

## POLYCYSTIC OVARY SYNDROME

*An information leaflet written by Mr. Jonathan West FRCS FRCOG Consultant Obstetrician & Gynaecologist, Royal Devon & Exeter Hospital (2009)*

### INTRODUCTION

Polycystic ovary syndrome (PCOS) is a common condition affecting as many as one in five women in the western world. In some parts of the world more women are affected than not. Although it used to be known as polycystic ovary disease (PCOD) it is not a disease in itself and should more correctly be thought of as a particular 'hormonal configuration' that may possibly give some women an advantage in having children in countries or situations where food is in short supply.

Women with the PCOS hormonal configuration are generally less sensitive than others to a hormone known as 'insulin'. Insulin is a hormone that is involved in the regulation of blood sugar, body fat and appetite. Many if not most women with PCOS will not have significant problems because of the condition. Some, however, may develop a number of problems when living under conditions where food shortages are not the problem that they may have been to our ancestors. Such problems may include some although not necessarily all of the following:

- A tendency to put on weight unless a strict control on diet and exercise is maintained
- Excess body or facial hair
- Skin problems, such as acne
- Infrequent periods
- Reduced fertility due to infrequent ovulation and a higher tendency to miscarry
- Slightly swollen ovaries due to the accumulation on them of partly matured eggs in small 'cysts' – this may give rise to some pelvic discomfort but is not in itself dangerous
- Either a resistance to medical treatment to stimulate ovulation when fertility treatment is given, or else a tendency to an excessive response to such treatment with an increased risk of multiple pregnancy or gross swelling of the ovaries (ovarian hyperstimulation syndrome)

### GENERAL HEALTH IMPLICATIONS

Some women with PCOS may have a tendency to develop sugar diabetes later in life, and some have a type of balance of blood fat levels that is traditionally associated with a higher risk of cardiovascular disease later in life e.g. high blood pressure. The implications of this for most women with PCOS are unclear. Some experts think that there might possibly be a benefit from regular long-term monitoring and possibly even preventative treatment but there is as yet no firm evidence that this is the case.

### DIAGNOSIS

There have been many disagreements among experts as to how to make a definite diagnosis of PCOS. In the UK and many parts of the world the diagnosis is made mainly upon the pattern of symptoms together with a particular appearance of the ovaries as judged by inspection at an operation or upon an ultrasound scan. In the USA the diagnosis is made by the finding of a raised blood testosterone level together with a history of infrequent periods. The diagnosis may be difficult since it is possible to have many of the symptoms for other reasons and also because some conditions, e.g. being either overweight or underweight or even puberty, may in themselves lead to a similar build-up of small cysts on the ovaries.

## TREATMENT

It is probable that women are born with a predisposition to develop PCOS. Since it is not a 'disease' there is no 'cure' as such. The key to preventing many of the unwanted effects listed above is to remember that for many women their bodies will only function properly from the hormonal point of view if weight can be maintained in the normal range. For those who are overweight diet and exercise is the mainstay of preventing or reducing unwanted effects. For some this may for a while require eating what seems like only a tiny amount of food. There is no intrinsic necessity for treatment except to deal with unwanted symptoms unless they are especially bothersome, however.

Certain specific symptoms may be helped in other ways as well, however, including:

- Facial hair or acne – cosmetic measures, hair removal creams e.g. 'Vaniqa', standard anti-acne preparations, and the anti-testosterone drug 'cyproterone' in the form of a contraceptive pill called 'Dianette';
- Infrequent periods or reduced fertility – drugs or hormones to stimulate ovulation, or else an operation to cauterise the surface of the ovaries that may produce a temporary resumption of normal activity. The multiple small cysts on the ovaries, by the way, do not usually require any treatment on their own account. Women with PCOS may have higher levels of fertility later in life due to the natural preservation in their ovaries of their eggs

Another treatment that is often tried works on what is believed to be the main underlying problem, namely reduced sensitivity to insulin hormone. This is the drug 'Metformin', which works by increasing sensitivity to insulin. It is taken in tablet form and is usually given in a dose of three to four 500mg tablets per day. It can have unwanted side-effects (such as looseness of the bowels) however, and it is usually necessary to start with a low dose (one tablet per day) and gradually increase by one tablet per day per week. Similarly the drug 'Orlistat' may be of help by reducing the absorption of fat from the diet, but this may also have unwanted gastrointestinal side-effects. It is believed that these help best in combination with diet and exercise to achieve weight reduction. For fertility patients it is usual to stop the medication once pregnancy is diagnosed.

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