

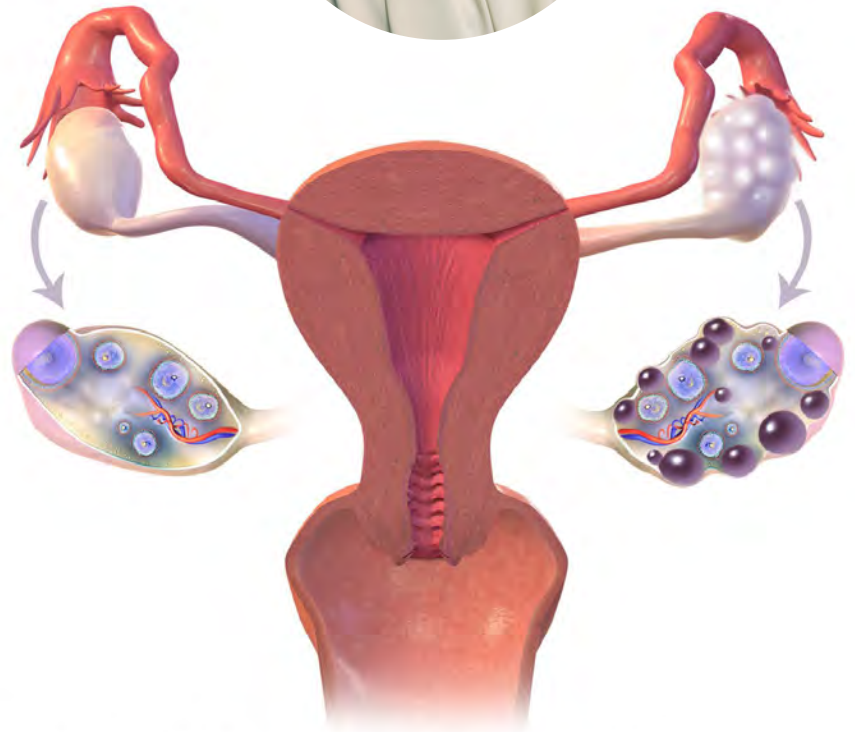
# POLYCYSTIC OVARY SYNDROME (PCOS) IN A NUTSHELL

*In conversation with a Gynecologist,  
**Dr Khairiah Bt Seman,**  
 Consultant Obstetrician & Gynecologist,  
 Columbia Asia Hospital – Klang*



## WHAT IS IT?

**P**olycystic ovary syndrome (PCOS) is the most common hormone abnormality of reproductive-aged women, occurring in up to 10% of such individuals. It is characterized by excess production of the testosterone, menstrual irregularity when ovulation does not occur and enlarged ovaries containing multiple small follicles. These ovaries lined up on the surface of the ovaries, which appears like a “pearl necklace.”



## WHAT CAUSES IT?

The exact cause of PCOS is unknown. It is more prevalent among family members than in the general population, suggesting that genes can influence the development of PCOS. One study in Sweden had

## Polycystic Ovary Syndrome

*Image Credit : BruceBlaus Wikimedia*

shown that daughters of women with PCOS are five times more likely to have it too. Lifestyle, including diet and exercise, also affects the severity of PCOS. Weight gain can worsen both reproductive and metabolic abnormalities.

### WHAT ARE THE SIGNS AND SYMPTOMS OF PCOS?

There are several combinations of signs and symptoms that may be accounted for in the diagnosis of PCOS, resulting in different phenotypes for the same syndrome.

Some have minimal signs/symptoms, while others may experience several of them. It can vary widely which may include irregular menses, excess body and facial hair, overweight or obesity, acne, darkening or thickening of the skin on the neck and armpits as well as scalp hair loss.

### HOW TO DIAGNOSE?

There is no single test that can diagnose PCOS. It is based on a combination of clinical findings such as medical history, physical examination, ultrasound findings of the ovaries, as well as blood investigations. Currently, health professionals are using the Rotterdam criteria to diagnose PCOS.

### COMPLICATIONS OF PCOS?

Women with PCOS have a hormonal imbalance and metabolism problems that can affect their overall health and appearance. It can cause a woman difficulty in getting pregnant. She also has a higher risk of miscarriage and developing diabetes mellitus and hypertension during pregnancy.

Women with PCOS also at increased risk of development of metabolic syndrome with its associated risks of heart disease and stroke. They are also at risk of mood disorders such as depression, anxiety and eating disorders. The hormone imbalance also increases the risk of endometrial cancer (cancer of the inside lining of the uterus).


### WHAT HAPPENS IF PCOS IS LEFT UNTREATED?

If PCOS left unchecked or untreated, those women are at higher risk of developing:

1. Type 2 diabetes mellitus, especially if women are overweight (BMI>25). Even if the BMI is normal, a woman with PCOS should be screened for diabetes if age is more than 40 years old, has a personal history of gestational diabetes, or has a family history of diabetes. PCOS is classified as a nonmodifiable risk factor for type 2 diabetes. Insulin resistance that occurs in PCOS leads to compensatory hyperinsulinemia, which in turn increases ovarian androgen synthesis by direct ovarian actions and by stimulating Luteinizing Hormone secretion. Insulin resistance also induces dyslipidemia, therefore increase the risk for diabetes mellitus and cardiovascular disease.
2. Non-alcoholic fatty liver disease: Recent studies indicated that PCOS is associated with low-grade chronic inflammation and that women with PCOS are at increased risk of non-alcoholic fatty liver disease.
3. Endometrial cancer: The hormone imbalance also increases the risk

of endometrial cancer (cancer of the inside lining of the uterus). Low level of progesterone that occur in PCOS, causing unopposed estrogen stimulation of endometrium resulting in endometrial hyperplasia and cancer.

4. Sleep apnoea: The prevalence of sleep apnoea is increased in obese women with PCOS. Hyperandrogenism and insulin resistance are positively associated with obstructive sleep apnoea in PCOS.
5. Mood disorders such as depression, anxiety and eating disorders.



Overall,  
the health risks  
associated  
with PCOS is  
lifelong.

### DOES PCOS AFFECT PREGNANCY?

One of the features of PCOS in anovulation, i.e. failure of the follicular/ovum development. This can result in difficulty in getting pregnant. She also has a higher risk of miscarriage and developing diabetes mellitus and hypertension during pregnancy.

### IS PCOS LINKED TO OTHER HEALTH ISSUES?

Yes definitely!  
For those women less than 50

years old with PCOS, they are at an increased risk for cardiovascular disease. Maybe because they are more likely to be overweight and have high blood pressure and diabetes compare to those without PCOS. However, for those above 50 years old, there was no difference in terms of risk of cardiovascular disease.

### **WHAT ARE THE TREATMENTS OF PCOS?**

There is no cure for PCOS, and it does not go away on its own. The overall goals of therapy of women with PCOS include the mitigation of hyperandrogenic symptoms, management of metabolic abnormalities and reduction of risk factors for type 2 diabetes and cardiovascular disease, prevention of endometrial hyperplasia, planning and obtaining a safe pregnancy if desired, and improving general well-being and quality of life. These goals are ideally achieved by a multidisciplinary team providing patient-centered care.

Lifestyle modification is the key to managing PCOS in an overweight woman. Even a modest weight loss can improve symptoms. Knowing the right types of foods to eat together with exercise can bring down insulin levels and can help with weight loss. Diet and exercise are also important for cardiovascular health and improve mood.

Metformin, an Insulin sensitizer has long been used in women with PCOS to counteract the Insulin resistance and its sequelae. Also, combined oral contraceptive pills to decrease



the androgens level as well as for endometrial protection.

### **THE LATEST RESEARCH ON PCOS?**

Few studies had shown that women with PCOS have a lower level of Vitamin D. Therefore, it is recommended that women with PCOS be given a Vitamin D supplement that may decrease chronic inflammation associated with PCOS.

Improved PCOS symptoms correlate with gut bacteria. It was noted that women with PCOS have less diverse gut bacterial composition. Studies in the mouse model have shown improvement in PCOS symptoms with exposure to healthy gut bacteria. Therefore, prebiotics and probiotics may be used as part of treatment for women with PCOS.

Having said that, a lot more research is needed to understand this disease further and to improve the treatment outcome. **IM**