

# polycystic ovarian syndrome & diabetes

**Polycystic Ovarian Syndrome (PCOS) is a hormonal condition that occurs in 5–10% of women between late adolescence and menopause. It is one of the most common hormonal related problems in women during their reproductive years. Not only is PCOS a leading cause of infertility it can also be a risk factor for other health problems.**

## What are the symptoms?

Women with PCOS usually have a few of the following symptoms:

- > Irregular or absent periods
- > Excessive hair growth or hair loss
- > Difficulty becoming pregnant
- > Acne
- > Weight gain (especially around the mid section) and difficulty losing weight

Usually very few investigations are necessary in PCOS, however a number of hormonal and other blood chemistry changes have been found in studies including:

- > Multiple small follicles in the ovaries
- > Elevated insulin levels
- > Abnormal blood lipids
- > Abnormal glucose metabolism
- > Elevated androgens (although referred to as 'male hormones', these are found normally in small amounts in women).

## What is the relationship between PCOS and type 2 diabetes?

Between 50-70% of women with PCOS have insulin resistance which occurs when the insulin made by the body is not working as well as it should. Insulin is an important hormone for regulating blood glucose levels. When insulin resistance occurs, the pancreas needs to make more and more insulin to effectively control blood glucose levels.

Insulin resistance is a risk factor for type 2 diabetes, gestational diabetes (diabetes during pregnancy) and pre-diabetes.

High insulin levels also stimulate fat storage, blood lipid problems such as low HDL-C (good cholesterol) and/or high triglycerides, and the over-production of androgens (so-called 'male hormones'). This can contribute to obesity and an increased risk of heart disease and stroke as well as the other symptoms previously listed.

**As women with PCOS are likely to have insulin resistance, they have a greater risk of developing type 2 diabetes, gestational diabetes (diabetes during pregnancy) and pre-diabetes.**



# PCOS & diabetes

As women with PCOS are likely to have insulin resistance, they have a greater risk of developing these conditions. It is recommended that all obese women with PCOS be tested for type 2 diabetes.

## How is PCOS treated?

PCOS is usually diagnosed after careful consideration of the medical history, symptoms, hormonal testing and sometimes ultrasound. Treatment can vary depending on these findings however the diagnosis of PCOS often requires lifestyle changes. These generally include following a low fat, low glycemic, healthy eating plan, giving up smoking and taking regular physical activity which can help with weight management and improve insulin sensitivity.

These lifestyle changes can also assist with managing other risk factors including high blood lipids, blood pressure and hormone levels. In many women the male hormone levels reduce therefore reducing future risks.

Sometimes medication called metformin, which has been shown to improve insulin resistance, may also be prescribed for women with PCOS. However, like any medication, metformin may cause side effects and if prescribed, should be used in conjunction with recommended lifestyle changes.

Other treatments may include the oral contraceptive pill to regulate the menstrual cycle and anti-androgen drugs (eg: cyproterone) to reduce the male hormone effects such as acne or excessive hair growth. However, treatments to combat these may also increase insulin resistance.

## For more information

To find out more about PCOS, talk to your doctor or phone the Polycystic Ovarian Syndrome Association of Australia on 02 8250 0222 ([www.posaa.asn.au](http://www.posaa.asn.au)).

For individualised advice on healthy eating and weight loss, see an Accredited Practising Dietitian (APD).

### Would you like to join Australia's leading diabetes organisation?

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<b>NT</b>	<a href="http://www.healthylivingnt.org.au">www.healthylivingnt.org.au</a>	<b>QLD</b>	<a href="http://www.diabetesqld.org.au">www.diabetesqld.org.au</a>
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