

PCOS and Long-term Metabolic Health

Polycystic ovary syndrome (PCOS) is a common condition in young women. Although it is well known for its typical symptoms, it is now understood that PCOS is also linked to many long-term health problems apart from its typical symptoms.¹ These problems due to PCOS are as follows:

Dyslipidaemia (abnormal levels of fats)¹



Women with PCOS may have unhealthy cholesterol levels, including low 'good' (HDL) cholesterol, higher 'bad' (LDL) cholesterol and increased triglycerides (a type of fat in the blood that the body uses for energy), both before and after meals.

Hyperinsulinaemia (higher than normal levels of insulin in the blood)²



Women with PCOS are more likely to have insulin resistance (the body does not respond properly to insulin, so sugar levels in the blood can rise more easily), even if their weight is normal. They also have a higher risk of diabetes during pregnancy, impaired glucose tolerance (blood sugar levels are higher than normal) and type 2 diabetes compared to women of the same age and body weight without PCOS.

Obesity (excessive body fat)²



Women with PCOS are about twice as likely to be overweight or obese compared to women without PCOS. Even thin women with PCOS tend to store fat differently; their fat cells are larger and break down fat more slowly. Higher male hormone levels in PCOS can increase hunger and reduce the urge to control it, leading to higher food intake. Metabolic risks linked to PCOS become worse in women who are also overweight or obese. In addition, women with PCOS are more likely to have fat stored around the abdomen, which increases the risk of heart disease.

Cardiovascular disease



Women with PCOS have higher levels of early warning signs (markers) of heart disease and greater risk of heart-related disease and death. Calcium buildup in the heart arteries and thickening of the arteries are also more common in women with PCOS.² PCOS causes higher levels of male hormones (androgens). This hormonal imbalance can lead to swelling and damage to the heart and blood vessels, increasing the risk of irregular heartbeat (atrial fibrillation), heart attack, high blood pressure, high 'bad' (LDL) cholesterol, insulin resistance, stroke and type 2 diabetes.³

Non-alcoholic fatty liver disease (NAFLD)



NAFLD is the build-up of extra fat in liver cells that is not caused by alcohol.⁴ Both PCOS and NAFLD share common risk factors, such as insulin resistance and metabolic syndrome. When the body becomes resistant to insulin, more fat is released from fat tissue and carried to the liver, where it builds up. Because of these shared metabolic problems, women with PCOS have a higher risk of developing NAFLD.¹

PCOS is not just a reproductive or hormonal disorder; it is a complex metabolic condition with long-term health issues. Therefore, early diagnosis, lifestyle changes and long-term management are important to reduce these risks in women with PCOS.

Abbreviations: HDL: High-density lipoprotein; LDL: Low-density lipoprotein

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