



## Metformin and Infertility

### What is Hyperinsulinemia (insulin resistance)?

Hyperinsulinemia, or elevated blood insulin levels, is an endocrine disorder most often found in patients with polycystic ovarian syndrome (PCOS). PCOS is characterized by irregular or absent menstrual periods, hormone imbalances and the presence of an increased number of small follicles on the ovaries. PCOS has several different manifestations. Some women with PCOS may also experience excessive hair growth, hair loss, acne, and obesity.

### How is Hyperinsulinemia related to infertility?

Hyperinsulinemia is believed to cause a hormonal imbalance in the pituitary gland and ovary. This leads to an increased level of lutenizing hormone (LH). Increased levels of LH are then believed to cause ovulation disorders, menstrual irregularities and infertility.

### What is Metformin?

Metformin (Glucophage) is an oral medication which can help lower insulin levels and improve ovulation patterns. Metformin is taken daily with meals.

The dose of the medication is gradually increased to a maximum dose of 3 tablets (1500 mg) a day.

1st week: 1 tablet daily

2nd week: 2 tablets daily

3rd week: 3 tablets daily.

Then continue taking 3 tablets daily.

### Side Effects

During the first week some people may experience diarrhea, stomach upset, or abdominal bloating. Once your body adjusts to the medication the stomach upset usually subsides.

Weight loss is also very common, which many patients do not mind.

If you experience any of the following symptoms please contact your doctor: shortness of breath, chest pain, severe diarrhea, severe muscle weakness.

Also, it is advised that you discontinue the medication 48 hours before any scheduled surgery, egg retrieval or HSG test and if you have a positive pregnancy test.

Generally we advise that patients do not consume alcohol while on the medication. Also, we encourage patients to take in active role in monitoring their diets and gradually increasing their activity level. Weight loss, moderate exercise, and Metformin are key components in decreasing insulin levels and increasing pregnancy rates.