

Polycystic Ovarian Syndrome (PCOS)

Polycystic Ovarian Syndrome (PCOS) is an endocrine (hormonal) disorder that affects 5-10% of all people with ovaries. PCOS can affect people of all races and ethnic backgrounds. Symptoms most often appear in the teen years, but some people do not have symptoms until they are in their early to mid-20's. Some of the most frequent symptoms that bring a teen to our clinic may include:

- Excessive facial or body hair (Hirsutism)
- Acne
- Irregular periods
- Insulin resistance
- Obesity

People with PCOS may have symptoms of acne, hair growth and menstrual problems. At this time there is no cure for PCOS, but there are ways to treat the symptoms and their causes. Every person with PCOS is unique. Some may have only a couple of symptoms while others may have more. Many people with PCOS have metabolic syndrome that must be treated. Symptoms of metabolic syndrome include high blood pressure, high cholesterol, glucose intolerance or diabetes.

Symptoms

No menstrual period (amenorrhea) or infrequent periods (oligomenorrhea) - The time between menstrual bleeding can be greater than six weeks, with eight or fewer periods per year. Irregular bleeding may occur. Periods may be lengthy, light, or heavy. Frequent spotting may also occur. Absence of a period for more than 3 months at a time should be treated.

Cystic Ovaries- The parts of the ovary that normally contain an egg that is released with each menstrual cycle can turn into cysts and no egg is released. Although the condition is called PCOS, only some people with PCOS have cystic ovaries. Most people with PCOS have normal ovaries. The cysts in PCOS look like a string of pearls on ultrasound many, many small cysts, not just one big single cyst. A single cyst can commonly occur and is not PCOS.

Infertility- Infertility is not being able to get pregnant within six to twelve months of unprotected intercourse (depending on your age). In the case of PCOS, this is often due to no eggs or few eggs being released from the ovary. Teenagers with PCOS may still get pregnant, so they should not have unprotected sex.

Increased blood levels of androgens (hyperandrogenism) - The hormones testosterone, androstenedione, and DHEAS are androgens. Making too much of these hormones can cause excess body and facial hair, as well as oily skin. The ovaries and adrenal glands produce these hormones.

Excessive hair growth (hirsutism)- The hair growth mostly occurs on the face, chest, abdomen, back, or toes. This can be a response to the body making too many androgens.

Flaking skin on the scalp (Acne/Oily Skin/Seborrhea)- All of these are a result of the skin making too much oil. This can be in response to the body making too many androgens.

Obesity or Weight Gain- Weight gain tends to occur around the middle, causing an “apple” shaped figure. Weight gain can worsen insulin resistance and heart disease risk factors, such as high cholesterol and high blood pressure.

Insulin Resistance and Hyperinsulinemia

Insulin resistance occurs when the body does not use insulin very well to change sugar from food into energy. The body then must produce higher than normal levels of insulin (hyperinsulinemia) to try to keep the blood sugars under control.

Abnormal lipids (dyslipidemia)- Lipids are fats in the blood. In PCOS, the bad lipids or cholesterol (LDL & triglycerides) become high and the good one (HDL) becomes low.

High blood pressure (hypertension)-

Blood pressure for a young adult should be around 120/80 or less. High blood pressure is a reading of 130/80 or greater. High blood pressure is a risk factor for heart disease.

Dark patches on the skin (Acanthosis

Nigricans)- This most often occurs around the neck but can also occur in the skin creases under the arms, breasts, knuckles, and between the thighs. The patch can feel smooth and ranges in color from tan to dark brown. These skin changes reflect high insulin levels.

Diagnosis

The exact cause of PCOS is not known. It is diagnosed based on the symptoms that you have, an exam, and blood tests to rule out other diseases. In most cases, a pelvic exam is not done at the first exam and is only rarely done at return visits in certain cases. An ovary ultrasound may also be done.

Treatment

Birth control pills (Oral Contraceptives)-

Birth control pills contain hormones to make periods regular. Some can also decrease the androgens produced by the ovaries and help control symptoms such as increased hair growth and acne. People with a history of blood clots, migraines with aura, clotting disorder, or liver disease should not use birth control pills.

Anti-androgen Drugs-

These drugs block the effect of the hormones that cause unwanted hair growth (on the body and face) and acne. Spironolactone (Aldactone®) is one of the drugs we often prescribe to decrease acne and facial and body hair growth. This drug may take up to 24 weeks for full results to be seen. This drug cannot be taken during pregnancy.

Insulin Sensitizers-

These drugs make the body more sensitive to insulin. These drugs lower the amount of insulin produced by the pancreas. Metformin (Glucophage®) is the most used drug for this situation. This drug can also help you to lose a small amount of weight, regulate menstrual cycles, and help improve cholesterol levels.

Weight Loss-

Losing weight can be hard at first because of the insulin resistance. A healthy diet and exercise will be important for weight loss. Our dietician can help you create a food plan and set goals. Weight loss can also decrease the risks of heart disease and type 2 diabetes.

Excessive Hair Growth-

In addition to Spironolactone, electrolysis or laser treatments can work well to achieve more permanent hair removal. These techniques are performed by a licensed dermatologist or plastic surgeon and can be costly.

Long Term Health Risks

Endometrial (lining of the uterus)

Cancer- Each month, a lining builds up in the uterus. If pregnancy does not occur, the lining is shed through menstruation. PCOS does cause a buildup of the lining, but the lining is not fully shed due to rare or absent periods. This buildup of the lining over time can increase the chance of endometrial cancer if it is not treated.

Type 2 Diabetes- Insulin resistance and obesity both increase the risk of having type 2 diabetes. People with PCOS who have family members with diabetes appear to be at the highest risk for also getting diabetes.

Forty percent of people with PCOS have either diabetes or are not able to process glucose the right way (glucose intolerance or pre-diabetes) by the age of 40.

Heart Disease- PCOS can lead to an increased risk of heart disease. Symptoms such as high blood pressure, high cholesterol, obesity, and hyperinsulinemia increase risk of heart disease.

References

- Polycystic Ovarian Syndrome Association, website: <http://www.pcosupport.org>
- Center for Young Women's Health, website: www.youngwomenshealth.org

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 12/2022. University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing HF#6156