

Fact sheet

Polycystic ovarian syndrome - PCOS

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Polycystic Ovarian Syndrome (PCOS) is a common condition - about 10% of Australian women have it. It is even more common in Indigenous Australian women.

In PCOS, menstrual periods usually do not come very often, it can be more difficult to get pregnant and there may be some increase of hair on the face and body.

PCOS may cause several different problems. Women with PCOS may experience all or only some of these.

What causes PCOS and what are the features?

It is not completely understood why PCOS happens, but it involves the ovaries not working as well as they should and some of a woman's hormones being a bit out of balance. Being overweight plays a role for some women.

Female hormone imbalance

- ◆ Irregular/absent periods
- ◆ Polycystic ovaries on ultrasound
- ◆ Less chance of getting pregnant

Male hormone imbalance

- ◆ Acne/oily skin
- ◆ Male pattern hair growth
- ◆ Male pattern baldness

Insulin resistance

- ◆ Metabolic syndrome
- ◆ Weight gain
- ◆ Diabetes

Female hormones - these are called estrogen and progesterone and are made by the ovaries. The ovaries are controlled by the brain hormones, LH and FSH:

- To have a regular period, the ovary needs to release an 'egg' each month and the hormones in the brain and ovary need to go up and down in a regular pattern.
- In PCOS, this does not happen properly and that means the periods don't come regularly - often only a few times a year.
- Instead of making one large 20mm cyst (ovulatory or dominant follicle) containing the 'egg' to be released every month (ovulation), the ovary makes lots of little cysts, 9mm or smaller, and doesn't release an egg.
- This means it can be harder for PCOS women to get pregnant.
- Also, the lining of the uterus (endometrium) builds up each month because of the hormone stimulation, but it does not come away as no period occurs. This can result in the lining becoming quite thick over time and when the bleeding finally does come, it can be very heavy.
- In addition, when women are in their 30s and 40s, there is a small increased risk in some PCOS women of cancer developing inside the lining of the uterus (endometrial cancer) because of these hormonal and period changes.



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Male hormones (testosterone and others)

- Although these are male hormones, all women also make them in small amounts.
- In PCOS, too much male hormone is produced and we call this hyperandrogenism.
- This can cause dark hair to develop on a woman in the places it usually develops in a man like the top lip, chin, cheeks, chest, tummy, back, upper legs (called hirsutism).
- It can also cause acne (pimples) and oily skin.
- Sometimes, if the male hormones are very high, loss of hair at the front of the head can occur (frontal balding).

Insulin hormone

- Insulin is made by your pancreas. Insulin's job is to help carry sugar into your cells to provide energy for the cells to work and grow.
- In PCOS, the cells don't respond to normal amounts of insulin. This is known as 'insulin resistance' and it causes the pancreas to make more insulin than usual. Often the level of sugar in the blood is high too.
- Insulin resistance can be associated with health problems including diabetes (Type II), weight gain (especially around the tummy), and high cholesterol-like blood fats (also called lipids). The combination of these problems is also called Metabolic Syndrome. If not checked regularly or treated, insulin resistance may, over time, lead to other medical problems like heart disease, stroke and sleep apnoea (snoring and breathing problems when asleep).
- Insulin resistance can also be associated with patches of thickened, dark, velvety skin in the armpits and back of the neck (called acanthosis nigricans).

How is PCOS diagnosed?

PCOS is a syndrome. That means it is a collection of features including symptoms and test results, rather than just one feature. International rules say that to be diagnosed with PCOS, a woman needs to have two out of the following three features:

- Bigger than normal ovaries on ultrasound or else ovaries with lots of little cysts. Polycystic ovaries contain 12 or more small follicles or cysts per ovary.
- High blood levels of testosterone or other male hormones, or else symptoms of high male hormone levels like acne or excessive hair growth in a male pattern.
- Irregular menstrual cycles (infrequent or absent periods).



Polycystic ovary on ultrasound

To make the diagnosis, your gynaecologist will ask you questions about your health and examine you. Your gynaecologist will also arrange for blood tests and a pelvic ultrasound to look at your ovaries.



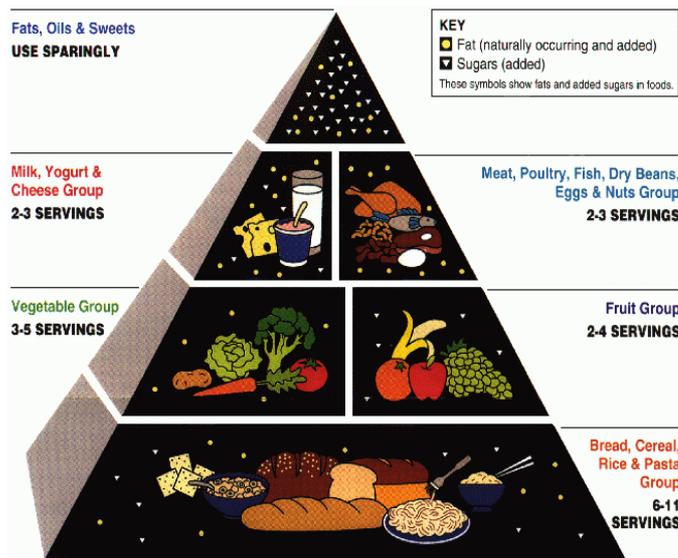
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Note: Because teenagers often have acne, irregular periods, and lots of little cysts in their ovaries on an ultrasound as a normal part of being a teenager, they should not be diagnosed with PCOS too soon. It is best to wait until after age 20 and then reassess the situation.

However, if a teenager has these features and is also overweight, it is never too soon to get back into the normal weight range with a good diet and regular exercise. Doing this can prevent problems in the future.

I have Polycystic Ovarian Syndrome. What can be done to help me?

The good news is there is a lot that can be done to help women with PCOS. Treatments are available to help with fertility, irregular periods, acne and excess hair growth. Regular check-ups and a healthy lifestyle can prevent many long term health problems from developing and bring things back to normal.



Healthy eating and staying in the normal weight range are an important part of managing PCOS.

Helping with irregular periods

If you have PCOS, it is important to have a period regularly to stop the endometrium from becoming too thick. If you are overweight, then losing weight (10-15% of your body mass) often helps bring back a regular cycle. Other ways to have a regular period include:

- Taking 'the pill' (the oral contraceptive pill) containing a low dose of both estrogen and progestin (a synthetic progesterone) is the most popular choice because it gives a regular period and also helps with problems like acne and excess hair growth.
- Taking a progestin hormone without estrogen for 14 days each month will give a regular period and protect the endometrium. However it is not a contraceptive and does not treat acne or hair growth.
- Other forms of progestin are available that also provide contraception. These include Implanon® (progestin implant), the Mirena® (progestin containing IUCD) and Depo Provera® (progestin injection). These will protect the endometrium but not treat acne or hair growth.

It is important to understand that these treatments do not cure PCOS, but they do give you a regular period and protect you from developing endometrial cancer.

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Helping with acne and excessive hair growth

Treatments for acne and excessive hair growth generally work well but the process can be slow. It often takes 6 months for acne to improve and even 12 months for hair growth to become less. We know this is frustrating but it is worth the wait. So be patient and keep using the treatments.

Acne can be managed by a range of face wash solutions and other creams and lotions. Treatment of excessive hair growth by bleaching, plucking, waxing, shaving, laser and electrolysis are helpful, particularly while waiting the 6 – 12 month period of time it can take for medical treatments to show an improvement. There is also a cream you can try called Vaniqua® (eflornithine) which helps prevent the hair coming back once you have removed it (note, in a few women it can worsen acne).

Medical treatments include:

- The oral contraceptive pill (OCP) 'the pill' – this works to decrease hair growth by a combination of actions including reducing the levels of male hormones in your blood and blocking the male hormone action on the skin. All OCPs work quite well at this, but some are particularly made to treat this problem (but are a bit more expensive). Your gynaecologist will discuss with you which pill you might like to try.
- If more treatment is needed after 6 - 12 months, your gynaecologist may add other medications called spironolactone or cyproterone acetate. These medicines block the effect of male hormones on your skin. They need to be taken with a reliable form of contraception as they are not safe in pregnancy.
- There are other stronger medicines which also block the male hormones, but they can have important side effects. If you need these medications, your gynaecologist will discuss these with you.

Helping with fertility

Not all women with PCOS have problems falling pregnant; in fact many conceive without difficulty. One important way to help with fertility is weight loss. If you are overweight, even 10% weight loss is worthwhile. A healthy lifestyle is important - you should try to eat a balanced diet, do regular exercise (some every day is best) and not smoke.

If you are trying to have a baby, remember to take the recommended pre-pregnancy supplements like folate and iodine.

The most important factors which affect your chances of falling pregnant are your age and weight. After age 35, a woman's chance of falling pregnant starts to reduce. If you have PCOS and are having difficulty falling pregnant (have not conceived after a year of trying) please speak with your GP or gynaecologist about this.

There are several fertility treatments which can be used in women with PCOS and the chance of a successful pregnancy is high. These medicines may have side effects in a small number of women, so your gynaecologist will need to discuss them with you.

Clomiphene or letrozole – these tablets, taken for 5 days a month, help you release an egg (ovulate). Over 6 months, about 50% of women will get pregnant taking these tablets.



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Other fertility treatments like ovulation induction (OI) using injections, surgery to stimulate the ovaries by 'drilling' tiny holes in them, and in vitro fertilisation (IVF) are helpful for women with PCOS. These will need to be discussed with your gynaecologist.

Helping with Insulin Resistance

PCOS is a condition that can affect you in many ways and you may need to make important changes to your lifestyle and approach to health. You will also need regular check-ups with your GP to make sure that you stay healthy.

Weight management is important. Some women with PCOS gain weight more easily and have difficulty losing weight. However, almost all women can stay in the healthy weight range with the right combination of diet and daily exercise. This has to be a priority in your life as it will help to protect you from developing diabetes, heart disease and other illnesses. Speaking with a dietitian and working out a long term diet and exercise program that suits you can be helpful.

Visiting your GP regularly to have your blood pressure checked and having blood tests to monitor your blood sugar and fats (lipids) is also very important.

Many women with PCOS feel upset and depressed because of the diagnosis and the symptoms they experience. Many also worry about their chances of falling pregnant. Learning about PCOS and understanding what can be done is very helpful. Please talk with your gynaecologist about your feelings and concerns and ask to see a counsellor if you feel it will help. It is important that you feel supported in looking after your health and that any questions you have concerning PCOS are addressed

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