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## PCOS (polycystic ovary syndrome)

Sources: [www.sundhed.dk](http://www.sundhed.dk)

<https://www.sundhed.dk/borger/patienthaandbogen/kvindesygdomme/sygdomme/svulster-og-cyster/polycystisk-ovariesyndrom/>

### Facts

With PCOS, there are many follicles in the ovaries and changes in sex hormones.

- This means that there is no regular ovulation
- It also causes too much of the male sex hormone

### Symptoms

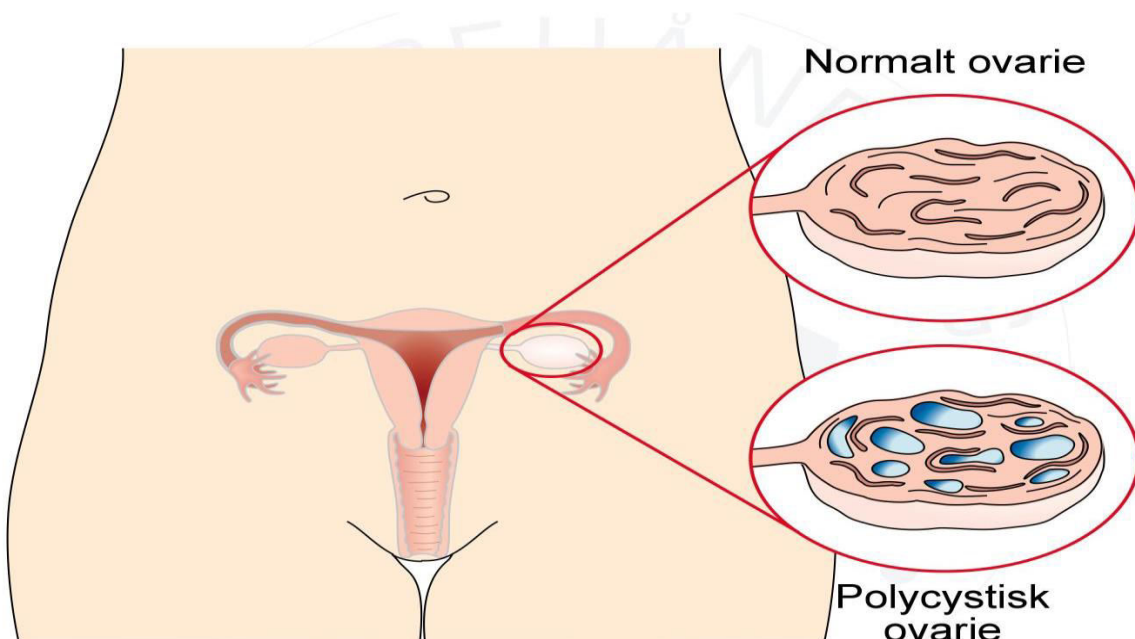
- Missing or sparse menstruation
- Childlessness
- Abnormal hair growth on body and face (hirsutism)
- Impure skin (acne)
- 65% of women with PCOS are overweight
- PCOS affects approximately 5-10% of women of childbearing potential

### Treatment

- The most important treatment is weight loss and exercise
- In addition, treatment with medication, and in rare cases surgery, may be appropriate

### What is polycystic ovary syndrome (PCOS)?

Pictures of normal ovary and ovary with polycystic ovarian syndrome.



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Polycystic ovary syndrome (PCOS) is a condition in which the function of the ovaries is adversely affected. According to the so-called Rotterdam criteria, at least two of the following findings are required in order to make a diagnosis of PCOS:

### Few or completely missing ovulations

### Signs of elevated male sex hormone (see below)

### Polycystic ovaries (see picture above)

Polycystic ovaries mean that the ovaries are enlarged and characterized by a large number of small follicles (follicles). It is important to note that many younger women have polycystic ovaries by ultrasound scan without having the condition PCOS. In other words, polycystic ovaries without other signs of PCOS are a normal phenomenon that is not associated with an increased health risk. Obesity is seen in approx. 65% of women with PCOS and may contribute to the worsening of the condition.

PCOS is accompanied by hormonal disorders, which can lead to few or no ovulation at all, which in turn can lead to difficulties in achieving pregnancy (infertility). However, women with PCOS have a good chance of achieving pregnancy through fertility treatment. There is also much to suggest that women with PCOS have a larger ovarian reserve, and thus a longer period in which they can achieve pregnancy than women without PCOS.

As part of the ovulation disorders, women with PCOS may have irregular and heavy periods.

Elevated male sex hormone can lead to increased male-type hair growth (hirsutism) and impure skin (acne). The abnormal hair growth affects about 70% of women with PCOS. Many people are particularly bothered by unwanted hair growth on the face, such as on the upper lip, chin and temples. Others may have increased hair around the nipples, between the breasts, on the inside of the thighs and from the pubic bone up to the navel. Acne is a common condition in adolescents but can be exacerbated by PCOS.

Some women with PCOS have disorders of sugar metabolism with elevated insulin levels in the blood and decreased insulin sensitivity in the tissues. This, coupled with increased male sex hormone levels and obesity, increases the risk of developing diabetes.

### What are the symptoms of PCOS?

Deficiency, sparse menstruation or irregular, heavy menstruation, infertility (infertility), abnormal hair growth of male type on body and face (hirsutism) and impure skin (acne).

Decreased fertility (infertility) 65% of women with PCOS are overweight and being overweight can worsen symptoms of PCOS.

### What symptoms should you pay special attention to?

Irregular or completely absent menstruation, increased male-type hair growth and signs of diabetes such as fatigue, frequent urination, uncommon thirst and frequent infections.

### How is the diagnosis made?

The medical history is characteristic. A general examination and a gynecological examination are nevertheless necessary to rule out other causes of the symptoms.



The gynecological examination will most often be normal, and it is usually not possible for the doctor to feel the small cysts on the ovaries. Ultrasound scan of the ovaries may show an increased number of small follicles, but this can also be seen in young, healthy women without PCOS.

In the general examination, one can find increased hair growth of the male type, for example increased hair from the pubic bone and up to the navel.

If the doctor suspects the condition PCOS, blood tests should be taken to measure the level of male and female sex hormones. In addition, especially in obese women, the doctor should check blood sugar and cholesterol levels.

### What does it mean to have PCOS?

It can be very stressful to have an illness that causes irregular periods, acne, unwanted hair growth, obesity and reduced possibility of pregnancy as well as a possible increased risk of illness later in life.

However, many people only have PCOS to a mild degree, and most women with PCOS become pregnant by themselves.

If fertility treatment is needed, there are good opportunities for help.

You can do a lot yourself by eating a healthy diet and exercising regularly. If that is not enough, there are several options for medical treatment.

### An important part of the disease picture in PCOS is the so-called metabolic changes

These are changes in sugar metabolism, which are due to decreased sensitivity to insulin in muscles and adipose tissue. This results in a decreased ability to absorb sugar, which in turn can lead to increased insulin production from the pancreas. If insulin production cannot keep up, type 2 diabetes can develop.

Estrogen levels usually fluctuate during a woman's menstrual cycle, but in PCOS there are constantly high levels, which can be further aggravated by estrogen formation in adipose tissue if the woman is overweight. In the long run, the persistently high estrogen level can lead to thickening of the lining of the uterus with a small increased risk of cancer of the uterine cavity.

The metabolic changes in women with PCOS can result in high cholesterol and high blood pressure.

All of these conditions are risk factors for cardiovascular disease later in life. In addition to treating the symptoms of PCOS, it is therefore important to try to prevent the risk of cardiovascular disease as well as diabetes in the future.

### Why do you get PCOS?

There is no single answer to that.

PCOS is a partially inherited disease. It is not certain that others in the family have been diagnosed with PCOS, but in many families there is an increased incidence of diabetes and / or cardiovascular disease.

How the disease develops depends on the individual woman's living conditions and lifestyle.

In adolescents and adults, PCOS will be exacerbated by obesity, poor diet and lack of physical activity.

### Is PCOS contagious?

No, the condition is not contagious.



### Is PCOS hereditary?

Yes, both heritage and environment play a role for PCOS. It is known that there is a tendency for PCOS to accumulate in families.

### How to treat PCOS?

For many obese women with PCOS, the only necessary treatment is to lose weight. You can reduce weight yourself through diet changes and exercise. This will often normalize menstruation, reduce problems with impure skin and abnormal hair growth.

If the woman loses 5-10% in weight, it will often help to normalize ovulation and thus improve the chances of achieving pregnancy without fertility treatment.

Weight loss also reduces the risk of cardiovascular disease and diabetes. Physical activity is at least as important as dietary change, which is why slim women with PCOS also benefit from lifestyle changes.

### What can I do?

You can focus on healthy eating and exercise.

### How do I avoid aggravating PCOS?

Avoid being overweight and make sure you get exercise.

### When should I seek help?

When you have not had menstruation for more than half a year and in case of unattainable pregnancy for 1 year.

### Lose weight

For PCOS, follow the same diet and exercise recommendations that apply to patients with type 2 diabetes. That is, a diet rich in vegetables and fiber as well as regular exercise.

### Medical treatment

The choice of medication depends on the purpose of the treatment, your genes, your age and your weight.

Birth control pills are typically the first thing you want to try. Birth control pills will cause regular menstruation and at the same time protect the lining of the uterus against the hormonal imbalance. Birth control pills will also reduce the amount of the male sex hormone and have an effect on both unwanted hair growth and acne.

Use of diabetes medication in tablet form, Metformin, increases the effect of insulin and leads to better blood sugar control. Metformin can lower the amount of male hormones, make menstruation more regular and especially in obese women increase the chance of getting pregnant.

In addition, there are several medical treatments that can be considered depending on the symptoms. If you have a pregnancy wish, you should be referred to a specialist in gynecology or a fertility clinic. In women with PCOS, the aim is to ensure the maturation and release of a single egg with a low dose of hormone stimulation.

### Second treatment

If you are bothered by annoying hair growth on your face, it can be removed by various methods, such as epilation, electrolysis and laser treatment.



Often you have to pay for these treatments yourself at a beautician.

### How does the disease develop?

PCOS is a chronic condition, but lifestyle changes and especially weight loss in overweight people can reduce many of the symptoms.

Involuntary infertility is a problem for many women with PCOS, but the treatment results are good. As PCOS carries an increased risk of developing diabetes as well as cardiovascular disease, the prognosis also depends on whether the woman is able to control the weight and intake of fats and sugars.

### Is PCOS dangerous?

An important part of PCOS is the so-called metabolic changes which include changes in sugar metabolism, high cholesterol levels and high blood pressure. In the long run, this can lead to serious diseases such as diabetes and cardiovascular disease. Furthermore, a persistently high estrogen level may increase the risk of cancer of the uterine cavity.

### How common is PCOS?

PCOS affects approximately 5-10% of women of childbearing potential. More people are becoming overweight today, and perhaps that is why there are more cases of PCOS.

### Can I get PCOS more than once?

PCOS is a chronic condition.