What is Pre-Diabetes?
According to the American Diabetes Association (2016), pre-diabetes occurs when blood sugar (glucose) levels are higher than normal, but not yet high enough to be considered diabetes.

How do people get tested for pre-diabetes?
Pre-diabetes can be diagnosed by testing your Hemoglobin A1C (HgA1c) which assesses your blood sugar averages over the past 2-3 months. If the levels are between 5.7%-6.4%, this falls in the pre-diabetes range.

It can also be tested through fasting plasma glucose (FPG). This test is performed by fasting for 8 hours prior to the test and is usually done first thing in the morning. If your fasting blood sugar is between 100-125 this falls into the pre-diabetes range.

Another test that can be performed is the oral glucose tolerance test (OGTT). This is a two-hour test that checks your blood sugar levels before and two hours after you ingest a sweet drink. If your blood sugar levels are between 140-199 this falls into the pre-diabetes range.
Health Nucleus also provides Quantose IR testing through a fasting blood draw. The HgA1c, OGTT, and FPG tests were developed to look at blood sugar status compared to Quantose IR which can measure insulin sensitivity on a cellular level and detect the early stages of type 2 diabetes.

Insulin helps take sugar into the cells, when insulin becomes less sensitive to this process, it is an early sign that blood sugar levels may be rising placing someone at risk for Type 2 diabetes and heart disease.

**What are risk factors for pre-diabetes and who is likely to develop it?**
- Being overweight or obese
- Inactivity
- Family history of diabetes
- Diabetes during pregnancy, or gestational diabetes
- Genetic risk factors

**How does it happen?**
People with pre-diabetes do not process blood sugar appropriately. Instead of the glucose going inside the cell, it stays in the blood stream instead of fueling the muscle cells and other functional tissues.

**What are possible symptoms?**
In many cases, prediabetes does not cause symptoms. Or you may have symptoms similar to diabetes such as feeling very thirsty, urinating often throughout the day, feeling hungry and not satisfied even after eating, and possible fatigue.

**Potential complications?**
Type 2 diabetes. Pre-diabetes can turn into diabetes if lifestyle interventions are not implemented or healthy lifestyle changes are not made.

**What are possible treatments?**
If you are pre-diabetic this does not mean you will automatically get diabetes, your blood sugar levels can return to the normal range by losing weight and exercising.
- Weight loss, if you are overweight
- Exercising moderately at least 30 mins day five days a week
- Healthy eating and reducing carbohydrate/sugar intake

**Where can I get more information?**
For additional information, please seek further guidance from your primary care provider or endocrinologist.

**Sources**
