalising the cycle. The best way to do so is using the 'combined' (contraceptive) pill. We generally start with a 2nd generation pill since they are least likely to cause blood clots.

If you wish to get pregnant…

you can first and foremost try to induce spontaneous pregnancy. To do so, try buying an ovulation test in a supermarket, pharmacy, or online, so you can track your ovulation. Since ovulation is always 14 days prior to the first day of menstruation, it ought to be possible to calculate it backwards. For example, if you have a 50-day cycle, you ovulate on the 36th day. Similarly, if the cycle is 40 days, you will ovulate on the 26th day. Therefor if your cycle is between 40 and 50 days long, you can try to induce pregnancy by having intercourse every other day between the 26th and 36th day of your cycle.

The man's sperm quality

It takes two to tango, so if the pregnancy attempts are unsuccessful the man ought to get his sperm quality checked early on.

Medical Treatment

If failed pregnancy attempts prevail, we start with a traditional form of medical treatment **Parlodel®** (**Clomiphene**), an oral anti-oestrogen. You should take 2 tablets daily from the 2nd to the 5th day of your cycle (5 days). Clomiphene increases the production of FSH (follicle stimulating hormone) and therewith the number of fertile eggs. We use an ultrasound to keep an eye on the maturity of the eggs.

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Another, and probably better, way of encouraging egg maturity is using **Letrozol** tablets. Letrozol reduces the level oestrogen in the ovaries, in order to stimulate the pituitary glands to increase the production of FSH which in turn boosts egg maturity.

Letrozol has been used for more than 20 years, though licenced to assist patients with breast cancer. However it is proven in a number of scientific journals that the drug can also be effective in stimulating the ovaries. Since not registered as a fertility treatment, it is generally known as an "Off label" treatment.

PCOS TREATMENT

The key to treating PCOS is weight loss. Weight loss and physical exercise are capital to increase your muscles sensitivity to insulin. An individual's BMI (Body Mass Index) - their weight (kg) divided by their height (m^2) - must be of no more than 25kg/m^2. Under construction, adipose tissue secretes plenty of hormones, which it cannot do if it's decomposing. Follow the general health advice to eat greens, rich in fibre, and minimise grease. Weight loss has many beneficial effects:

- **Fewer male sex hormones**, reduces acne and body/facial hair growth
- **More regular ovulation**, high chances of pregnancy
- **Lower risk of diabetes**, atherosclerosis, and uterine cancer.

Birth control pills: ensure a better hormone balance, with normal levels of LH and male sex hormone.

Metformin: increases sensitivity to insulin, but can induce loss of appetite, nausea, vomiting, diarrhoea, and leave a metal taste in the mouth.

Overview of PCOS Treatments

- Regardless of the current weight, an increasing weight curve must be overturned.
- Metformin helps overweight women with PCOS to lose and stabilise their weight.
- Women suffering of severe PCOS (no egg release) can start ovulating within a few months using Metformin, regardless of their weight.
- Continue taking the contraceptive pill until there is a full overview of the couple's fertility (sperm quality, PCOS as described above, examination of the fallopian tubes).
- Taking the pill for 2-3 months increases the chances of getting pregnant. In fact, women with PCOS typically get pregnant naturally right after stopping the pill or just after an abortion. This is thanks to the very favourable hormonal environment with little male sex hormones in correlation with the action pill.
- Stimulation using Clomiphene (Parlodel®) only works for those suffering of very light cases of PCOS. It is therefore more common to stimulate the ovaries directly with FSH.
- A probably better way of treating PCOS is Letrozol tablets. It reduces the oestrogen levels in the ovaries, thereby stimulating the pituitary glands to produce more FSH, increasing the eggs' fertility. We prescribe 5mg daily for women of average weight and 10mg daily for overweight women, to be taken from the 3rd to 8th day of menstruation (5 days).

WHO CAN I CALL WITH QUESTIONS?

You are welcome to call the Women's Clinic every weekday from 8.00 - 15.00 on 36 46 71 40.

Revised April 2020. To be revised on an ongoing basis and certainly no later than 1 April 2022, before in case of any significant changes.