



## *Metabolic Syndrome/Insulin Resistance*

Insulin is a hormone produced by the pancreas to assist the body in using glucose (sugar) for energy. Our body's digestive system breaks down the food we eat into glucose, which then travels to the cells and tissues of the body. After meals, the pancreas secretes insulin to assist the cells in taking in this glucose and using it for energy.

When cells start to "resist" the assistance of the insulin hormone, glucose builds up in the blood stream instead of entering the cells. The pancreas tries to keep up with this excess glucose by secreting even more insulin, but eventually is unsuccessful. This cycle predisposes us to Type 2 diabetes, abnormal cholesterol levels, high blood pressure, obesity, polycystic ovaries, and heart disease.

### *How do you know if you are at risk?*

- If you have difficulty losing weight (despite proper diet and exercise)
- If you've ever had Gestational Diabetes
- If you tend to carry your weight in the abdominal area (apple shaped)
- If you've ever had abnormal cholesterol levels
- If you've ever had high blood pressure
- If you have family members with Type 2 diabetes, hypertension, or cardiovascular disease

### *What are the possible warning signs of Insulin Resistance:*

- Frequent thirst
- Frequent urination
- Excessive hunger
- Difficulty losing weight
- Unexplained drowsiness or tiredness, especially after eating
- Inability to concentrate
- Skin tags or dark discoloration of skin folds

*What are the components of Metabolic Syndrome?*

- Overweight or obese, especially with increased abdominal weight gain.
- Insulin resistance, “pre” Diabetes, or Type 2 Diabetes
- Elevated blood pressure
- Abnormal cholesterol

*If you have Insulin Resistance/Metabolic Syndrome, you may also be at increased risk for:*

- Gallbladder disease
- Liver damage
- Sleep apnea
- Polycystic ovary syndrome
- Gestational diabetes and pre-eclampsia
- Psychiatric problems, in particular anxiety and depression
- Gout
- Cancer
- Heart disease (increased cholesterol/hypertension)
- Kidney disease
- Obesity

*If you are at risk for Insulin Resistance, please consult with your physician.*