



the acupuncture  
IVF support clinic

## Polycystic Ovarian Syndrome

**Polycystic Ovarian Syndrome (PCOS)** is a condition that affects fertility and blood sugar metabolism. It is the most common hormonal disorder found in young women.

### Causes

We don't know what causes PCOS but certain genes are probably involved; most likely genes related to the production of testosterone and those that predispose to insulin resistance. On top of this, events in the womb (like nutritional deficiencies or pesticide exposure) and lifestyle factors during early and middle life (like weight gain or stress or hormonal contraceptive use) can contribute to the development of PCOS.

### Insulin Resistance

As humans we are still genetically 'wired' to thrive on the habits of our ancestors, who consumed nutrient-rich, low carbohydrate foods and who engaged in more physical activity than we do today. Unhealthy lifestyles of the modern day plus a genetic predisposition can cause the pancreas to overproduce insulin in an attempt to maintain normal blood glucose levels. The body reacts by reducing the number of insulin receptor sites on the cells. The resulting insulin resistance makes it hard to lose weight and causes many metabolic problems.

### Weight

Many, but not all, PCOS patients are overweight, especially round the abdomen. Even normal weight women with PCOS tend to have a high waist-to-hip ratio, indicating increased abdominal fat mass. Women with PCOS often have an increased susceptibility to weight gain and/or find it harder to lose weight than other women. High levels of insulin encourage the body to store fat and elevated testosterone levels increase cravings for carbohydrates. The hormones that control appetite may also be disordered.

## What can I do?

There is much you can do to manage PCOS and improve fertility with lifestyle modification and applying specific treatments.

## Losing Weight

Weight loss improves fertility by increasing ovulation frequency and enhancing the follicular environment in which the eggs mature. It also improves insulin resistance and general health. The good news is that a relatively small weight loss and body fat redistribution is often all that is needed. Losing just 5 - 10% of initial body weight, enough to change the waist-to-height ratio, will improve metabolic function and will promote more ovary activity.

## Diet

In general, high protein, low carbohydrate meals are recommended because they are relatively low calorie, they do not raise blood sugar or insulin levels too much, and they manage hunger well. But a variety of approaches, including calorie counting and meal replacements, can be successful for achieving and sustaining weight loss. Your Chinese medicine doctor can advise on a diet that addresses weight loss and is specific for your constitution.

## Exercise

Exercise is an important part of a weight loss program because it can improve insulin sensitivity, so that there is less insulin present in the blood and hence less glucose is converted to fat. High intensity interval training has been shown to reduce insulin resistance effectively with a very small weekly time commitment. Additionally, exercise specifically shrinks abdominal fat cells and it reduces the level of those stress hormones that promote fat deposits around the organs. And it makes you feel good!

## Acupuncture

Researchers in several parts of the world have demonstrated that regular acupuncture treatment improves ovary function and increases ovulation frequency in PCOS patients. Additionally, abnormally high levels of testosterone and insulin are reduced after a course of acupuncture. This means that in addition to improved fertility, weight and skin problems improve. Acupuncture is very effective at managing stress and reducing stress hormone levels. This also helps in regulating the menstrual cycle.

Regular acupuncture improves digestion and metabolism to support weight loss.