



## Polycystic Ovarian Syndrome (PCOS)

### Q. What causes PCOS?

The cause of PCOS is unknown. But most experts think that several factors, including genetics, could play a role. Women with PCOS are more likely to have a mother or sister with PCOS.

A main underlying problem with PCOS is a hormonal imbalance. In women with PCOS, the ovaries make more androgens than normal. Androgens are male hormones that females also make. High levels of these hormones affect the development and release of eggs during ovulation.

Researchers also think insulin may be linked to PCOS. Insulin is a hormone that controls the change of sugar, starches, and other food into energy for the body to use or store.

Many women with PCOS have too much insulin in their bodies because they have problems using it. Excess insulin appears to increase production of androgen. High androgen levels can lead to:

- Problems with ovulation/Irregular periods
- Excessive hair growth
- Weight gain

### Q. What are the symptoms of PCOS?

The symptoms of PCOS can vary from woman to woman. Some of the symptoms of PCOS include:

- Infertility (not able to get pregnant) because of not ovulating. In fact, PCOS is the most common cause of female infertility.
- Infrequent, absent, and/or irregular menstrual periods
- Increased hair growth on the face, chest, stomach, back, thumbs, or toes
- Cysts on the ovaries
- Acne
- Weight gain or obesity, usually with extra weight around the waist
- Male-pattern baldness or thinning hair
- Patches of skin on the neck, arms, breasts, or thighs that are thick and dark brown or black

## Q. Why do women with PCOS have trouble with their menstrual cycle and fertility?

The ovaries, where a woman's eggs are produced, have tiny fluid-filled sacs called follicles or cysts. As the egg grows, the follicle builds up fluid. When the egg matures, the follicle breaks open, the egg is released, and the egg travels through the fallopian tube to the uterus (womb) for fertilization. This is called ovulation. In women with PCOS, the ovary doesn't make all of the hormones it needs for an egg to fully mature. The follicles may start to grow and build up fluid but ovulation does not occur. Instead, some follicles may remain as cysts. For these reasons, ovulation does not occur and the hormone progesterone is not made. Without progesterone, a woman's menstrual cycle is irregular or absent. Plus, the ovaries make male hormones, which also prevent ovulation.

**Fertility medications:** Lack of ovulation is usually the reason for fertility problems in women with PCOS. Several medications that stimulate ovulation can help women with PCOS become pregnant. Even so, other reasons for infertility in both the woman and man should be ruled out before fertility medications are used. Also, some fertility medications increase the risk for multiple births (twins, triplets). Treatment options include:

- Clomiphene (Clomid, Serophene) — the first-choice therapy to stimulate ovulation for most patients.
- Metformin taken with clomiphene — may be tried if clomiphene alone fails. The combination may help women with PCOS ovulate on lower doses of medication.

## Q. How do I know if I have PCOS?

There is no single test to diagnose PCOS. Your doctor will take the following steps to find out if you have PCOS or if something else is causing your symptoms:

- **Medical History-** Your doctor will ask about your menstrual periods, weight changes, and other symptoms.
- **Physical Exam-** She will check the areas of increased hair growth. You should try to allow the natural hair to grow for a few days before the visit.
- **Pelvic Exam-** Your doctor might want to check to see if your ovaries are enlarged or swollen by the increased number of small cysts.
- **Blood Tests-** Your doctor may check the androgen hormone and glucose (sugar) levels in your blood.
- **Vaginal Ultrasound (sonogram)-** Your doctor may perform a test that uses sound waves to take pictures of the pelvic area. It might be used to examine your ovaries for cysts and check the endometrium (lining of the womb). This lining may become thicker if your periods are irregular or absent.

## Q. How is PCOS Treated?

Because there is no cure for PCOS, it needs to be managed to prevent future problems. Treatment goals are based on your symptoms, whether or not you want to become pregnant, and lowering your chances of getting heart disease and diabetes. Many women

will need a combination of treatments to meet these goals. Some treatments for PCOS include:

**Lifestyle modification-** Many women with PCOS are overweight or obese, which can cause health problems. You can help manage your PCOS by eating healthy and exercising to keep your weight at a healthy level. Healthy eating tips include:

- Limiting processed foods and foods with added sugars
- Adding more whole-grain products, fruits, vegetables, and lean meats to your diet
- This helps to lower blood glucose (sugar) levels, improve the body's use of insulin, and normalize hormone levels in your body. Even a 10 percent loss in body weight can restore a normal period and make your cycle more regular.

**Birth control pills-** For women who don't want to get pregnant, birth control pills can:

- Control menstrual cycles
- Reduce male hormone levels
- Help to clear acne

Keep in mind that the menstrual cycle will become abnormal again if the pill is stopped.

**Diabetes medications-** The medicine metformin (Glucophage) is used to treat type 2 diabetes. It has also been found to help with PCOS symptoms. Metformin affects the way insulin controls blood glucose (sugar) and lowers testosterone production. It slows the growth of abnormal hair and, after a few months of use, may help ovulation to return. Recent research has shown metformin to have other positive effects, such as decreased body mass and improved cholesterol levels.

## **Q. I have PCOS. What can I do to prevent complications?**

If you have PCOS, get your symptoms under control at an earlier age to help reduce your chances of having complications like diabetes and heart disease. Talk to your doctor about treating all your symptoms, rather than focusing on just one aspect of your PCOS, such as problems getting pregnant. Also, talk to your doctor about getting tested for diabetes regularly.