



Insulin Resistance/Dysmetabolic Syndrome

What is Insulin Resistance?

This is a condition where a person has a high level of insulin in order to maintain a normal blood sugar. Studies have shown that there are about twenty-five percent (25%) of the population which secrete very high insulin levels and yet are not diabetics, since their blood sugars are at a normal level.

What is Insulin?

Insulin is a hormone secreted by the pancreas helping the body utilize and store the sugars (carbohydrates) eaten. Insulin rises in response to eating so that the body can take the sugars in the blood and carry them into the cells to fuel the cells. Type I diabetics do not have insulin so their blood sugars are very high. Those with IR have a faulty ability of that sugar being transported into the cells for fuel use. The body overcomes this by secreting more insulin to compensate for the faulty connector between insulin and the cells. Thus, to keep a normal blood sugar level, the insulin levels are very high.

If this high level of insulin exists for years the pancreas starts to fall behind and the blood sugars start to rise. This is known as type II diabetics. It is not a lack of insulin like type I, rather the insulin does not work well.

Risk Factors for Insulin Resistance:

Family history of type II diabetics is a big factor increasing chances of having IR. Not only do genetics play a role but so a sedentary lifestyle, smoking, excess weight, high fat diets and certain medications.

What does IR mean to your health?

Those who have IR have an increased chance of acquiring type II diabetes. They are at risk of many healthy problems such as heart attacks, strokes, infertility, kidney and nervous system function, weight problems and high blood pressure.

Who should be tested?

Those who have risk factors such as:

- ✓ A family member with type II diabetes
- ✓ History of diabetes in pregnancy
- ✓ Weight gain
- ✓ High blood pressure
- ✓ High tryglycerides
- ✓ Infertility

How is it diagnosed?

The test currently recommended is challenging the body with a pre-measured level of sugar. The levels of insulin and blood sugar are then monitored over a two (2) hour period of time. The sensitivity of the test is improved if one has nothing to eat or

drink for ten (10) hours prior to the test. These levels are then used to calculate a score. This score tells you if the condition is mild to severe or normal.

How is it treated?

There are several methods proven effective in treating IR. Some can work on their own, but experience shows there is more success combining the different treatment options together. The preferred options of treatment are as follows:

- ❖ **Exercise** helps a great deal. By increasing your physical activity there is less need for insulin because you use more of the blood sugars for energy. This also helps your cells to become more sensitive to the insulin. This increase in physical activity needs to be a commitment of good exercise for 30-60 minutes of duration on a daily basis.
- ❖ **A heart healthy diet** provides a smaller amount of sugars (carbohydrates). Eating small meals is better than one or two large meals, especially if the large meal is in the evening and there is no activity prior to sleep.
- ❖ **Weight Loss**, even at only a small amount, will make a big difference in IR. Eating healthy, exercising and sometimes using medication for weight loss can help improve the symptoms and disease of IR.
- ❖ **Quit Smoking**. Need more be said? The healthy risks from smoking are already well known. Smoking with IR makes the disease much more severe and permanent.
- ❖ **Medications** are also available that can help the body cells to become more sensitive to the insulin, thus lowering the need for high insulin. This helps lower the work on the pancreas and helps decrease all the risks associated with IR. Currently these medications are Glucophage, Avandia and Actos.