



Children's | of
Hospital of Pittsburgh | UPMC

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PCOS

What You Need To Know



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Additional resources

www.youngwomenshealth.org/pcosinfo.html
www.kidshealth.org/teen/sexual_health/girls/pcos.html
www.mypyramid.gov
www.4woman.gov or 1-800-994-9662
www.hormone.org
www.webmd.com/hw/womens_conditions/tw9104.asp

For an appointment please contact:

Children's Hospital of Pittsburgh of UPMC
PCOS Center
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What is PCOS?

PCOS is an abbreviation for
Polycystic Ovary Syndrome

PCOS is a hormone imbalance that can cause irregular periods, unwanted hair growth on the face or other parts of the body, acne and infertility. PCOS is the most common hormonal problem in women, occurring in approximately one in 10 women. PCOS can begin during the teenage years.

What are the signs of PCOS?

- Infrequent or irregular menstrual periods or none at all
- Increased growth of hair on the face, chest, stomach, back or inner thighs
- Acne and/or oily skin
- Weight gain and/or problems losing weight
- Thinning of the hair or male-pattern baldness
- Patches of velvety-appearing dark skin around the neck and arm pits, skin creases and knuckles

If you have some or all of the above signs, you should talk with your health care provider about PCOS. If you do have PCOS, you'll want to know what causes it and how to treat it.

Even though you aren't able to see or feel them, hormones regulate a female's reproductive system and are responsible for many things that happen to you, like menstrual periods, breast development and other aspects of becoming a woman.



What causes PCOS?

- No one knows exactly what causes PCOS.
- PCOS frequently runs in the family and may be associated with being overweight.
- PCOS is usually due to an imbalance in the hormones produced by the ovaries, and hormones that regulate reproduction and metabolism.
- There may be a relationship between PCOS and the body's ability to regulate insulin production. Insulin is the hormone that helps the body use sugar and other food for energy. If the insulin levels are too high, this may also cause the ovaries to make too much testosterone.

Why are my periods irregular?

To understand why your periods are irregular, you must first understand the reproductive system.

The hormones that regulate your menstrual cycle come from the pituitary gland, which is in your brain. The pituitary gland is responsible for the release of follicle-stimulating hormone (FSH), which travels through the blood to the ovaries telling them to “grow” an egg. The ovaries respond by growing multiple eggs in little sacs, called cysts. This part of the cycle takes about 14 days.

Once mature, the egg sends a signal to the brain indicating that it is ready to be released. The pituitary gland responds by sending a large wave of luteinizing hormone (LH) telling the ovary to release the egg. At the same time, the ovaries are producing estrogen, progesterone and a small amount of androgen (a male sex hormone). If the egg is not fertilized, your period will occur about 14 days later.

In girls with PCOS, the ovaries produce higher than normal amounts of androgens, which are male hormones, that can interfere with the development and release of the egg. Some of the eggs will remain in the cysts and build up, causing the ovaries to enlarge. The production of cysts causes the ovaries to respond abnormally to the hormone signals from the brain. Overproduction of insulin also can cause the ovaries to produce too many androgens.

How can I lose weight?

Talk with your doctor and/or health advisor to find out what a healthy weight is for you. He or she can help you set realistic goals. Weight management is about long-term success. The best weight management strategies are those that you can maintain for a lifetime.

You can follow a few of the simple suggestions listed below to get started.

- Eat Healthy!
 - Base meals on fruits, vegetables, low-fat dairy, hearty whole grains and lean proteins.
 - Eliminate processed foods such as frozen dinners and high-fat lunch meats.
 - Avoid fast food.
 - Drink plenty of water and reduce intake of soda, juice and sports drinks.
 - Pack your lunch.
- Eat Together!
 - Eat dinner at home with your family whenever possible, but more importantly, not at fast food restaurants!
- Be Active!
 - Moderate activity, such as walking, 30 minutes per day, five days a week.
 - Limit sedentary activities like TV and computer time to one-two hours per day.





Do I have cysts on my ovaries?

Some girls with PCOS have lots of tiny cysts inside the ovaries, but many do not. Even if you do have them, they aren't harmful to you and don't have to be removed.

How will my health care provider know if I have PCOS?

Your health care provider will do a complete physical examination and ask you lots of questions about your general health and especially about your menstrual cycle and other symptoms you have noticed. You will have blood tests done to check your hormone levels, to find out if testosterone is elevated. You may have additional blood tests for cholesterol and other lipids, since they can also be high.

Why do I have acne and more hair on my body?

If your body is making too much testosterone, it may cause acne and extra hair growth. All girls' ovaries make some testosterone, but if you have PCOS, your ovaries make a little more than usual. Your skin and hair cells are very sensitive to even tiny increases in testosterone, which you have with PCOS. This causes extra hair growth and oily skin and acne.

What are the dark patches on my skin?

Often girls with PCOS have high amounts of the hormone insulin in their blood. This can also be called insulin resistance. The high insulin level can cause darkened patches of velvety-feeling skin around the neck, under the arms, in the groin area, across knuckles and elbows and on other areas of the skin. This doesn't wash off by scrubbing or any other way because it's due to the high amount of insulin in the blood. However, this can come off with weight loss and improved hormone levels.



What other problems could I have with PCOS?

Sometimes girls/women with PCOS have problems with their sleep, mood swings or some liver abnormalities. These could be more pronounced if you are overweight. Your doctor will ask specific questions and run tests to find out if you have any of these.

Will having PCOS affect me having children some day?

Some women have trouble getting pregnant and some do not. If, in the future, you are concerned about this, you can talk with your doctor about all the options available.

What can I do about having PCOS?

PCOS can't be cured but it can be treated. Weight loss can be very effective in lessening many of the health conditions associated with PCOS, such as high blood pressure, insulin resistance and diabetes. Sometimes weight loss alone can restore hormone levels to normal, causing many of the symptoms to disappear or become less severe. You can work toward a healthy lifestyle by eating healthy foods low in calories and high in fiber and by getting daily exercise. This is very important for your treatment.

What treatments does my doctor have available?

In addition to a healthy lifestyle, which includes healthy eating habits and daily physical activity, there are medications to treat the symptoms related to PCOS.

Sometimes birth control pills are used to help treat PCOS. These pills contain hormones, estrogen and progesterone, which your body needs to treat PCOS. By taking these pills you can

- Correct the hormone imbalance
- Decrease the testosterone level, which can improve acne and decrease hair growth
- Regulate menstrual periods
- Lower the risk of endometrial cancer, which is higher in women who do not ovulate regularly



Are there any other treatments?

There is a medication that helps the body lower the insulin and testosterone levels called metformin. If you are going to take this medicine, other blood tests to check on kidney and liver function would be done first. Because you may ovulate if you take metformin, if you are sexually active, you would need to use birth control. Sometimes girls are treated with metformin and birth control pills at the same time.

There are other medicines that mostly block the effects of high male hormone levels and lessen the acne and excess hair.

We do not know the best way to treat PCOS. We are learning more by doing research studies to find out the causes of PCOS and the best treatment options for those affected by PCOS. It is best to discuss all the different treatment options with your doctor.