

# Polycystic ovary syndrome: what it means for your long-term health

## Information for you



Royal College of  
Obstetricians and  
Gynaecologists

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Setting standards to improve women's health

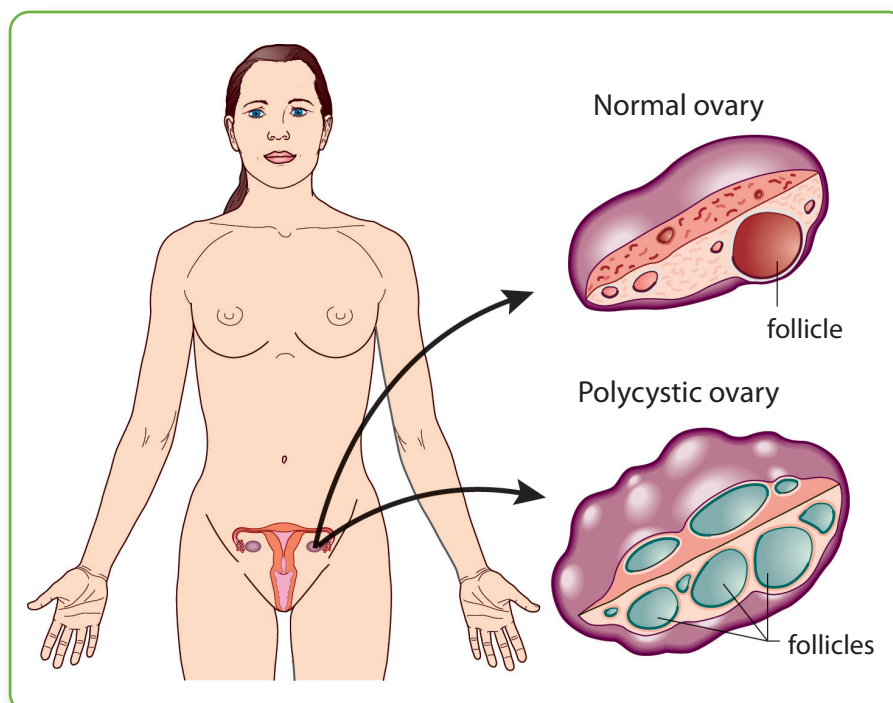
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unless otherwise indicated.

### What is polycystic ovary syndrome?

Polycystic ovary syndrome (PCOS) is a condition which can affect a woman's menstrual cycle, fertility, hormones and aspects of her appearance. It can also affect long-term health. This information is about the effects on your long-term health and does not cover specific treatment options for PCOS.

### What are polycystic ovaries?

Polycystic ovaries are slightly larger than normal ovaries and have twice the number of follicles (small cysts). Polycystic ovaries are very common affecting 20 in 100 (20%) of women.



Having polycystic ovaries does not mean you have polycystic ovary syndrome. Around 6 or 7 in 100 (6–7%) of women with polycystic ovaries have PCOS.

## What are the symptoms of PCOS?

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The symptoms of PCOS can include:

- irregular periods or no periods at all
- difficulty becoming pregnant (reduced fertility)
- having more facial or body hair than is usual for you (hirsutism)
- loss of hair on your head
- being overweight, rapid increase in weight, difficulty losing weight
- oily skin, acne
- depression and mood swings.

The symptoms may vary from woman to woman. Some women have mild symptoms, while others are affected more severely by a wider range of symptoms.

PCOS is a cause of fertility problems in women. Fertility problems are not covered here. For further information see ***Fertility: Assessment and Treatment for People with Fertility Problems***, produced by the National Institute for Health and Clinical Excellence (NICE) at <http://guidance.nice.org.uk/CG11>. You may still become pregnant even if you do not get periods. If you do not want to become pregnant, you should seek advice from your GP about contraception.

## What causes PCOS?

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The cause of PCOS is not yet known. PCOS sometimes runs in families. If any of your relatives (mother, aunts, sisters) are affected with PCOS, your own risk of developing PCOS may be increased.

The symptoms of PCOS are related to abnormal hormone levels. Hormones are chemical messengers which control body functions. Testosterone is a hormone which is produced by the ovaries. Women with PCOS have slightly higher than normal levels of testosterone and this is associated with many of the symptoms of the condition.

Insulin is a hormone which regulates the level of glucose (a type of sugar) in the blood. If you have PCOS, your body may not respond to the hormone insulin (known as insulin resistance), so the level of glucose is higher. To prevent the glucose levels becoming higher, your body produces more insulin. High levels of insulin can lead to weight gain, irregular periods, infertility and higher levels of testosterone.

## How is PCOS diagnosed?

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Women with PCOS often have different signs and symptoms and sometimes these come and go. This can make PCOS a difficult condition to diagnose. Because of this, it may take a while to get a diagnosis.

A diagnosis is usually made when you have any two of the following:

- irregular, infrequent periods or no periods
- more facial or body hair than is usual for you and/or blood tests which show higher testosterone levels than normal
- an ultrasound scan which shows polycystic ovaries.

When a diagnosis is made, you may be referred to a gynaecologist (a doctor who specialises in caring for a woman's reproductive system) or an endocrinologist (a doctor who specialises in the hormonal system).

## What could PCOS mean for my long-term health?

You are at greater risk of developing the following long-term health problems if you have PCOS:

### Insulin resistance and diabetes

If your blood glucose does not stay normal, this can lead to diabetes. One or two in every ten (10–20%) women with PCOS go on to develop diabetes at some time. Untreated, this causes damage to organs in the body.

If you have PCOS, your risk of developing diabetes is increased further if you:

- are over 40 years of age
- have relatives with diabetes
- developed diabetes during a pregnancy (known as gestational diabetes)
- are obese (body mass index or BMI over 30).

If you are diagnosed with diabetes, you will be given dietary advice and may be prescribed tablets or insulin injections.

### High blood pressure

Women with PCOS tend to have high blood pressure, which is likely to be related to insulin resistance and to being overweight, rather than the PCOS itself. High blood pressure can lead to heart problems and should be treated.

### Heart disease in later life

Developing heart disease is linked to health conditions such as diabetes and high blood pressure. If you do not have these conditions, there is no clear evidence that, just because you have PCOS, you are more likely to die from heart disease than women who do not have PCOS.

If you have a high cholesterol level you may be advised to take medication (statins) to reduce the risk of heart problems. If you are trying for a baby, you should seek specialist advice about the use of statins.

## Cancer

With fewer periods (less than three a year), the endometrium (lining of the womb) can thicken and this may lead to endometrial cancer in a small number of women.

There are different ways to protect the lining of the womb using the hormone progestogen. Your doctor will discuss the options with you. This may include a five-day course of progestogen tablets used every three or four months, taking a contraceptive pill or using the intrauterine contraceptive system (Mirena®). The options will depend on whether you are trying for a baby.

PCOS does not increase your chance of breast, cervical or ovarian cancer.

## Depression and mood swings

The symptoms of PCOS may affect how you see yourself and how you think others see you. It can lower your self-esteem.

## Snoring and daytime drowsiness

PCOS can lead to fatigue or sleepiness during the day. It is also associated with snoring.

## What can I do to reduce long-term health risks?

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### Have a healthy lifestyle

The main ways to reduce your overall risk of long-term health problems are to:

- eat a healthy balanced diet. This should include fruit and vegetables and whole foods (such as wholemeal bread, whole grain cereals, brown rice, wholewheat pasta), lean meat, fish and chicken. You should decrease sugar, salt, caffeine and alcohol (14 units is the recommended maximum units a week for women).
- eat meals regularly especially including breakfast
- take exercise regularly (30 minutes at least three times a week).

Your GP or specialist nurse will provide you with full information on eating a healthy diet and exercise.

You should aim to keep your weight to a level which is normal (a BMI between 19 and 25). BMI is the measurement of weight in relation to height. To calculate your BMI follow this link <http://www.nhs.uk/Tools/Pages/Healthyweightcalculator.aspx>.

If you are overweight, it would be helpful to lose weight and maintain your weight at this new level. If you are obese (BMI greater than 30), discuss strategies for losing weight, including weight-reducing drugs, with your GP, practice nurse or pharmacist.

The benefits of losing weight include:

- a lower risk of insulin resistance and developing diabetes
- a lower risk of heart problems
- a lower risk of cancer of the womb
- more regular periods
- an increased chance of becoming pregnant
- reduction in acne and a decrease in excess hair growth over time
- improved mood and self-esteem.

### Have regular health checks

Once you have a diagnosis of PCOS, you will be monitored to check for any early signs of health problems.

Women with PCOS over the age of 40 should be offered a blood sugar test once a year to check for signs of diabetes. If you are obese (BMI over 30) or have a family history of diabetes, you may be offered testing for diabetes earlier than age 40.

If you have not had a period for a long time (over 4 months), it is advisable to see your doctor. You may be offered a referral for further tests which may include an ultrasound scan.

Discuss with your doctor how often you should have your blood pressure checked and whether you should have blood tests for cholesterol levels.

### Is there a cure?

There is no cure for PCOS. Medical treatments aim to manage and reduce the symptoms or consequences of having PCOS. Medication alone has not been shown to be any better than healthy lifestyle changes (weight loss and exercise).

Many women with PCOS successfully manage their symptoms and long-term health risks without medical intervention. They do this by eating a healthy diet, exercising regularly and maintaining a healthy lifestyle.

A list of useful organisations is available on the RCOG website at:  
[www.rcog.org.uk/womens-health/patient-information/useful-links](http://www.rcog.org.uk/womens-health/patient-information/useful-links)

A glossary of all medical terms is available on the RCOG website at:  
[www.rcog.org.uk/womens-health/patient-information/medical-terms-explained](http://www.rcog.org.uk/womens-health/patient-information/medical-terms-explained)

## Sources and acknowledgements

This information is based on the Royal College of Obstetricians and Gynaecologists (RCOG) guideline *Long-term Consequences of Polycystic Ovary Syndrome* (originally published in May 2003 and revised in December 2007). The guideline contains a full list of the sources of evidence that we have used. You can find it online at: <http://www.rcog.org.uk/womens-health/clinical-guidance/long-term-consequences-polycystic-ovary-syndrome-green-top-33>.

Clinical guidelines are intended to improve patient care. They are drawn up by teams of medical professionals and consumers' representatives who look at the best research evidence there is about care for a particular condition or treatment. The guidelines make recommendations based on this evidence. This information has been developed by the Patient Information Subgroup of the RCOG Guidelines Committee, with input from the Consumers' Forum and the authors of the clinical guideline. It was reviewed before being published it by women from Leeds, Cheshire, and London. The final version is the responsibility of the Guidelines Committee of the RCOG.

### A final note

The Royal College of Obstetricians and Gynaecologists produces patient information for the public. This information is based on guidelines which present recognised methods and techniques of clinical practice, based on published evidence. The ultimate judgement regarding a particular clinical procedure or treatment plan must be made by the doctor or other attendant in the light of the clinical data presented and the diagnostic and treatment options available.