

# Polycystic Ovary Syndrome: A Guide for Families

## What is polycystic ovary syndrome (PCOS)?

*Polycystic ovary syndrome* (PCOS) is a common disorder in girls associated with symptoms of excess body hair (*hirsutism*), severe acne, and menstrual cycle problems. The excess body hair can be on the face, chin, neck, back, chest, breasts, or abdomen. The menstrual cycle problems include months without any periods, heavy or long-lasting periods, or periods that happen too often. Many girls with PCOS have overweight or obesity, but some girls are of normal weight or thin. Girls may have mothers, aunts, or sisters who have had irregular menstrual periods, excess body hair, or infertility. Some family members may have type 2 diabetes. Polycystic ovary syndrome has also been called *ovarian hyperandrogenism*.

During puberty, the androgen (male-like) hormones made in the adrenal gland cause underarm hair, pubic hair, and body odor to develop. During and after puberty, ovaries normally make 3 types of hormones: *estrogens*, *progesterone*, and *androgens*. In PCOS, the ovaries make too many androgen hormones. The elevated androgen hormone levels can cause increased body hair growth, acne, and irregular menstrual cycles in teens and adults.

## What causes PCOS?

The causes of PCOS are not completely known. Polycystic ovary syndrome seems to “run” in families. Although the specific genes that cause PCOS are unknown, some genetic differences may increase the risk of developing PCOS. In many girls, PCOS also seems to be related to being *insulin resistant*, which means that a girl’s body must make extra insulin to keep blood sugar levels in the normal range. Higher insulin levels can influence the ovaries to make too many androgen hormones. Some girls may have elevated blood pressure, elevated blood glucose levels, or elevated blood cholesterol levels.

## How is PCOS diagnosed?

No single laboratory test can accurately diagnose PCOS. The typical symptoms of PCOS include irregular menstrual periods, acne, or excess body hair on the face, chest, or abdomen. Blood tests are obtained to measure blood androgen hormone levels and to rule out other disorders with similar symptoms. For some girls, an oral glucose tolerance test is helpful to check for elevated blood glucose and insulin levels.

Menstrual periods are often irregular for the first 2 to 3 years after menarche (the first menstrual period). Thus, it may be difficult to diagnose PCOS in early adolescent girls. Nevertheless, it is important to treat the symptoms even if the diagnosis cannot be confirmed.

## How is PCOS treated?

Treating PCOS focuses on treatment of the specific symptoms of PCOS, including acne, excess body hair, and abnormal menstrual periods. *Oral contraceptives* are pills that contain estrogen- and progesterone-type hormones and are often used to treat abnormal menstrual cycles. Other treatment options include a pill containing only progesterone, which is given for 5 to 10 days every 1 to 3 months to bring on a period; combined

estrogen and progesterone patches; or an intrauterine device. Some girls cannot use these medications because of other health conditions, so it is important to share your child’s whole medical and family history with your child’s doctor.

Acne can be treated with medication applied to the skin, antibiotics, a pill called *spironolactone*, or oral contraceptives. Spironolactone is typically used to treat high blood pressure, but it also blocks some of the effects of androgen hormones. Pregnant women should never take spironolactone because of the possibility of birth defects in newborn boys.

Removal of excess body hair involves cosmetic methods such as bleaching, waxing, shaving, electrolysis, laser hair removal, or topical depilatories. Some women develop cutaneous allergic reactions to topical depilatories. Using oral contraceptive pills and/or spironolactone can slow the rate of hair growth. A cream medication called Vaniqa® (eflornithine hydrochloride; 13.9%) can be applied twice a day to unwanted areas of hair to prevent new hair from growing. It is usually not covered by insurance and must be used every day, or the hair will grow back.

In patients who have overweight or obesity, losing weight may decrease insulin resistance and improve the signs and symptoms of PCOS. At least 150 minutes of a physical activity that raises the heart rate every week helps for weight loss. A healthy diet without sweet drinks, such as soda and juice, and with limited concentrated carbohydrates, reduced simple sugars and processed carbohydrates, and portion control will help to achieve weight loss and decrease insulin resistance.

Metformin is a medication commonly used to treat type 2 diabetes mellitus. It may be used in the treatment of PCOS. It helps to reduce insulin resistance and can be associated with a small amount of weight loss. Metformin has not yet been approved by the US Food and Drug Administration (FDA) for the treatment of PCOS. However, metformin is generally safe and often helps.

## Can girls with PCOS become pregnant?

A girl with PCOS can become pregnant, even if she is not having regular periods. Any girl with PCOS who is having sexual intercourse should use contraception if she does not wish to become pregnant. If a woman with PCOS wants to have a child and is having difficulty becoming pregnant, many options are available to help achieve pregnancy. Some PCOS medications cannot be used during pregnancy, so discuss your plans honestly with your doctor.

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