

The logo for PRE University, featuring the word "PRE" in a bold, white, sans-serif font, followed by a white right-pointing arrow icon, and the word "University" in a white, sans-serif font. The entire logo is set against a solid black rectangular background.

**PRE** University

**SAMANTHA LEE**

**PRED CORE**  
PERSONAL HEALTH  
AND VITALITY  
ASSESSMENT  
REPORT

MARCH 2015

---

# DIABETES RISK ASSESSMENT REPORT

## Learning Your Risk for Diabetes

PreD Core is a comprehensive clinical laboratory assessment of relevant biomarkers to help you better understand your risk for prediabetes—a condition that can lead to type 2 diabetes. Diabetes is a growing epidemic that affects nearly 30 million children and adults. There are another 86 million (27% of the population) who have prediabetes and are at risk of developing type 2 diabetes, according to the American Diabetes Association.

PreD Core is part of an overall health program that allows you to:

- Assess your risk for developing type 2 diabetes
- Understand how your body is responding to glucose (also known as blood sugar)—this helps determine if you have type 2 diabetes, a prediabetic condition or metabolic syndrome
- Measure levels of important hormone biomarkers associated with fat cells
- Monitor the effect of medical treatment and/or lifestyle changes

The results of your PreD Core are based on the following assumptions:

- You are not currently taking diabetic medications or medications that may affect the test results (for example, glucocorticoids, insulin, beta-blockers, etc.). Please consult with your physician or pharmacist to determine if your medications may alter lab results
- You are not pregnant
- You have been fasting for at least eight hours.

If any of these assumptions are not true, your risk for developing type 2 diabetes conditions may change and the results contained within this report may not be accurate.

Your risk level is based on blood-based biomarkers, however, only a physician can determine if you have diabetes or prediabetes. There are other risk factors for type 2 diabetes that you and a physician should consider. These additional risk factors include:

- Age over 45 years
- Ethnicity (increased risk for black/African American, Native American and Hispanic people)
- Family history of diabetes
- High blood pressure
- History of gestational diabetes (diabetes while you were pregnant)
- Decreased physical activity
- Obesity

---

## Understanding Your Results

The PreD Core Biomarker Blood Test Measures 8 health markers: blood glucose, hemoglobin A1c, leptin, adiponectin, total cholesterol and BMI. Above each biomarker result you will see three columns: Out of Range, In Range and Reference Range.

The values that appear under the **Reference Range** column indicate the range of values typically found in individuals with apparently normal health.

Lab values that appear under the **Out of Range** column may indicate abnormalities, as they are either higher or lower than the values indicated in the Reference Range column.

Lab values that appear beneath the **In Range** column fall within the Reference Range values and are therefore considered normal.

### Note Concerning In Range Values

Please note that In Range values may be considered normal even if they are not optimal. Just as one student can graduate with an “A” grade point average and another can graduate with a “C-” grade point average, In Range values can range from optimal to suboptimal and yet still be considered normal.

## LAB RESULTS

# BLOOD GLUCOSE

## MY CURRENT LAB VALUES

REFERENCE RANGE

74-109 mg/dL

OUT OF RANGE

IN RANGE

103 mg/dL



## WHAT'S HAPPENING IN MY BODY

Glucose is a type of sugar that serves as a major source of energy for most of the body's cells. Physicians traditionally diagnose diabetes by measuring the fasting blood glucose level, or the amount of glucose in the blood. A level from **65-99 mg/dL** indicates normal glucose metabolism. A level from **100-125 mg/dL** indicates prediabetes, while a level above **125 mg/dL** on two separate occasions indicates the presence of diabetes.



## WHAT TO DO WITH NUTRITION

Eating a diet rich in vegetables, whole grains, lean proteins, and healthy fats can help control blood sugar. Fruits and vegetables are rich in fiber, and eating more fiber has been linked with better blood sugar control over time, studies report. Limiting consumption of carbohydrates and exercising portion control can also help manage blood sugar levels.



## WHAT TO DO WITH SUPPLEMENTATION AND MEDICATION

For people who need additional support managing blood sugar and insulin levels, a powerful supplement like [PreD Glucose Support](#) can help. Containing biotin, alpha lipoic acid, cinnamon, bitter melon and many more nutrients, the compounds found in this supplement can help cells use glucose more effectively and optimize blood sugar control. A glucose control supplement such as [sugardown](#)®—a chewable dietary supplement that is taken before meals to reduce post-meal blood sugar spikes—can also help. A physician may also prescribe a diabetes medication, such as metformin, to control blood glucose levels. An advanced multivitamin such as [PreD Foundation](#) can also help. Containing 33 essential nutrients—including niacin, calcium, magnesium, fish oil and much more—PreD Foundation can fill nutritional gaps in the diet.

## LAB RESULTS

# HEMOGLOBIN A1C

## MY CURRENT LAB VALUES

REFERENCE RANGE

&lt;5.7%

OUT OF RANGE

6.1 %

IN RANGE

## WHAT'S HAPPENING IN MY BODY



Hemoglobin is a protein in red blood cells that carries oxygen. The hemoglobin A1c level is the percentage of hemoglobin molecules in red blood cells that have sugar attached to them. The hemoglobin A1c test measures a person's average blood glucose levels over the past 60-90 days. A healthy A1c level falls between **4 and 5.3 percent**, and people who are trending toward prediabetes have an A1c between **5.4 and 5.6**. People with prediabetes have an A1c between **5.7 and 6.4 percent**. An A1c of **6.5** or above indicates diabetes.

## WHAT TO DO WITH NUTRITION



Eating a diet rich in vegetables, whole grains, lean proteins, healthy fats and complex carbohydrates (nuts, beans, whole grains) is the best way to control blood glucose. Limit intake of foods containing trans fats and saturated fats, and limit consumption of sugary foods, such as desserts, soft drinks, and store-bought fruit drinks.

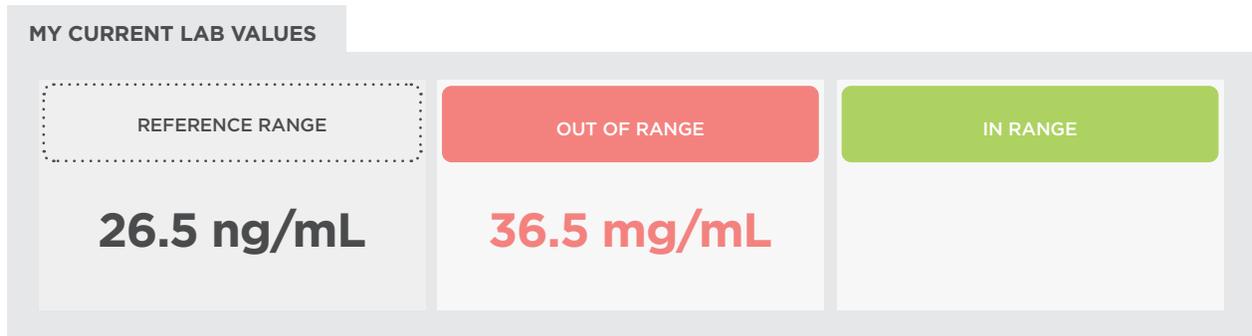
## WHAT TO DO WITH SUPPLEMENTATION AND MEDICATION



Studies show that some alternative remedies—like bitter melon and cinnamon—can help decrease insulin resistance and regulate blood sugar. [PreD Glucose Support](#) is a specially formulated supplement containing biotin, alpha lipoic acid, cinnamon, bitter melon and many more nutrients. The compounds found in this supplement can help cells use glucose more effectively and optimize blood sugar control. A physician may also prescribe a diabetes medication, such as metformin, to control blood glucose levels.

LAB RESULTS

# LEPTIN



### WHAT'S HAPPENING IN MY BODY

Leptin is a hormone released by healthy fat cells that helps to control appetite. It works by sending signals to your brain about how much you have in your fat reserves. Typically, leptin levels are higher in people who are overweight or obese. Consumption of food leads to higher leptin levels in people, which causes satiety and a decrease in hunger. However, in obese people leptin levels are chronically high and after a while the brain starts to resist leptin signals, a condition known as “leptin resistance.” Without the effect of leptin, the body feels starved and appetite increases. The body responds by slowing down the metabolism and burning fewer calories, perpetuating a cycle of weight gain.



### WHAT TO DO WITH NUTRITION

Increase consumption of high-fiber foods such as whole grains, legumes, oatmeal and celery. Fiber causes a feeling of fullness, which signals the brain to release more leptin. Eat a variety of fruits and vegetables, as they are high in fiber while low in calories.



### WHAT TO DO WITH SUPPLEMENTATION AND MEDICATION

When the body isn't well rested, it produces less leptin—that's why it's crucial that you get adequate sleep! Melatonin and valerian supplements can help promote restful sleep. A specially formulated natural sleep supplement containing several nutrients and melatonin—such as [PreD Restful Nights](#)—can also aid in inducing relaxation and improving the quality of sleep. There are also many medications available for the treatment of sleeplessness and insomnia.

LAB RESULTS

# ADIPONECTIN



### WHAT'S HAPPENING IN MY BODY

Adiponectin, a hormone released by fat cells, helps control how the body uses sugars and fats from the foods you eat. Adiponectin also helps reduce inflammation in the body and the buildup of cholesterol in the arteries. As body fat increases, adiponectin levels decrease. People with low adiponectin levels are more likely to have metabolic syndrome or diabetes, while adiponectin levels are normal or elevated in individuals who are lean. Adiponectin has anti-inflammatory effects, therefore, high levels help to decrease inflammation in the body and low levels may allow a state of inflammation to exist. Low levels of adiponectin have been shown to be associated with increased levels of C-reactive protein, glucose, insulin, C-peptide, and body mass index (BMI).



### WHAT TO DO WITH NUTRITION

To raise adiponectin levels, add more fruits, vegetables, and whole grains to your diet and lower your consumption of fatty foods and processed carbohydrates.

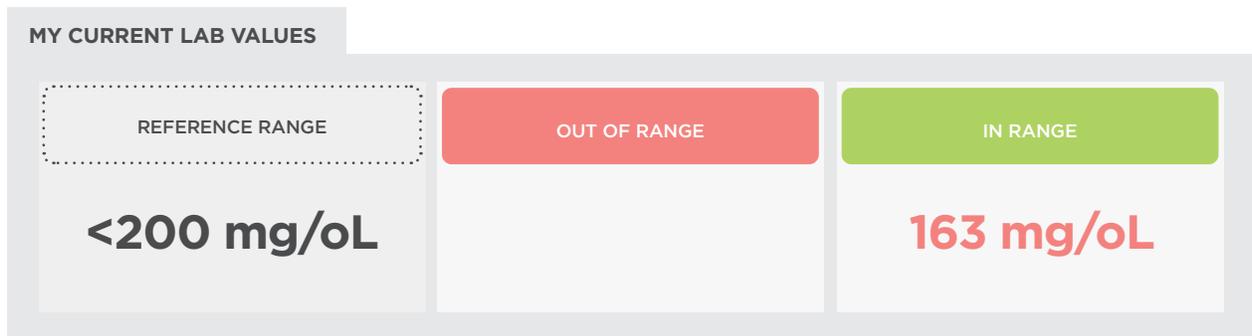


### WHAT TO DO WITH SUPPLEMENTATION AND MEDICATION

Some diabetes medications or medications used to control lipid levels may also help raise adiponectin levels. Containing 33 essential nutrients—including niacin, calcium, magnesium, fish oil and much more—[PreD Foundation](#) can help people with prediabetes or metabolic syndrome meet their nutritional needs.

LAB RESULTS

# TOTAL CHOLESTEROL



### WHAT'S HAPPENING IN MY BODY

Cholesterol is a lipid that is found in food and also produced by the liver. It's needed to make hormones, build cell walls and help digest fat. Some types of cholesterol boost heart health, such as "good" high-density lipoprotein (HDL) cholesterol. Others are harmful, such as "bad" low-density lipoprotein (LDL) cholesterol and triglycerides. Total cholesterol is the total amount of three types of cholesterol: LDL, HDL and very low-density lipoprotein (VLDL). A total cholesterol score of less than 180 mg/dL is considered optimal.

### WHAT TO DO WITH NUTRITION

To reduce total cholesterol levels and LDL levels and raise HDL levels, limit foods containing saturated fats (red meat, dairy products), all trans fats (anything labeled "partially hydrogenated") and foods high in cholesterol (red meat, ice cream, baked goods, lobster, fried poultry, organ meats). Be sure to eat a wide variety of whole foods, including beans, fruits, vegetables, whole grains, and fish high in omega-3 fatty acids (salmon, mackerel).

### WHAT TO DO WITH SUPPLEMENTATION AND MEDICATION

A lipid-lowering multivitamin may help improve an abnormal lipid panel. [PreD Cardio Support](#) is a specialized supplement that contains vitamin C, vitamin B5, red yeast rice, guggul extract, bromelain, taurine and more to help reduce high cholesterol. [PreD Co-Q10](#) should always be taken with [PreD Cardio Support](#) (or other cholesterol lowering drugs) to maintain energy production in muscle cells. Note that [PreD Omega3](#) can help with cholesterol management. Certain medications can also cause high cholesterol, such as glucocorticoids and beta blockers. A physician can determine if medications should be eliminated from your wellness plan, and can also prescribe cholesterol-lowering drugs such as statins (Lipitor), bile-acid-binding resins (Prevalite) and cholesterol absorption inhibitors (Zetia).

LAB RESULTS

# BMI



### WHAT'S HAPPENING IN MY BODY

Body mass index, or BMI, is a calculation of the relationship between a person's height and weight. BMI is a useful screening tool to identify possible weight problems. However, BMI is not always an accurate way to determine if a person should lose or gain weight. People who are very muscular, for example, may have a high BMI but not be overweight. An ideal BMI is between 18.5 and 24.9, an overweight BMI between 25 and 30, and an obese BMI is greater than 30.

### WHAT TO DO WITH NUTRITION

A healthy, nutrient-rich diet can help reduce high BMI. Avoid foods high in cholesterol, sugar and trans fats (anything labeled "partially hydrogenated"). Avoid processed foods and limit consumption of foods containing saturated fat (red meat, dairy products). Eat whole foods, including fruits, vegetables, whole grains, lean meat, fish and poultry and low-fat sources of dairy. Increase consumption of soluble fiber (beans, beets, barley, quinoa) and omega-3 fatty acids (soy, flaxseeds, almonds). Green tea may also help promote weight loss, as a compound in the tea may help limit fat absorption and increase the body's ability to use fat.

### WHAT TO DO WITH SUPPLEMENTATION AND MEDICATION

A daily multivitamin like [PreD Foundation](#) can help ensure you have adequate levels of vitamins and minerals in the body and boost overall wellness. [PreD B12](#) may also be useful, as it helps support optimal energy levels and metabolism.

## HEALTH SUMMARY



## YOUR RISK FOR TYPE 2 DIABETES IS MODERATE

*If you were not fasting at the time that your blood sample was collected your risk for type 2 diabetes will show as "NA" above.*

Only a physician can diagnose you with prediabetes or diabetes. However, the American Diabetes Association sets ranges that indicate whether a person is healthy, prediabetic or diabetic. A Fasting Blood Glucose level from **100 to 125 mg/dL** is considered prediabetic, while a score **above 125 mg/dL** indicates diabetes. Alternatively, the ADA states that a Hemoglobin A1c level **between 5.7% and 6.4%** indicates prediabetes. Levels **above 6.5%** are considered diabetic.

Lipid blood biomarkers such as Adiponectin, Leptin and Total Cholesterol can identify cardiovascular health issues independent of blood sugar control. Again, only a physician can diagnose you with a disease or disorder.

If you are not sure how to interpret the results contained within this report, it is strongly recommended that you consult with a physician or other healthcare professional to assist you.

Please note that PreDiabetes Centers offers affordable wellness programs both online and in a city near you. The PreDiabetes Centers Treatment Program was developed by a clinical team with extensive experience in prediabetes and diabetes treatment, and is based on proven medical practices and evidence-based research.

Many people have prediabetes and are unaware of it, as symptoms are often invisible. Though people may not know they have the disease, they may already be incurring long-term damage to the body—especially to the heart, kidneys and blood vessels. In fact, studies show that people with prediabetes are at greater risk for heart attack, stroke, kidney disease, vision problems, nerve damage and high blood pressure, compared to people without the disease.

**Here's the good news:** Unlike diabetes, prediabetes is reversible. Early diagnosis and treatment of prediabetes can help people reverse or delay the progression to type 2 diabetes.

If you do have prediabetes or early-stage type 2 diabetes, there's still time for you to take hold of your health and prevent a dangerous disease from taking hold of your body. A personalized, comprehensive prediabetes treatment plan designed to improve and reverse the associated metabolic conditions of prediabetes can help you achieve lasting, optimal health.

### ADDITIONAL INFORMATION

Prediabetes is especially prevalent in people over 45 years of age who are overweight (as indicated by a body mass index over 25).

While this group of people have a higher risk of developing type 2 diabetes, not everyone in this group will be affected. PreD Core is especially useful for identifying people within this higher risk group who show signs of prediabetes and who are most likely to benefit from early medical intervention.

Early identification and treatment of people with prediabetes has the potential to reverse or delay the progression to type 2 diabetes.

The logo for PREU University, featuring the text "PREU University" in white on a black rectangular background. The "E" in "PREU" is stylized with a right-pointing arrow.

**PREU** University

**PRED CORE  
LABORATORY  
REPORT**