



## POLYCYSTIC OVARY SYNDROME/HYPERINSULINEMIA

Polycystic ovary syndrome (PCO) is a condition in which the ovary produces an overabundance of androgenic (male type) hormone. The condition consists of chronic anovulation with absent or irregular periods and hirsutism (excessive hair growth). Numerous studies have also revealed that a high degree of insulin resistance with hyperinsulinemia is a characteristic finding in PCO. The only way to diagnose hyperinsulinemia is by bloodwork, which includes insulin levels. This will also diagnose diabetes and impaired glucose tolerance. It is important to note if you are diagnosed with any of these conditions, you may be at a higher risk for coronary artery disease and should see an internist at regular intervals.

Treatment includes weight loss and/or drug therapy. A weight loss of just 10% can be very significant to improve ovulation. There are a number of programs available for weight loss. Your physician will help you decide one suitable for you.

Drug therapy may include medications, which help lower insulin levels. These drugs are not necessarily recommended for treatment of PCO or hyperinsulinemia. However, use of these drugs may improve ovulation. They are officially considered "experimental" for this use. The most commonly used drug is Glucophage.

### How does Glucophage work?

Glucophage decreases liver production of glucose and decreases intestinal absorption of glucose. Glucophage also improves the ability of major body organs to uptake glucose into the cells. Glucophage also increases the ability of ovarian cells to utilize insulin and glucose.

### When should Glucophage not be used?

Glucophage should not be used in a person who has significant evidence of kidney or liver damage.

It is important Glucophage be stopped prior to any surgical procedure and it should not be restarted until a person has adequate oral intake.

Glucophage should also be stopped 48 hours prior to any dye studies, such as HSG (hysterosalpingogram) and not restarted until 48 hours later.

Glucophage should be withheld if a woman becomes severely dehydrated or has significant respiratory difficulty.

Glucophage should not be used if a person intakes too much alcohol because lactic acidosis, a very serious and life-threatening condition, could result.

The Physicians Desk Reference also includes a warning that Glucophage may be associated with increased heart attack death. However, the study was conducted on older patients who were obviously diabetic and had failed dietary therapy.

### What problems would occur while taking Glucophage?

**Lactic Acidosis:** This condition is rare and accompanied by nonspecific symptoms such as malaise, muscle aches, difficulty breathing, increased sleepiness and vague abdominal distress.

**Gastrointestinal reactions:** Symptoms such as diarrhea, nausea, vomiting, abdominal bloating, excess gas and poor appetite are the most common reactions to Glucophage. These symptoms are usually transient and resolve with continued treatment.

**Metallic taste:** Approximately 3% of patients will complain of a metallic taste, which usually resolves spontaneously.

**Skin reactions:** There is no evidence that skin reaction increases with Glucophage use.

**Blood reaction:** Occasionally, a special type of anemia termed megaloblastic anemia may occur. This type of anemia is easily treated.

This concludes a brief overview regarding possible drug therapy for infertility secondary to polycystic ovarian disease. Polycystic ovarian disease is the most frequent type of ovulatory dysfunction. Glucophage therapy should further enhance fertility success.