

## WHAT IS POLYCYSTIC OVARY SYNDROME (PCOS)?

Polycystic ovary syndrome (PCOS) is a widespread hormonal disorder. PCOS presents as a group of symptoms that can include irregular menstrual cycles, weight changes, increased body or facial hair, and acne.

If you have PCOS, remember that treatments and support are available to help manage your well-being. Take each step as it comes, and don't hesitate to seek help from a healthcare provider.

[VIEW ALL OF OUR RESOURCES ON PCOS](#)

 [PCOS treatment information](#)

## DIAGNOSING POLYCYSTIC OVARY SYNDROME (PCOS)

If you suspect you may have PCOS, your healthcare provider will guide you through the diagnostic process, which generally involves identifying at least two of the following indicators:

- Persistent lack of ovulation (absence of egg release from the ovaries)
- Elevated levels of androgens, such as testosterone, which may contribute to symptoms like acne or excess hair growth
- Ovaries containing multiple small follicles, which differ from large ovarian cysts

During the diagnosis, your healthcare team will conduct a physical exam to observe hair growth patterns and assess other potential causes. They'll review your medical history, including your menstrual regularity and symptom patterns. An ultrasound may be performed to examine your ovaries, and blood tests can measure hormone levels and assess blood sugar or cholesterol.

[VIEW THE PCOS FACT SHEET WITH INFOGRAPHICS](#)

## RISK FACTORS FOR POLYCYSTIC OVARY SYNDROME

- **Family History:** Having a close relative, like a mother or sister, with PCOS increases your risk. This suggests a genetic link.
- **Obesity or Being Overweight:** Excess body weight can lead to insulin resistance, which is linked to PCOS and can make symptoms worse.
- **Insulin Resistance:** Insulin resistance happens when your body's cells stop responding to insulin the way they should. Insulin is a hormone made by your pancreas, and its job is to help sugar (glucose) from the food you eat get into your cells to be used for energy. When you have insulin resistance, your cells don't let sugar in as easily, so your body makes more insulin to try to fix the problem. Over time, this can lead to high insulin levels and high blood sugar. If it continues, it can cause weight gain, make you feel tired, and even lead to health problems like type 2 diabetes or PCOS.
- **Hormonal Imbalances:** An imbalance in hormones, like elevated androgens or luteinizing hormone (LH), is both a cause and risk factor for PCOS.
- **Type 2 Diabetes or Prediabetes:** People with insulin resistance or diabetes have a higher risk of developing PCOS.
- **Sedentary Lifestyle:** Lack of physical activity can increase weight gain and insulin resistance, raising the risk of PCOS.
- **Early Puberty or Irregular Periods:** Girls who start puberty early or have irregular menstrual cycles may be at higher risk of developing PCOS.

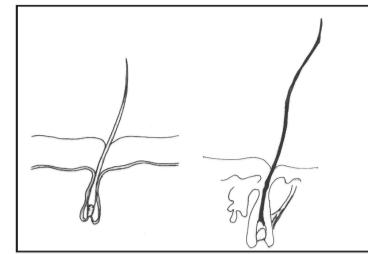


Figure 1. Terminal hair is longer, darker, and more coarse than vellus hair.

## Additional Resources:

### HIRSUTISM AND POLYCYSTIC OVARY SYNDROME PATIENT EDUCATION BOOKLET

Symptoms and risks of PCOS

## SYMPTOMS OF PCOS

- **Irregular Periods:** Periods that are very late, very early, or sometimes missing altogether.
- **Excess Hair Growth:** Extra hair on the face, chest, stomach, or back (called hirsutism).
- **Acne:** Severe or long-lasting acne, especially on the face, chest, or back.
- **Thinning Hair or Hair Loss:** Hair on the scalp may become thin or fall out (like male-pattern baldness).
- **Weight Gain:** PCOS can make it more difficult to lose weight, and cause you to gain weight easily, especially around the belly.
- **Dark Skin Patches:** Darker, thicker patches of skin, often on the neck, underarms, or around the groin.
- **Difficulty Getting Pregnant:** PCOS can prevent you from releasing an egg (ovulating), which makes it difficult to get pregnant.

Not everyone with PCOS will have all these symptoms, and they can vary from person to person. If you notice any of these signs, it's a good idea to talk to a doctor.

## MANAGING POLYCYSTIC OVARY SYNDROME (PCOS)

Managing PCOS involves understanding your options, finding the approach that best meets your needs, and working with your healthcare provider. Remember, you're not alone, and there are ways to improve symptoms and enhance your well-being.

### Hormonal Treatments

If you're not aiming to become pregnant, hormonal treatment could be effective in managing PCOS symptoms. Birth control pills are a common option, as they reduce ovarian hormone production and help balance androgen levels. However, these may not be recommended if you're over 35 and a smoker. For individuals managing hirsutism (excessive hair growth), your provider might suggest spironolactone, either alone or alongside birth control pills, to reduce androgen levels. In some rare cases, GnRH analogs might also be used to decrease ovarian androgen production. Alternatively, for those primarily looking to regulate menstrual bleeding without needing contraception or addressing hirsutism, taking progesterone at regular intervals can help.

If you decide to pause or stop treatment, symptoms may return, so regular follow-up is encouraged to maintain health and manage any changes.

### Addressing Excess Hair and Acne

For managing excess hair and acne, there are several options. Medications that lower androgen levels can help reduce symptoms, and additional methods such as shaving, plucking, laser treatment, or electrolysis may also be effective for hair removal. Acne may improve with medications that target sebum production, but it's helpful to consult your healthcare provider for recommendations on safe and effective treatments tailored to you.

### Weight and Metabolic Health

Dietary changes and increased physical activity can be an effective strategy for managing PCOS symptoms. Additionally, weight management can be beneficial in reducing androgen levels, improving menstrual cycle regularity, and lowering the risk of diabetes and other metabolic conditions. Even a small amount of weight loss can make a difference. Talk to your healthcare provider about a safe and sustainable weight-management plan. Increasing physical activity with exercises like walking, swimming, or aerobic exercise can aid in weight loss and support both physical and mental health.

Avoid fad diets, which may be tempting but often don't provide lasting results and can sometimes lead to additional health concerns. You Ifneeded, your provider may recommend additional resources to help you develop healthy habits, such as a nutritionist. Your physician may also recommend medication or surgical options to assist with weight loss goals.

## Monitoring Metabolic Health

PCOS can increase the risk of metabolic disorders, so it's important to regularly monitor factors like cholesterol, blood pressure, and blood sugar levels. Routine screenings and working with your healthcare provider to manage these risks can support long-term health and help you stay on top of your overall wellness.

# PCOS Treatment

*For Women who Wish to Conceive Now*

### HELPING YOU OVULATE

If pregnancy is your immediate goal, ovulation may be induced with clomiphene citrate or letrozole. These pills are simple to use, relatively inexpensive, and are a good first step for many patients.



# PCOS Treatment

*For Women who do not Wish to Conceive Now*

### LOWER ANDROGEN LEVELS

If you are not trying to conceive, birth control pills may be your best way of lowering androgens and controlling your menstrual cycle. There are other options for women who cannot or choose not to take birth control pills.



Polycystic Ovaries

## PCOS AND FERTILITY

If you're trying to get pregnant, there are several options available to help you ovulate and increase your chances of conception. Your doctor will work with you to find the best approach for your situation.

### Medications to Stimulate Ovulation

The first step often involves taking medication to stimulate ovulation. Clomiphene citrate, an oral medication, is usually tried first. Letrozole, another oral medicine, can also be very helpful for women with PCOS. If these are not successful, your doctor may prescribe injected fertility medications called gonadotropins to help stimulate the growth of an egg. It's important to be closely monitored while taking gonadotropins to ensure you are responding appropriately and to minimize the risk of side effects, such as ovarian hyperstimulation and multiple pregnancy (twins or triplets).

### Weight Management

If you are overweight, losing some weight can help improve your ovulation patterns and overall fertility.

### Insulin-Sensitizing Medicines

Medications like metformin can help your body use insulin more effectively, which can improve ovulation and lower the risk of developing diabetes or metabolic syndrome.

## Surgical Options

In very rare cases, if ovulation is not achieved with medication, ovarian surgery may be considered. Procedures such as ovarian drilling, performed through laparoscopy, can help stimulate ovulation. However, these surgeries are generally a last resort due to potential risks, such as the formation of adhesions (scar tissue) which can affect future fertility.

### In Vitro Fertilization (IVF)

If other treatments do not work, IVF may be an option to help you conceive. IVF has helped many women with PCOS achieve pregnancy when other methods have not been successful.

#### Read more

- [Medications for Inducing Ovulation Patient education booklet](#)
- [Ovarian Drilling for Infertility Patient Fact Sheet](#)
- [In Vitro Fertilization Treatment Patient Journey](#)

 who is treated with ovulation drugs

## MEDICATIONS TO STIMULATE OVULATION

Addressing infertility in individuals with PCOS commonly involves the use of medications that can stimulate ovulation. An oral medication, letrozole, is typically tried first. Another oral ovulation induction agent, clomiphene citrate, may also be considered. If these medications are not effective, your healthcare provider may prescribe injectable fertility medications called gonadotropins. Injectable medication can also help stimulate egg growth but requires close monitoring to ensure that you are responding well and to reduce the risk of ovarian hyperstimulation and multiple pregnancy (e.g., twins or triplets).

## Additional Options

In some cases, your provider may also suggest metformin, an insulin-sensitizing medication, that can also help promote ovulation. Additionally, this medication improves how the body uses insulin which also lowers the risk of developing diabetes or metabolic syndrome, conditions which are associated with PCOS.

If oral and injectable treatments do not lead to pregnancy, in vitro fertilization (IVF) may be considered. IVF can be an effective option for individuals with PCOS when other treatments are unsuccessful.

### ORAL MEDICINES FOR INDUCING OVULATION FACT SHEET

## WEIGHT MANAGEMENT

The number on the scale is not as important as your overall health, but being overweight can often have a negative impact on your health. Here are some ways to manage your weight.

### NUTRITION

Nutrition plays a big role in keeping you healthy because the food you eat gives your body the energy and nutrients it needs to work properly, including your reproductive organs!

- **Good nutrition:** Eating a balanced diet with fruits, vegetables, whole grains, protein, and healthy fats helps your body stay strong, gives you energy, helps you maintain a healthy weight, and supports all functions in the body.
- **Poor nutrition:** Eating too much sugar and processed foods, or not enough healthy foods can cause insulin resistance, make you feel tired, cause weight gain, and increase the risk of health problems like heart disease, diabetes, or infertility.

Because everyone is different, it can be helpful to visit a nutritionist or dietitian who can create a nutrition plan just for you.

### EXERCISE

Exercise can help manage weight and improve fertility by making your body healthier and more balanced. Here's how it helps:

- **Healthy Weight:** Being too overweight (or underweight) can affect hormones and make it harder to get pregnant. Exercise helps you stay at a healthy weight.
- **Better Blood Flow:** Regular exercise improves blood flow to your reproductive organs, which can help them work better.
- **Balanced Hormones:** Regular exercise lowers levels of stress hormones like cortisol, which can interfere with other hormones like estrogen and progesterone, which are important for ovulation and fertility.
- **Reduces Insulin Resistance:** Exercise improves insulin resistance by helping your body use insulin more effectively. When you exercise, your muscles need energy, so they take in sugar (glucose) from your blood. This lowers your blood sugar levels and makes your cells more sensitive to insulin, meaning they respond to it better. Regular exercise also helps reduce body fat, especially around the belly, which is linked to insulin resistance. It can improve blood flow and reduce inflammation in the body, both of which help insulin work more efficiently. Over time, this makes it easier for your body to keep blood sugar levels balanced.
- **Boosts Overall Health:** Staying active makes your heart, lungs, and muscles stronger, which prepares your body for a healthy pregnancy.

Exercising in moderation is best—too much intense exercise can sometimes hurt fertility, so finding a balance is important. If you currently do not exercise at all, it's OK! Start slow and make it a goal to move more each day.

In addition to nutrition and exercise, your doctor may recommend medical treatments to help you lose weight and improve insulin resistance. Keep in mind that the following therapies will work best in conjunction with a healthy nutrition and exercise plan.

## MEDICATION

- **Metformin**, although not a weight loss medication, can help your body use insulin better, which can improve ovulation and lower the chances of getting diabetes or metabolic syndrome, and for some people can help lose a small amount of weight.
- **GLP-1 inhibitors** are medicines that can help you lose weight by making your body feel full and slowing down how fast your stomach empties food. This makes you eat less because you don't feel as hungry. These medicines also help control your blood sugar levels by helping your body release the right amount of insulin when you eat. When your blood sugar is stable, your body is less likely to store extra fat. By reducing hunger and improving how your body handles food, GLP-1 inhibitors can make it easier to eat healthier and lose weight. These medications should be stopped 2 months prior to becoming pregnant, so they should be used prior to starting fertility treatments.
- **Other medications:** Other medications such as Phentermine, Orlistat, or Naltrexone + Bupropion are also used for weight loss. Your doctor can help you decide if any of the above medications might be helpful for you.

## SURGICAL OPTIONS

Bariatric surgery helps you lose weight by changing how your stomach and digestive system work. Here are the main ways it works:

- **Smaller Stomach:** After surgery, your stomach is smaller, so you can't eat as much food at one time. You feel full faster, which helps you eat less.
- **Changes How Food is Digested:** Some types of bariatric surgery also change how food is absorbed in your intestines. This means your body takes in fewer calories from the food you eat.
- **Hormone Changes:** Bariatric surgery can affect the hormones in your stomach and gut, which can lower your hunger and help control blood sugar levels.

By eating less and absorbing fewer calories, you lose weight over time. This surgery is usually for people who are very overweight and haven't been able to lose weight with other methods like diet and exercise.

## REAL LIFE EXPERIENCES

[Listen to a PCOS patient story on the SART Fertility Experts podcast](#)

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As the most common hormonal disorder in women, PCOS is a disruptive problem that impacts many aspects of a woman's health including getting pregnant. In this episode, Brittany discusses how PCOS has affected her life and shares the story of her challenging journey to parenthood, with Dr. Mark Trolice, a reproductive endocrinologist.

[SUBSCRIBE TO SART FERTILITY EXPERTS](#)

[VISIT THE SOCIETY FOR ASSISTED REPRODUCTIVE TECHNOLOGY \(SART\) WEBSITE](#)

## FIND AN EXPERT

Coping with hirsutism and PCOS can be emotionally challenging. You may feel self-conscious or concerned about issues like excessive hair growth, weight management, or future fertility. It's important to remember that many people experience similar challenges, and these conditions are more common than you might think. Seeking support early on can make a difference, as early diagnosis and treatment often lead to better outcomes.

Even though you may feel hesitant to share these feelings, talking with a physician can open doors to medical and cosmetic treatments that address both PCOS and hirsutism. A range of options is available, including medication, and, if needed, electrolysis or laser treatments to permanently reduce unwanted hair.

If you're seeking specialized help, ASRM can assist in finding a reproductive endocrinologist knowledgeable about Polycystic Ovary Syndrome. This specialist can guide you on your journey and help you address your specific goals and concerns.

[SEARCH FOR AN EXPERT](#)



Healthcare professional eager to help a patient

## POLYCYSTIC OVARY SYNDROME (PCOS)



[PCOS WITH DR. MARK TROLICE AND DR. ANUJA DOKRAS](#)



[WEIGHT AND FERTILITY](#)

In this episode of the SART Fertility Experts podcast, Dr. Mark Trolice sits down with PCOS expert Dr. Anuja Dokras, who explains diagnosis, risks, fertility, lifestyle changes, and new treatments to empower women with PCOS in 2025 and beyond.

[LISTEN TO THE EPISODE](#)



#### CONDITIONS TREATED WITH SURGERY ON THE FALLOPIAN TUBES AND OVARIES

Surgery can be used to treat problems with the ovaries or fallopian tubes, such as cysts, endometriosis, or infections.

[VIEW THE FACT SHEET](#)

One of the easiest ways to determine if you are underweight or overweight is to calculate your body mass index (BMI).

[VIEW THE FACT SHEET](#)



#### KILO VE DOĞURGANLIK

Gebelik için ideal kiloda olup olmadığını anlamak en kolay yollarından biri, vücut kitle indeksinizi (VKİ) hesaplamaktır.

[VIEW THE FACT SHEET](#)



## PATIENT JOURNEYS

Meet our endocrinologist who is preparing her for fertility tests

Meet our patient who is preparing her for her first IVF cycle

Meet our patient who is preparing her for her second IVF cycle

#### PATIENT JOURNEY

##### FERTILITY PRESERVATION

[VIEW THE PATIENT JOURNEY](#)

#### PATIENT JOURNEY

##### ENDOMETRIOSIS JOURNEY

[VIEW THE PATIENT JOURNEY](#)

#### PATIENT JOURNEY

##### FIBROIDS JOURNEY

[VIEW THE PATIENT JOURNEY](#)



[VIEW ALL THE PATIENT JOURNEYS](#)

## RESOURCES FOR YOU

The American Society for Reproductive Medicine (ASRM) is committed to providing patients with the highest quality information about reproductive care.

Resources teaser

Teaser

Teaser

[Advocacy Resources](#)

[Frequently Asked Questions](#)

[Patient Journeys](#)

ASRM has prepared resources to help you explain and advocate for reproductive rights and the continuation of in vitro fertilization and other fertility treatments.

[VIEW THE RESOURCES](#)

ASRM's Frequently Asked Questions (FAQ) provides answers to common questions about reproductive health.

[KNOW THE FAQS](#)

ASRM has resources to help you through each stage of your journey.

[BROWSE THE JOURNEY](#)



[BROWSE ALL TOPICS](#)

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