



A REVIEW ON POLYCYSTIC OVARY SYNDROME (PCOS)

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ABSTRACT:

Polycystic Ovary Syndrome (PCOS) is a health condition that affects many women, especially during their reproductive years. It is known for causing problems like irregular periods, acne, weight gain, and sometimes difficulty getting pregnant. PCOS happens due to hormonal imbalances, particularly an increase in male hormones (androgens), and is often linked to insulin resistance. The exact cause isn't fully understood, but genetics and lifestyle factors play a big role. This review looks at what we currently know about PCOS—its causes, symptoms, how it's diagnosed, and the different ways it can be managed.

Keywords: PCOS, Hormonal imbalance, Female health, Infertility, Metabolism, Insulin resistance

Introduction:

Polycystic Ovary Syndrome is one of the most common health problems for women between the ages of 15 and 45. It was first described back in 1935, but even today, many women are unaware they have it. This is because symptoms can be very different from one person to another. PCOS doesn't just affect periods and fertility—it can also lead to long-term health problems like diabetes and heart disease.

What Causes PCOS?

PCOS doesn't have a single cause. It's believed to be caused by a mix of genetic factors and how the body reacts to insulin and hormones.

Insulin Resistance

Many women with PCOS have insulin resistance. This means the body has trouble using insulin properly, causing the pancreas to produce more. High insulin levels can trigger the ovaries to make more androgens, which worsens PCOS symptoms.

Hormonal Imbalance

In PCOS, the body makes more luteinizing hormone (LH) and less follicle-stimulating hormone (FSH). This hormonal imbalance can stop the ovaries from releasing eggs each month, which affects fertility and causes irregular periods.

Common Signs and Symptoms:

PCOS can show up in different ways. Some women have obvious symptoms, while others may not even realize they have it. Here are the most common signs:

- Irregular or missed periods
- Acne or oily skin
- Excess hair on the face or body
- Thinning hair on the scalp
- Weight gain or trouble losing weight
- Small cysts on the ovaries (seen on ultrasound)

Some women may also feel tired, moody, or anxious. These emotional symptoms are just as important and should be taken seriously.

How is PCOS Diagnosed?

There's no single test for PCOS. Doctors usually use a combination of symptoms, blood tests, and ultrasound. The most accepted guideline (called the Rotterdam criteria) says you need to have at least two of these three:

1. Irregular periods or no periods
2. High levels of androgens (tested or seen through symptoms)
3. Polycystic ovaries on ultrasound

Other conditions with similar symptoms should be ruled out first.

Health Problems Linked to PCOS:

PCOS doesn't just affect your periods or chances of getting pregnant—it can also cause other health concerns:

- Difficulty getting pregnant
- Type 2 diabetes or prediabetes
- High cholesterol and heart problems
- Depression or anxiety
- Thickening of the uterus lining (which can raise cancer risk if not treated)

That's why it's important to take PCOS seriously and manage it early.

How is PCOS Treated?

There's no cure for PCOS, but it can be managed well with the right plan. Treatment depends on what symptoms you have and whether you want to get pregnant.

Lifestyle Changes

The first step is often changing your daily habits. Eating healthy, exercising regularly, and losing a small amount of weight (even 5–10%) can make a big difference in symptoms.

Medications

- Birth control pills can help regulate periods and reduce acne and hair growth.
- Metformin helps with insulin resistance and may help restart periods.
- Anti-androgen medicines like spironolactone reduce excess hair and acne.
- Ovulation medications like clomiphene or letrozole can help women who want to get pregnant.

Surgery

If other treatments don't work, a small surgery called ovarian drilling might help trigger ovulation. However, this is used only in specific cases.

What's New in PCOS Research?

Researchers are always looking for better ways to understand and treat PCOS. Natural supplements like inositols show promise, and new medications that target metabolism are being studied. Technology is also helping—AI tools might soon make PCOS diagnosis and treatment more accurate and personalized.

Conclusion:

PCOS is a common but often misunderstood condition. It can affect many parts of a woman's life—physically and emotionally. But with early diagnosis, healthy habits, and the right treatments, most women can manage their symptoms well and live healthy, fulfilling lives. Spreading awareness and supporting more research will help more women get the care they need.

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