CONDITION

Bilateral polycystic ovarian syndrome

Learn what bilateral polycystic ovarian syndrome means, including PCOS symptoms, diagnosis, treatment options, fertility effects, and recommended follow-up.

WHAT IT IS
Hormone and metabolic condition affecting people with ovaries

BODY SYSTEM
Reproductive and metabolic

MAIN SYMPTOMS
Irregular or absent periods, excess facial or body hair, acne, difficulty becoming pregnant

WHAT CAUSES IT
Unknown combination of genetic, hormonal, metabolic and environmental factors

HOW IT IS DIAGNOSED
Clinical assessment, blood tests, sometimes pelvic ultrasound

MAIN TREATMENT
Lifestyle measures and symptom-based medicines

CAN IT BE CURED?
No, effects can only be managed

IS IT AN EMERGENCY?
Sometimes, sudden severe pelvic or abdominal pain

LONG-TERM OUTLOOK
Often manageable with increased metabolic and uterine risks

Overview

Bilateral polycystic ovarian syndrome usually refers to polycystic ovary syndrome , or PCOS, with an ultrasound appearance involving both ovaries. "Bilateral" means both sides. It is not a separate type of PCOS, and both ovaries do not need to look polycystic for someone to have the condition.

PCOS is a hormone and metabolic condition affecting women and other people with ovaries, usually during the reproductive years. It can interfere with ovulation, which is the release of an egg from an ovary. It may also cause higher-than-expected levels or effects of androgens, sometimes called "male hormones," although everyone produces them.

The name can be confusing. The "cysts" seen on ultrasound are usually many small, immature egg-containing follicles rather than harmful ovarian cysts. These follicles may collect when

eggs do not mature and release regularly. Some people with PCOS have this ovarian appearance, while others do not.

PCOS matters because it can affect menstrual periods, skin and hair, fertility, emotional health, and long-term metabolic health. It is associated with a greater risk of type 2 diabetes, sleep apnea, and changes in cholesterol or blood pressure. Infrequent periods can also allow the uterine lining to become too thick.

Symptoms and health priorities vary widely. Treatment is based on a person's concerns, such as irregular periods, unwanted hair growth, acne, pregnancy planning, or metabolic health.

Symptoms

PCOS symptoms often begin around puberty, but they may become more noticeable later. Some people first seek care after stopping hormonal birth control or having difficulty becoming pregnant.

Possible symptoms include:

Not everyone with PCOS has all these features. PCOS can occur at any body size. A person may also have regular-looking ovaries on ultrasound or regular bleeding while still having problems with ovulation.

Pelvic pain is not considered a defining feature of PCOS. Sudden or severe pelvic pain may have another cause, such as a separate ovarian cyst, ovarian twisting, infection, or an ectopic pregnancy.

- Periods that are infrequent, unpredictable, very heavy, or absent
- Difficulty becoming pregnant because ovulation is irregular or absent
- Increased facial or body hair, called hirsutism
- Acne or oily skin
- Thinning scalp hair in an androgen-related pattern
- Dark, thickened patches of skin, often around the neck, groin, or underarms
- Small skin tags
- Weight gain or difficulty managing weight
- Sleep problems, snoring, or daytime tiredness
- Anxiety, depression, low self-esteem, or distress about appearance or fertility

Causes and risk factors

The exact cause of PCOS is not fully understood. It appears to result from a combination of genetic, hormonal, metabolic, and environmental factors.

PCOS often runs in families. Having a close relative with PCOS or type 2 diabetes may increase the likelihood of developing it, although there is no single test that can predict who will be affected.

Many people with PCOS have insulin resistance . This means the body does not respond to insulin as effectively as expected. Insulin is the hormone that helps move glucose, or sugar, from the blood into cells for energy. The body may produce extra insulin to compensate.

High insulin levels can encourage the ovaries to produce more androgens. Excess androgen activity may disrupt follicle development and ovulation. It can also contribute to acne, facial or body hair growth, and scalp hair thinning.

Higher body weight can worsen insulin resistance and some PCOS symptoms, but it is not the sole cause of PCOS. People in smaller bodies can also have insulin resistance and PCOS. Weight stigma can delay diagnosis and care, so evaluation should consider the full pattern of symptoms rather than weight alone.

Diagnosis

There is no single test that confirms PCOS. Diagnosis is based on medical history, symptoms, examination, laboratory testing, and sometimes pelvic ultrasound. Clinicians must also consider other conditions that can cause similar findings.

In adults, PCOS is generally diagnosed when at least two of the following are present after other causes have been excluded:

In adults, an anti-Müllerian hormone, or AMH, blood test may sometimes be used instead of ultrasound to assess polycystic ovarian morphology. AMH should not be used as a stand-alone test for PCOS.

Ultrasound is not always necessary. A person who has both irregular ovulation and clear evidence of excess androgen activity may meet diagnostic criteria without ovarian imaging. Likewise, having polycystic-appearing ovaries alone does not establish PCOS.

Diagnosis is more cautious in adolescents because irregular periods and acne can be part of normal puberty. Current international guidance requires both persistent ovulatory problems and excess androgen activity in adolescents. Pelvic ultrasound and AMH are not recommended for diagnosing PCOS during adolescence because normal developing ovaries

may appear polycystic.

The evaluation may include questions about menstrual patterns, pregnancy possibility, medicines, hair and skin changes, weight history, sleep, and family health. A physical examination may assess blood pressure, acne, hair growth, scalp hair loss, and signs of insulin resistance.

Blood tests may measure androgen levels and help exclude pregnancy, thyroid disease, elevated prolactin, and nonclassic congenital adrenal hyperplasia. Testing for other hormonal disorders may be appropriate when symptoms suggest them.

Glucose testing is important because blood sugar problems can occur regardless of body size. A clinician may also check cholesterol and other blood fats. A markedly elevated androgen level or rapidly developing symptoms may require additional evaluation for a less common ovarian or adrenal condition.

- Irregular or absent ovulation, often shown by irregular periods
- Clinical or laboratory evidence of excess androgen activity
- Polycystic ovarian appearance on ultrasound

Treatment and management

Treatment is tailored to the person's symptoms, medical history, and pregnancy plans. PCOS does not have one permanent cure, but its effects can often be managed.

Healthy eating, regular physical activity, adequate sleep, and avoiding tobacco support metabolic and cardiovascular health. Benefits can occur even without weight loss. For people who want to lose weight, a clinician can help set realistic goals and discuss structured nutrition support, behavioral treatment, medicines, or other options when appropriate.

Combined hormonal birth control, such as certain pills, patches, or vaginal rings, may make periods more predictable and improve acne or unwanted hair growth. It also protects the uterine lining by preventing prolonged exposure to estrogen without progesterone. Suitability depends on a person's health history and risk factors.

For people who cannot or do not want to use combined hormonal contraception, periodic progestin treatment or a progestin-releasing intrauterine device may protect the uterine lining. These methods differ in how they affect bleeding, acne, and hair symptoms.

Metformin improves the body's response to insulin. It may be considered for metabolic concerns and can help some people with irregular cycles. Digestive side effects are common, especially when treatment begins. Decisions about metformin should be made with a clinician

rather than based on PCOS symptoms alone.

Unwanted facial or body hair can be managed with shaving, waxing, threading, laser treatment, or electrolysis. Hormonal treatment takes time to affect new hair growth. Anti-androgen medicines may be considered when other measures are not enough, but they require reliable contraception because they may harm a developing fetus.

Acne may improve with hormonal therapy or standard topical and oral acne treatments. A primary care clinician, gynecologist, or dermatologist can help select an approach based on severity and pregnancy plans.

If pregnancy is desired, treatment focuses on restoring ovulation and checking for other fertility factors. Letrozole is recommended by the international PCOS guideline as the first-line medicine for inducing ovulation in many people with anovulatory infertility due to PCOS when no other infertility factor is present. Other options may include clomiphene, metformin, injectable fertility medicines, or in vitro fertilization. These treatments require medical supervision.

Preconception care may include reviewing medicines, blood pressure, blood sugar, nutrition, and folic acid needs. A clinician can identify treatments that should be changed before pregnancy.

Complications

PCOS does not mean that complications will occur. Appropriate screening and treatment can reduce several risks.

Infrequent ovulation can cause the uterine lining, called the endometrium, to remain exposed to estrogen without enough progesterone. Over time, this can lead to endometrial hyperplasia, meaning abnormal thickening of the lining, and a higher risk of endometrial cancer. The overall chance of cancer remains low, and routine screening for endometrial cancer is not recommended without symptoms. Persistent abnormal bleeding should be evaluated.

Insulin resistance raises the risk of prediabetes and type 2 diabetes. PCOS is also associated with unfavorable cholesterol levels, high blood pressure, and other cardiovascular risk factors. The presence of these risk factors does not mean that heart disease is inevitable.

Obstructive sleep apnea is more common in people with PCOS. It causes repeated pauses or reductions in breathing during sleep. Loud snoring, waking unrefreshed, morning headaches, or significant daytime sleepiness should be discussed with a clinician.

Irregular ovulation can make pregnancy harder to achieve, but many people with PCOS become pregnant naturally or with treatment. During pregnancy, PCOS is associated with

higher risks of gestational diabetes, high blood pressure disorders, and some other complications, so early prenatal care is important.

Depression, anxiety, eating disorders, and body-image distress can also occur. These concerns deserve direct support and treatment rather than being treated as minor effects of the condition.

Follow up

Routine follow-up should review menstrual patterns, current symptoms, treatment effects, pregnancy goals, and emotional well-being. Blood pressure should be checked, and glucose and cholesterol testing may be repeated based on initial results and individual risk.

Contact a clinician for routine evaluation if periods remain very infrequent, bleeding changes significantly, unwanted hair or acne worsens quickly, or treatment causes troublesome side effects. New snoring, daytime sleepiness, depression, anxiety, or concerns about eating should also be discussed.

Seek prompt medical care for very heavy bleeding, especially if it causes weakness, dizziness, shortness of breath, or fainting. Sudden severe pelvic or abdominal pain also needs urgent assessment because it is not a typical PCOS symptom.

Emergency care is appropriate for severe pain with fainting, shoulder pain, heavy bleeding, or a possible pregnancy. These symptoms can occur with internal bleeding or an ectopic pregnancy. Immediate help is also needed for thoughts of suicide or self-harm.

Sources

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