

An imbalance of male and female sex hormones causes PCOS. Common symptoms include ovarian cysts, irregular periods, and excess facial and body hair. You can manage symptoms with lifestyle and medical treatments.

Polycystic ovary syndrome (PCOS) is a condition that causes symptoms that affect the ovaries and ovulation.

A hormone imbalance causes the body to skip menstrual periods and makes it harder to get pregnant.

Birth control pills and diabetes drugs (which combat insulin resistance, a common PCOS complication) can help fix the hormone imbalance and improve symptoms.

[View video transcript](#)

What is PCOS?

PCOS is a condition that affects those assigned female at birth (AFAB) during childbearing years.

Many people with PCOS don't know they have it. The [World Health Organization \(WHO\) Trusted Source](#)

estimates that up to 70% of people AFAB worldwide with PCOS have not received a proper diagnosis.

PCOS affects the ovaries, the reproductive organs that produce [estrogen and progesterone](#) — hormones that regulate the menstrual cycle.

The ovaries also produce a small amount of male sex hormones called [androgens](#).

The three main features of PCOS are:

- [Cysts](#) in the ovaries: Many small, fluid-filled sacs grow inside the ovaries. These sacs are actually [follicles](#), each containing an immature egg. The eggs never mature enough to trigger [ovulation](#).
- High levels of androgens: The ovaries produce high amounts of androgens, which affect ovulation and can cause irregular periods and make it hard to [get pregnant](#).
- Lower levels of progesterone: The lack of ovulation alters estrogen, progesterone, follicle-stimulating hormone (FSH), and luteinizing hormone levels.

What causes PCOS?

Health experts don't know exactly what causes PCOS. They believe that high levels of androgens prevent the ovaries from producing hormones and making eggs normally.

Genes, insulin resistance, and inflammation have all been linked to excess androgen production.

Genes

A 2019 study suggests that PCOS may [run in families](#)

[Trusted Source](#)

. While having a close relative who lives with PCOS increases the odds that you might have it too, it doesn't mean you will.

Experts are still trying to determine exactly how genes contribute to PCOS. Many genes are likely involved.

Insulin resistance

Research from 2023 estimates that between [65% and 95%](#)

[Trusted Source](#)

of people with PCOS have [insulin resistance](#) and [hyperinsulinemia](#).

When cells can't use [insulin](#) properly, the body's demand for insulin increases. The pancreas makes more to compensate, resulting in hyperinsulinemia. Extra insulin triggers the ovaries to produce more male sex hormones.

[Obesity](#) is a major cause of insulin resistance. Both obesity and insulin resistance [can increase your risk](#)

[Trusted Source](#)

of [type 2 diabetes](#).

Inflammation

People with PCOS often have increased levels of [inflammation](#) in their bodies. Having obesity can also contribute to inflammation. Studies have [linked excess inflammation](#) to higher androgen levels.

Common symptoms of PCOS

Some people start seeing symptoms around the time of their [first period](#). Others only discover they have PCOS after gaining weight or experiencing difficulties getting pregnant.

The most common PCOS symptoms are:

- [Irregular periods](#): A lack of ovulation prevents the uterine lining from shedding every month. Some people get [fewer than eight](#)
- [Trusted Source](#)
- periods a year, or none at all.
- Heavy periods: The uterine lining builds up for a longer period of time, so the periods you do get can be [heavier than usual](#).
- Hair growth: Up to [70% of people](#)
- [Trusted Source](#)
- grow excess hair on their face and body ([hirsutism](#)), including on their back, belly, and chest.
- Acne: Male sex hormones can make the skin oilier than usual and cause [acne](#) breakouts on the face, chest, and upper back.
- [Weight gain](#): Obesity affects about [4 in 5](#) people with PCOS. It can also make it hard to lose weight. However, rates can vary by population and region.
- Male pattern baldness: Hair on the scalp may thin or fall out.
- Darkening of the skin: [Dark patches](#) of skin can form in body creases like those on the neck, in the groin, and under the breasts.
- Headaches: Hormone imbalances can trigger [headaches](#).

How PCOS is diagnosed

A pelvic exam can find problems with your ovaries or other parts of your reproductive tract.

Blood tests can check for higher levels of male sex hormones. Your doctor might also check your [cholesterol](#), [insulin](#), and [triglyceride levels](#) to evaluate your risk for related conditions like heart disease and diabetes.

Doctors typically provide a diagnosis of PCOS in those who meet [at least two](#) [Trusted Source](#)

of the following Rotterdam criteria for PCOS:

- high androgen levels
- irregular menstrual cycles
- cysts in the ovaries found with ultrasound

Your doctor might ask whether you've had symptoms like acne, excess face and body hair growth, and weight gain.

How PCOS affects your body

Having higher androgen levels can affect your fertility and other aspects of your health.

Infertility

To get pregnant, you must ovulate. Those who don't ovulate regularly don't release as many eggs. PCOS is one of the [leading causes](#) of [infertility](#) in those AFAB.

Metabolic syndrome

Both obesity and PCOS increase your risk for:

- [high blood sugar](#)
- [high blood pressure](#)
- low [HDL "good" cholesterol](#)
- high [LDL "bad" cholesterol](#)

Together, these factors are called [metabolic syndrome](#), and they increase your risk for:

- [heart disease](#)
- [diabetes](#)
- [stroke](#)

Sleep apnea

[Sleep apnea](#) is more common in those who have obesity — especially if they also have PCOS.

According to research from 2020, what may link PCOS to sleep apnea may [include](#):

- insulin resistance

- [hormone imbalances](#)
- [oxidative stress](#)
- [sympathetic nervous system](#) overreactivity

Endometrial hyperplasia and cancer

During ovulation, the uterine lining sheds. If you don't ovulate every month, this lining can build up. A thickened uterine lining can [increase your risk](#) for endometrial hyperplasia, which is a noncancerous condition itself but can sometimes lead to [endometrial cancer](#) in a small number of cases.

Depression

Hormonal changes and symptoms can negatively affect your mental health. Many with PCOS may experience [depression](#) and [anxiety](#).

According to a study of 8,612 women with and without PCOS, compared to those without PCOS, [8.5% more](#)

[Trusted Source](#)

women reported a higher prevalence of depression symptoms.

And 10.8% more reported a higher prevalence of anxiety symptoms.

Pregnancy and PCOS

PCOS interrupts the menstrual cycle and makes it harder — but not impossible — to get pregnant.

Research from 2025 using data from 2021 estimates that PCOS-related infertility affects about [32.5%](#)

[Trusted Source](#)

of people.

This condition can also [increase the risk](#)

[Trusted Source](#)

of:

- having a [high risk pregnancy](#)
- [infertility](#)
- [miscarriage](#)

[Fertility treatments](#) can help stimulate ovulation, though these also may [raise your risk](#) for pregnancy complications.

If you're looking to get pregnant, consider speaking with a fertility specialist for more guidance.

It may still be [possible to get pregnant](#) even if you don't ovulate or menstruate regularly. It's best to use [contraception](#) and barrier methods, even if you have PCOS, if you don't want to conceive.

Lifestyle tips to help relieve PCOS symptoms

Treatment for PCOS usually starts with lifestyle changes like weight management, diet, and exercise.

Weight management

Maintaining a moderate weight can help regulate your menstrual cycle and improve PCOS symptoms while helping to improve:

- [cholesterol levels](#)
- [insulin sensitivity](#)
- risk of heart disease and diabetes

Diet

A 2019 study on the effect of a low carbohydrate diet for PCOS found that it [can help with](#):

- [weight loss](#)
- insulin resistance
- total cholesterol
- LDL cholesterol

To see these improvements, however, you'll need to follow the diet consistently. The study also found that following it for more than 4 weeks [may help](#):

- increase FSH
- decrease [testosterone](#) (a male sex hormone that PCOS causes increased levels of)
- increase [sex hormone binding globulin](#)

A low [glycemic index \(GI\)](#) diet may also [help improve symptoms](#) of PCOS. However, not enough evidence exists to recommend a specific diet for this condition.

Exercise

The international PCOS guidelines suggest getting at least [150 minutes](#)

[Trusted Source](#)

of moderate activity (anything you can talk but not quite sing doing), 75 minutes of intense exercise, or both each week.

Depending on your fitness level, you may or may not be able to reach this goal. That's OK — just focus on what you can do for now. Remember: The goal is to move more in general.

Common medical treatments for symptoms of PCOS

Birth control pills and other medications can help regulate the menstrual cycle and treat PCOS symptoms like hair growth and acne.

Birth control

Taking [progestin](#) daily can help:

- [restore hormone balance](#)
- regulate ovulation
- manage symptoms like excess hair growth
- protect against endometrial cancer

These hormones come in a [pill](#), [patch](#), or [vaginal ring](#).

Metformin

[Metformin](#) is used to treat type 2 diabetes by improving insulin levels.

A 2023 study found that taking metformin can also [help improve](#) insulin levels in those with PCOS.

Other potential benefits include restoring the regular menstrual cycle and triggering ovulation.

Clomiphene

[Clomiphene](#) is a [fertility](#) drug that can help people with PCOS get pregnant.

It's important to note that clomiphene — and other fertility drugs, for that matter — [may increase](#) the chances of twins and other multiple births. Discuss your chances with a fertility expert.

[Letrozole](#) can help minimize the chance of twins, though it's not FDA-approved for this use.

Hair removal medications

Eflornithine cream is a prescription drug that can help slow hair growth.

[Laser hair removal](#) and [electrolysis](#) can also help remove unwanted hair on the face and body, though you should still expect some hair regrowth from these methods.

Surgery

Surgery can be an option to improve fertility if other treatments don't work.

Ovarian drilling is a procedure that makes tiny holes in the ovary with a laser or thin heated needle to restore ovulation.

When to seek medical attention

Speak with your doctor if:

- You've missed periods, and you're not pregnant.
- You have symptoms of PCOS.
- You've been trying to get pregnant for more than 12 months and are younger than 35.
- You have [symptoms of diabetes](#).

If your periods are already irregular or [absent](#) and you're trying to get pregnant, do not wait 12 months to see a specialist to be evaluated.

If you have PCOS, plan regular visits with your doctor. You'll need regular tests to check for diabetes, high blood pressure, and other possible complications.

The takeaway

PCOS can disrupt menstrual cycles and make it harder to get pregnant. High levels of male sex hormones can lead to symptoms like hair growth on the face and body.

Weight management can help relieve PCOS symptoms and restore fertility. Diet and exercise are two additional approaches to try alongside weight management.

Medications are an option if lifestyle changes don't work. Birth control pills and metformin can help regulate menstrual cycles and relieve PCOS symptoms.