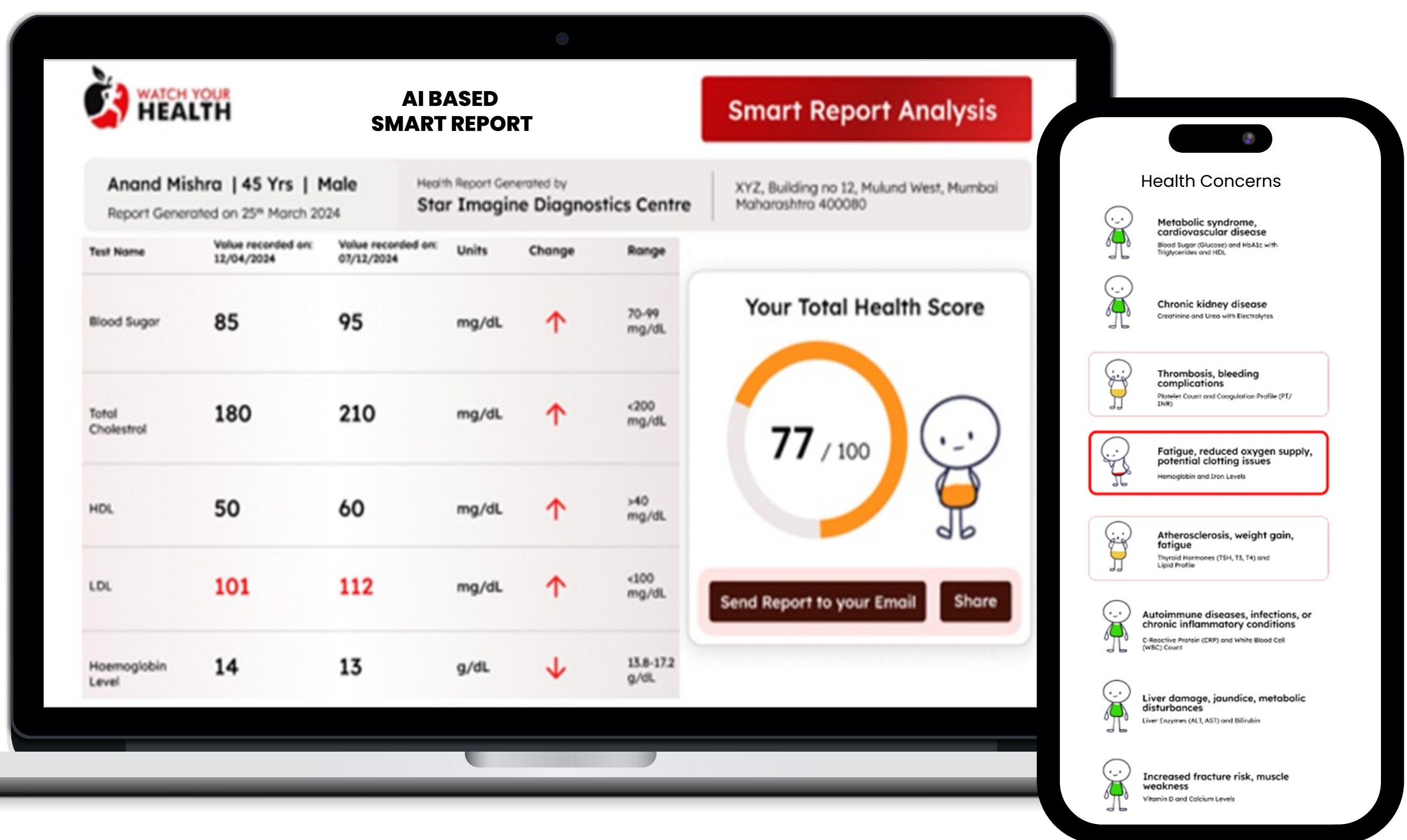


AI BASED SMART REPORT



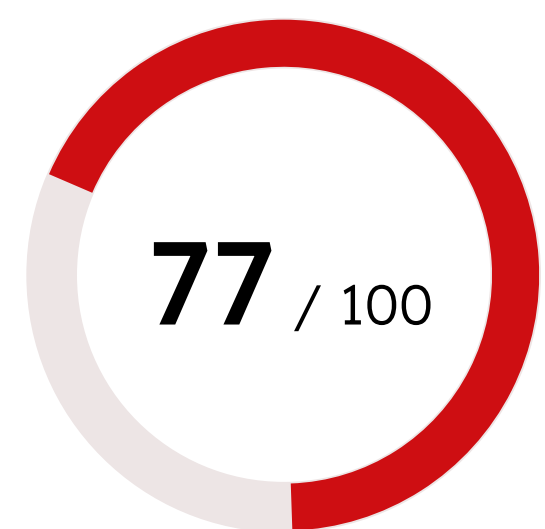
Overall score of a 45 years old person (Healthy Individual: 100)

A Smoker person **79**

A Non Smoker person **89**

A person who is Overweight **87**

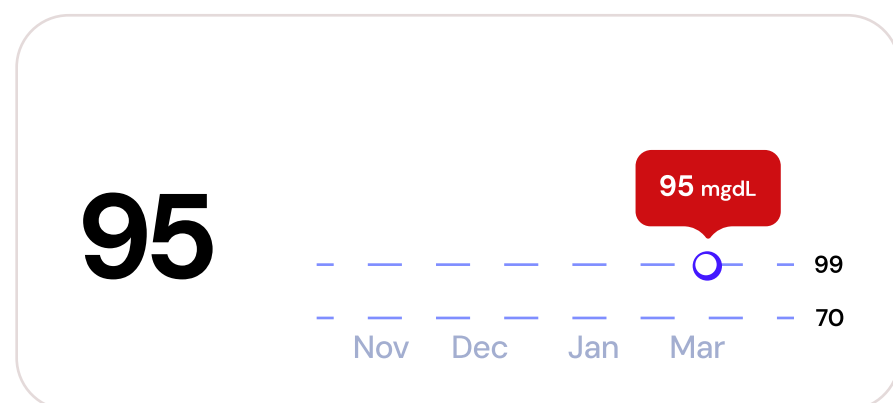
A person who is underweight **90**



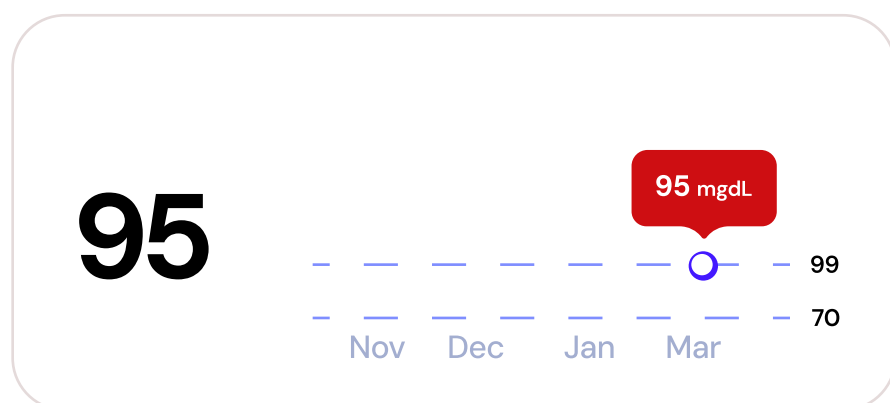
Your Total Health Score

Test Results

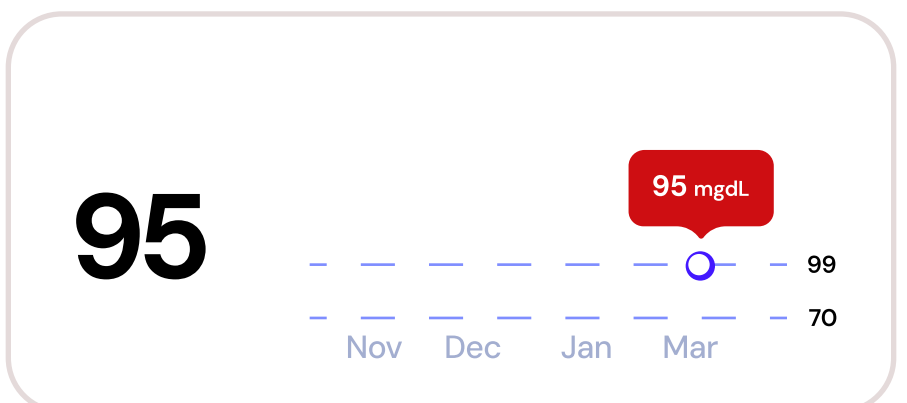
CHOLESTEROL LEVELS



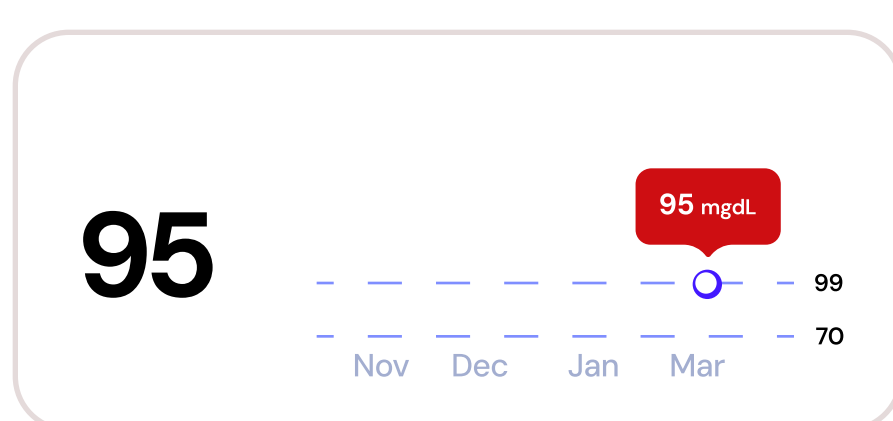
HDL CHOLESTEROL



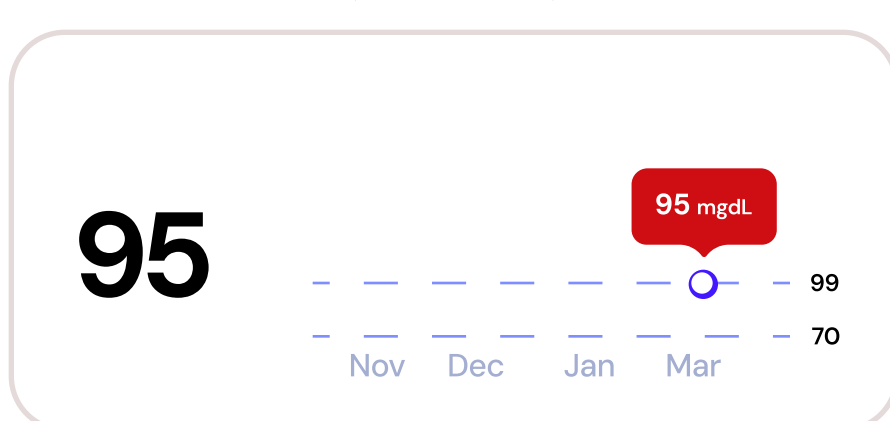
LDL CHOLESTEROL



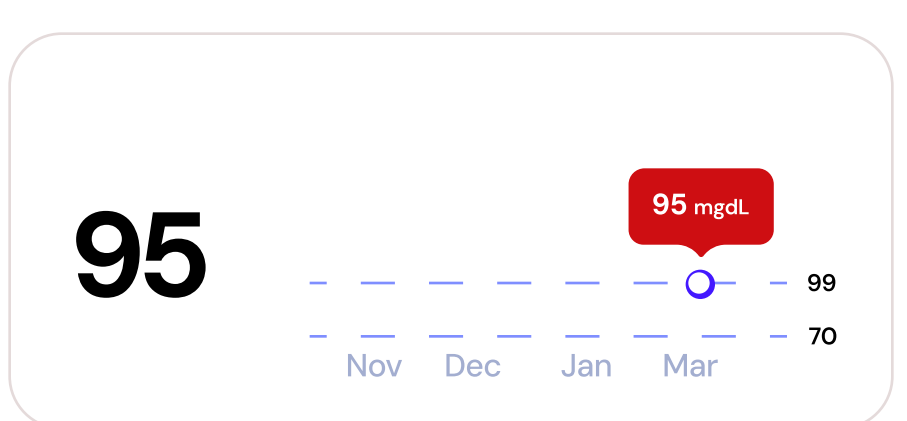
TRIGLYCERIDES



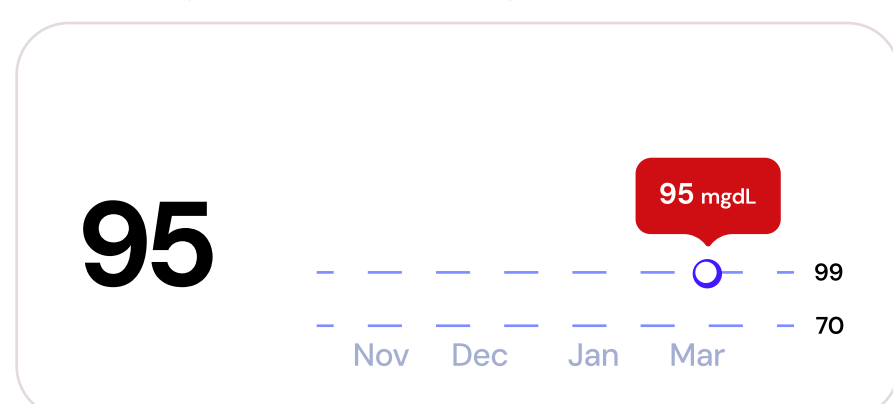
BLOOD SUGAR (FASTING)



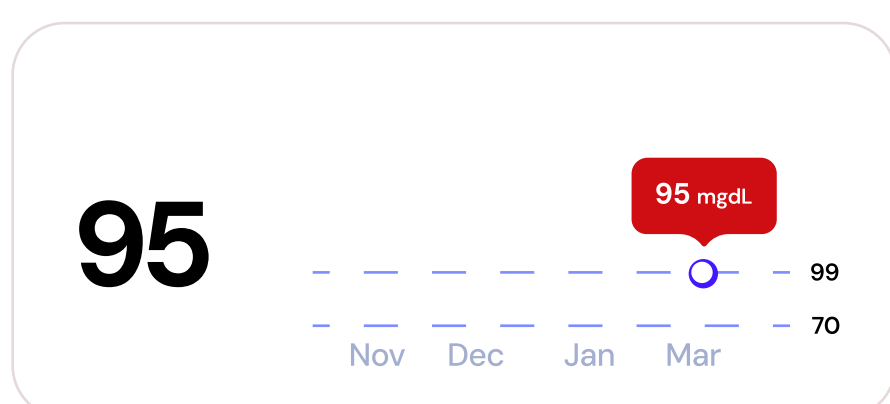
POST PRANDIAL BLOOD SUGAR



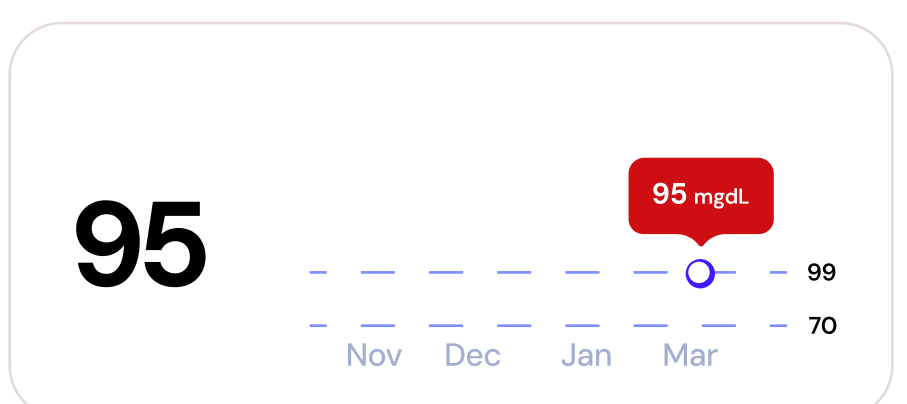
HBA1C (BLOOD SUGAR)



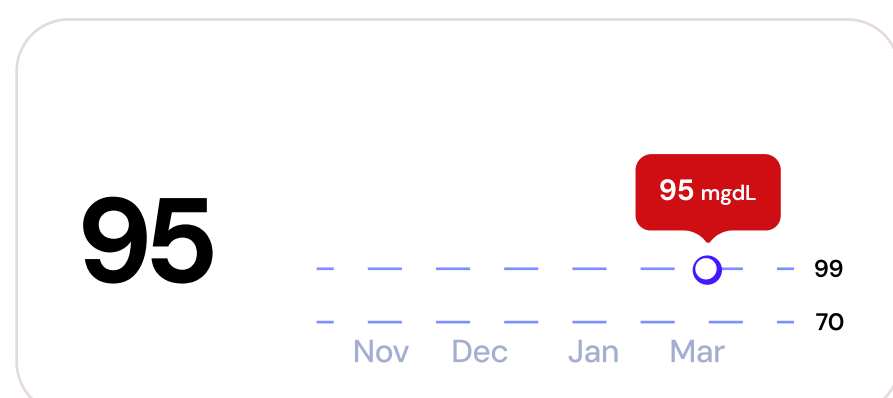
BLOOD UREA NITROGEN (BUN)



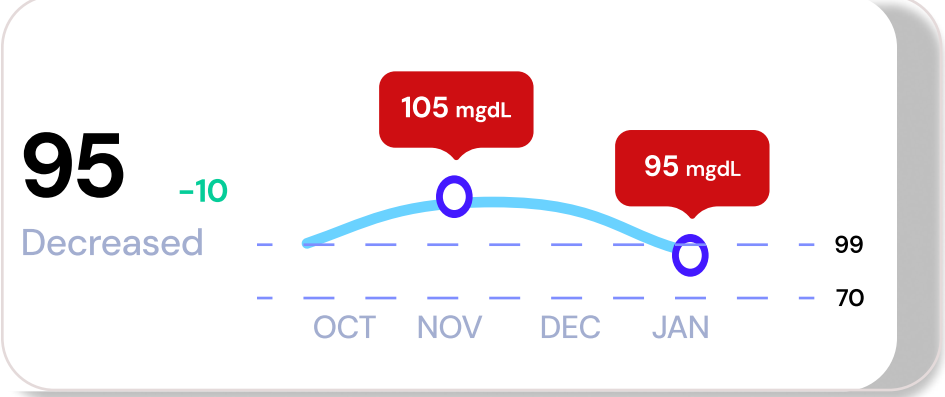
CREATININE



URIC ACID



CHOLESTEROL LEVELS



Report Explained

- Explanation: This measures the total amount of cholesterol in your blood, including HDL and LDL
- Normal Range: Less than 200 mg/dL is considered desirable.
- Interpretation: Your value of 180 mg/dL is within the healthy range.

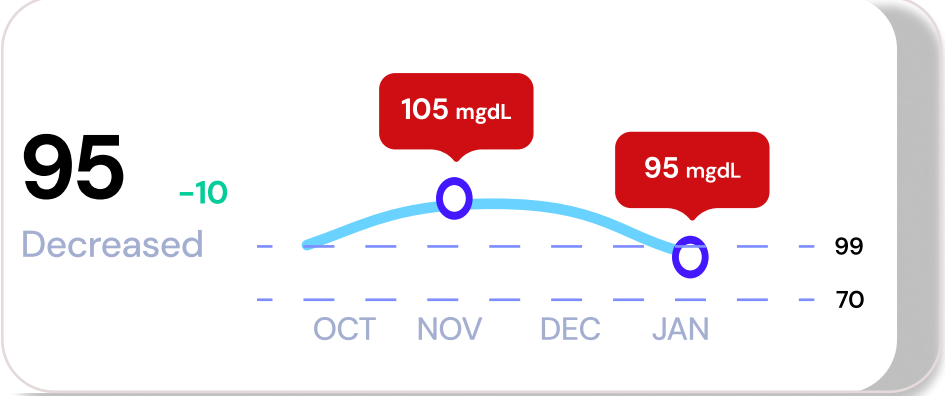
Why Cholestrol Balance Matters?

High LDL cholesterol increases the risk of plaque buildup in arteries, which can lead to blockages, heart attacks, or strokes.

Low HDL cholesterol means less "good" cholesterol is available to clean up excess "bad" cholesterol.

High triglycerides can combine with high LDL or low HDL levels to amplify the risk of heart disease.

HDL CHOLESTEROL



Report Explained

- Explanation: High-density lipoprotein (HDL) is often called "good cholesterol" because it helps remove other cholesterol types from your bloodstream.
- Normal Range: Greater than 40 mg/dL is considered good for heart health.
- Interpretation: Your HDL level of 50 mg/dL is healthy and protective.

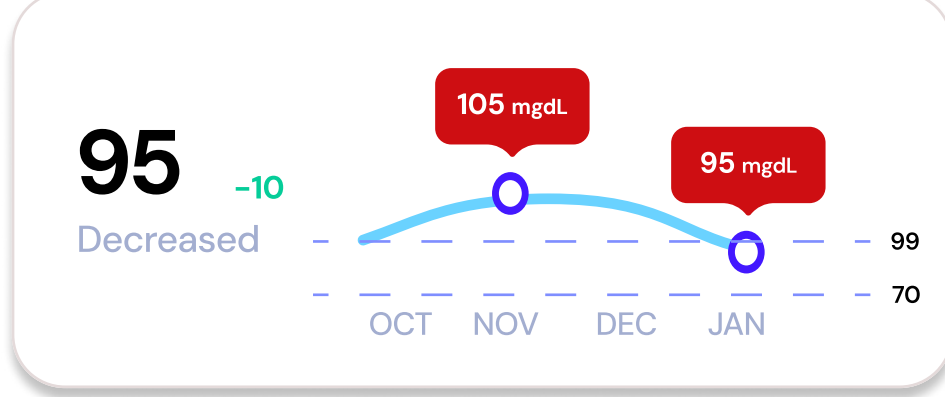
Why HDL is Important?

Removes Excess Cholesterol: HDL acts as a scavenger, collecting cholesterol from the walls of arteries and other parts of the body and transporting it to the liver for excretion. This process is called reverse cholesterol transport.

Prevents Plaque Buildup: By reducing the amount of cholesterol in your bloodstream, HDL helps prevent fatty deposits (plaque) from forming in your arteries.

Reduces Heart Disease Risk: Higher HDL levels are associated with a lower risk of heart attack, stroke, and other cardiovascular diseases.

LDL CHOLESTEROL



Report Explained

- Explanation: Low-density lipoprotein (LDL) is often called "bad cholesterol" because high levels can lead to plaque buildup in arteries.
- Normal Range: Less than 100 mg/dL is optimal.
- Interpretation: Your LDL level is slightly elevated (borderline), but still close to the normal range. Lifestyle changes can help reduce this.

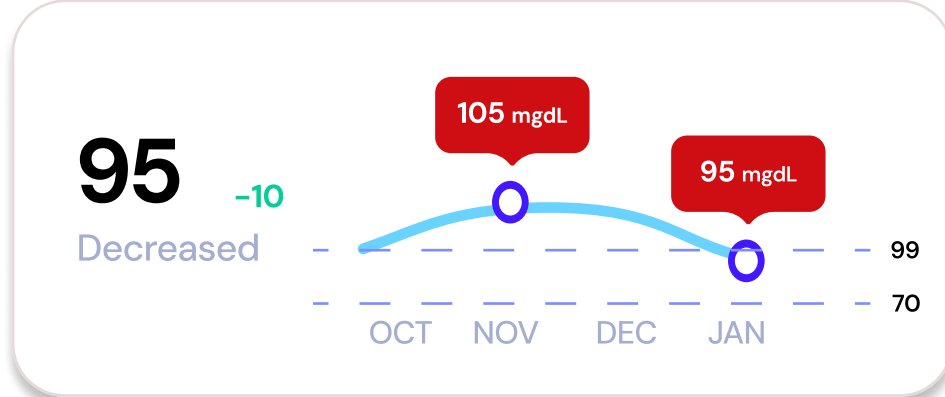
Why LDL is Bad?

Plaque Formation: When there's too much LDL in the blood, it can stick to the walls of your arteries, forming plaque.

Narrowing of Arteries: Plaque buildup (atherosclerosis) narrows the arteries, making it harder for blood to flow, which can strain the heart.

Risk of Blockages: Plaque can rupture and form clots, potentially causing a heart attack or stroke.

TRIGLYCERIDES



Report Explained

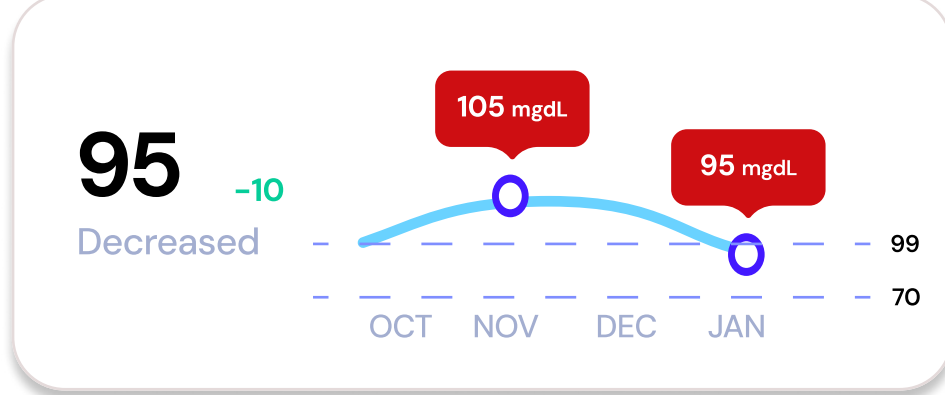
- Explanation: These are a type of fat in your blood. High levels can increase the risk of heart disease.
- Normal Range: Less than 150 mg/dL is normal.
- Interpretation: Your value of 140 mg/dL is within the normal range, which is good.

Why High Triglycerides Are Dangerous?

High triglycerides (hypertriglyceridemia) can contribute to:

1. Heart Disease: High levels are often associated with low HDL ("good cholesterol") and high LDL ("bad cholesterol"), increasing cardiovascular risk.
2. Pancreatitis: Extremely high triglyceride levels (above 500 mg/dL) can cause inflammation of the pancreas.
3. Metabolic Syndrome: High triglycerides are a key component of this syndrome, which also includes high blood pressure, obesity, and insulin resistance, increasing the risk of diabetes and heart disease.

BLOOD SUGAR (FASTING)



Report Explained

- Explanation: Measures blood glucose levels after an overnight fast.
- Normal Range: 70–99 mg/dL is normal.
- Interpretation: Your level of 90 mg/dL is normal and indicates healthy blood sugar control.

Why Blood Sugar Fasting is Important?

Blood sugar levels are controlled by a hormone called insulin, which helps glucose enter cells for energy. Abnormal fasting blood sugar levels can indicate problems with insulin production or effectiveness, which may lead to:

1. Hyperglycemia: High blood sugar levels.
2. Hypoglycemia: Low blood sugar levels.
3. Diabetes: A chronic condition where blood sugar regulation is impaired.

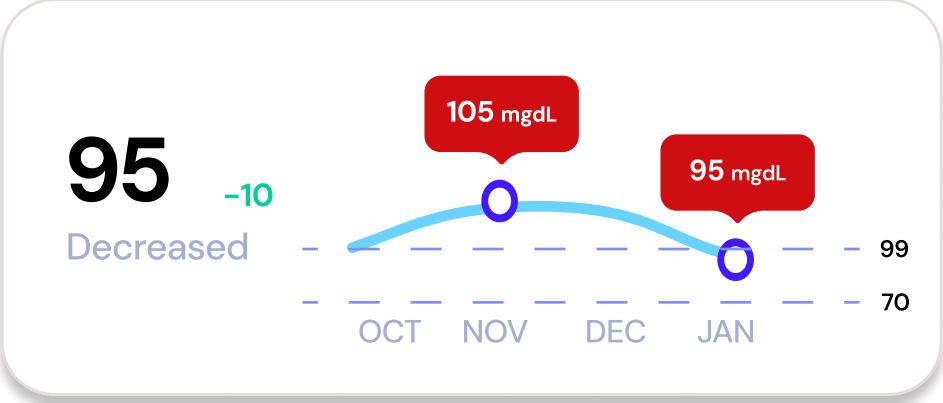
Blood Sugar Fasting Explained::

Fasting Blood Sugar (FBS) is a measurement of the glucose (sugar) level in your blood after you've gone without eating or drinking (except water) for at least 8–12 hours. This test is primarily used to check for diabetes, pre-diabetes, or other conditions affecting blood sugar levels.

Normal Fasting Blood Sugar Levels

- Normal: 70–99 mg/dL
- Pre-diabetes: 100–125 mg/dL (indicates insulin resistance or impaired glucose tolerance)
- Diabetes: 126 mg/dL or higher (on two or more occasions)

POST PRANDIAL BLOOD SUGAR



Report Explained

- Explanation: Measures blood glucose levels 2 hours after eating.
- Normal Range: Less than 140 mg/dL is normal.
 - Interpretation: Your value of 120 mg/dL is within the normal range, suggesting good post-meal glucose management.

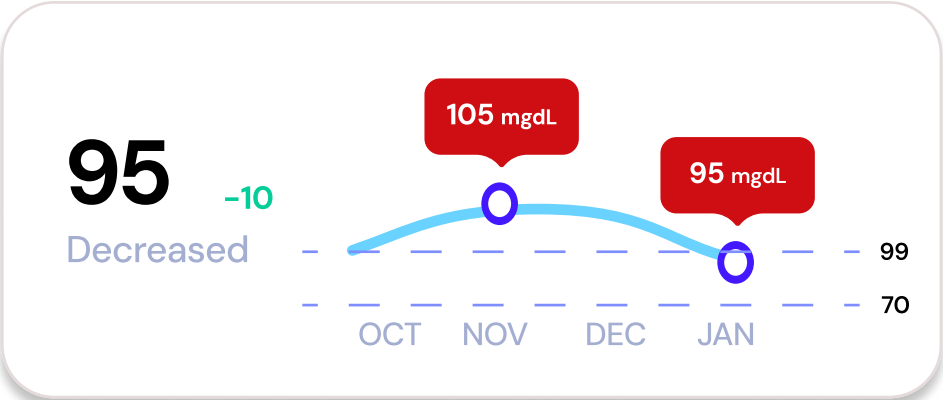
Why Post Prandial Blood Sugar is Important?

After you eat, your body breaks down food into glucose (sugar), which enters the bloodstream and raises blood sugar levels. The hormone insulin is then released by the pancreas to help move this glucose into cells for energy. Postprandial blood sugar levels help show how well this process works, particularly in people with diabetes or those at risk.

Postprandial Blood Sugar and Diabetes Management
Monitoring postprandial blood sugar is crucial for people with diabetes. It helps gauge how well their body is responding to insulin and how well dietary choices are supporting blood sugar control.

- For Type 1 Diabetes: Postprandial blood sugar monitoring helps adjust insulin doses based on the amount of carbohydrate consumed.
- For Type 2 Diabetes: It helps identify foods that cause excessive blood sugar spikes and manage the overall blood glucose level more effectively.

HbA1c (Blood Sugar)



Report Explained

- Explanation: This test shows your average blood sugar level over the past 2-3 months
- Normal Range: Less than 5.7% is considered normal.
 - Interpretation: Your HbA1c level of 5.4% is normal, indicating no signs of prediabetes or diabetes.

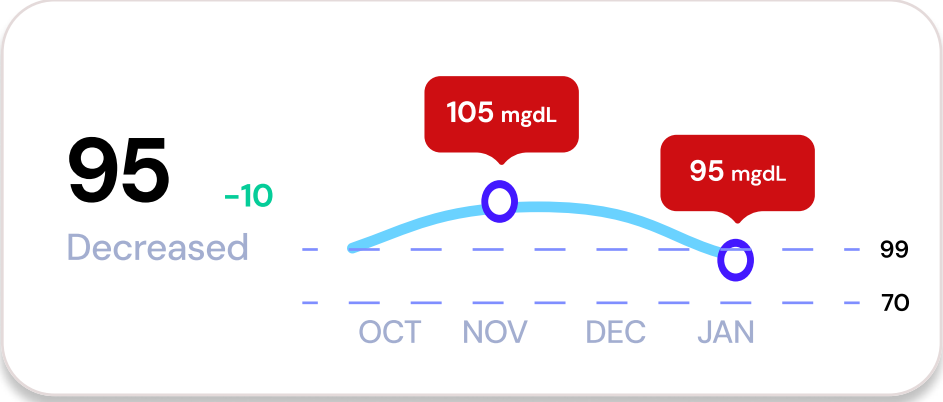
Why HbA1c is important?

Unlike fasting blood sugar or postprandial blood sugar tests that measure your glucose level at a single point in time, the HbA1c test gives a longer-term view of your blood sugar management. It reflects how much glucose has attached to hemoglobin (the protein in red blood cells that carries oxygen). The higher the blood sugar, the more glucose binds to hemoglobin, raising your HbA1c level.

Factors That Can Affect HbA1c Levels

1. Anemia: Conditions like anemia (low red blood cell count) or hemoglobinopathies (like sickle cell anemia) can alter HbA1c results.
2. Pregnancy: Pregnancy can affect HbA1c readings, especially during gestational diabetes.
3. Kidney Disease: Kidney dysfunction can interfere with HbA1c levels and their interpretation.
4. Blood Loss or Shortened Red Blood Cell Lifespan: People with certain blood disorders or those with rapid red blood cell turnover may have falsely low HbA1c levels.

BLOOD UREA NITROGEN (BUN)



Report Explained

- Explanation: BUN measures the amount of nitrogen in your blood from urea, a waste product.
- Normal Range: 7-20 mg/dL is normal.
 - Interpretation: Your value of 18 mg/dL is within the normal range, indicating healthy kidney function.

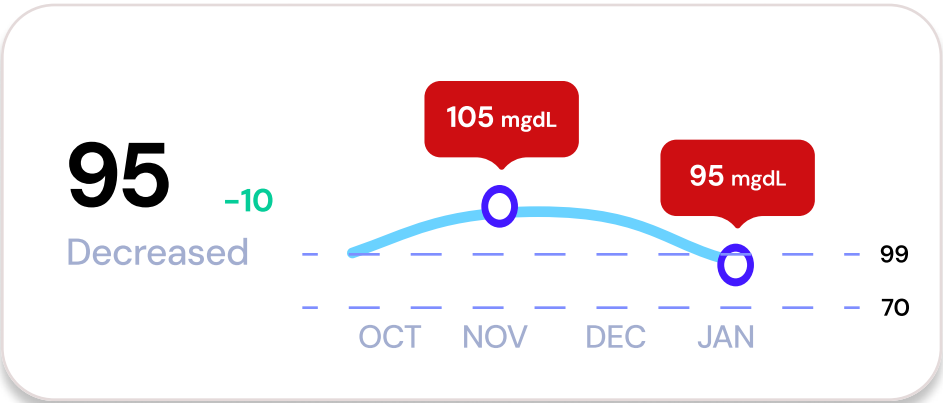
Why Blood Urea Nitrogen is Important?

The kidneys play a critical role in filtering waste products from your blood, including urea. If the kidneys are not working properly, they may not be able to remove urea efficiently, leading to an increase in BUN levels. A high BUN level can indicate kidney dysfunction, dehydration, or excessive protein breakdown, while a low BUN level may suggest malnutrition, liver disease, or a problem with protein metabolism.

High BUN levels can suggest several conditions, including:

1. Kidney Dysfunction or Failure: If the kidneys are not working properly, they can't filter urea out of the blood, leading to elevated BUN levels.
2. Dehydration: When you're dehydrated, there is less water in the bloodstream, so the concentration of urea increases.
3. High Protein Diet: Eating too much protein can increase the amount of urea your body produces, leading to higher BUN levels.
4. Heart Failure: When the heart is not pumping blood efficiently, it can affect kidney function and raise BUN.
5. Shock or Severe Blood Loss: Both conditions can reduce kidney blood flow, leading to high BUN levels.

CREATININE



Report Explained

- Explanation: Creatinine is a waste product from muscle metabolism. The kidneys filter it out of the blood.
- Normal Range: 0.6-1.2 mg/dL is normal.
 - Interpretation: Your creatinine level of 1.0 mg/dL is within the normal range, suggesting proper kidney function.

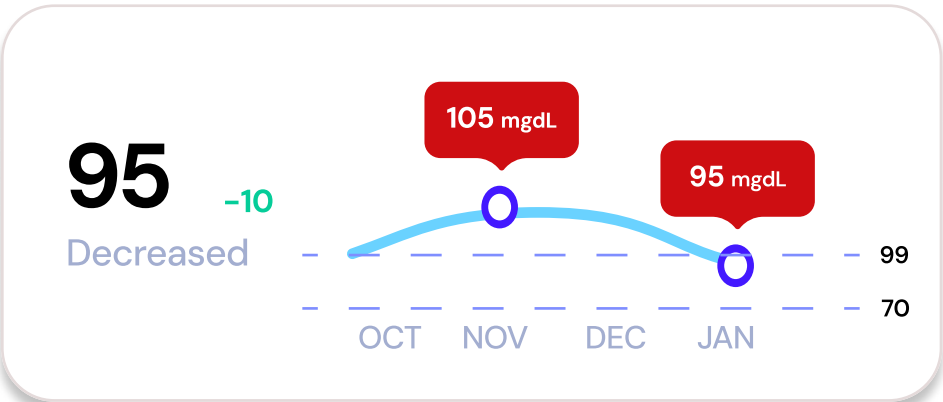
Why Creatinine is Important?

Since creatinine is eliminated from the body via the kidneys, the level of creatinine in the blood can provide useful insights into how well the kidneys are functioning. High levels of creatinine in the blood may suggest that the kidneys are not working properly and are unable to filter waste effectively. Conversely, low creatinine levels can indicate certain health conditions, such as muscle loss or malnutrition.

Creatinine and Kidney Function

- Normal Creatinine Levels:
 - Normal levels of creatinine suggest that your kidneys are filtering waste at a normal rate.
- Elevated Creatinine Levels:
 - High levels may indicate kidney damage, but they are usually a late sign of kidney disease. If your creatinine levels are high, further tests, including a GFR test, may be done to assess kidney function more thoroughly.
- Low Creatinine Levels:
 - Low levels are not as concerning as high levels but can indicate issues like low muscle mass, malnutrition, or liver disease.

URIC ACID



Report Explained

- Explanation: Uric acid is a waste product formed from the breakdown of purines in food. High levels can lead to gout.
- Normal Range: 3.5-7.2 mg/dL is normal.
 - Interpretation: Your level of 5.0 mg/dL is within the healthy range.

Why HbA1c is important?

Uric acid is normally found in the blood, but if your body either produces too much uric acid or if your kidneys have trouble eliminating it, uric acid levels can increase, leading to various health problems. High levels of uric acid can lead to conditions like gout or kidney stones. On the other hand, low levels of uric acid are less common and usually not a concern, but can be associated with conditions like Wilson's disease.

How the Uric Acid Test Works
The uric acid test involves a blood sample taken from a vein in your arm. The blood sample is then tested in a laboratory to measure the amount of uric acid in your bloodstream. This test helps determine whether your levels are within the normal range or if you have hyperuricemia or other potential issues. In some cases, a 24-hour urine test may also be done to measure the amount of uric acid being excreted in the urine, especially if you're being tested for kidney stones or gout.

Health Concerns

Test Name	12/04/24	07/12/24	Units	Change	Range
Blood Sugar	105	95	mg/dL	↓ Good	70-99 mg/dL

Blood sugar levels indicate how well the body manages glucose

- High Levels (Above 126 mg/dL): May indicate diabetes or prediabetes
- Low Levels (Below 70 mg/dL): May cause hypoglycemia, leading to symptoms like dizziness or fatigue
- Trend Analysis: Decreasing levels suggest improved insulin sensitivity or better glucose control through lifestyle changes

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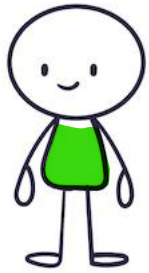
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Interdependencies



Chronic Kidney Disease

Blood Sugar (Fasting) and Kidney Function (BUN, Creatinine)



kidney Stones

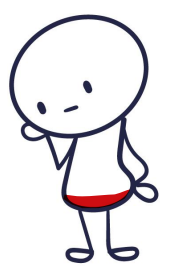
Cholesterol and Kidney Function (BUN, Creatinine, Uric Acid)



Poor glycemic control

Blood Sugar (Fasting), HbA1c, and Triglycerides

- High blood sugar and HbA1c are indicative of poor glycemic control, leading to increased triglyceride levels. This happens because high insulin levels (as in insulin resistance) promote fat storage and increase triglyceride production.
- Elevated triglycerides often correlate with high blood glucose levels, especially in type 2 diabetes and metabolic syndrome.



Atherosclerosis

Cholesterol, HDL, LDL, and Triglycerides

- High triglycerides can contribute to low HDL levels and higher LDL levels.
- Both LDL and triglycerides are risk factors for atherosclerosis, which affects heart health.
- An unhealthy lipid profile (high LDL, low HDL, and high triglycerides) is often seen in metabolic syndrome, which is also linked to insulin resistance and type 2 diabetes.



Atherosclerosis, weight gain, fatigue

Thyroid Hormones (TSH, T3, T4) and Lipid Profile



kidney Dysfunction

Cholesterol (LDL, HDL) and Blood Pressure

- Elevated BUN and creatinine levels suggest poor kidney function, and high uric acid levels can compound kidney damage, increasing the risk of gout and kidney stones.
- Chronic kidney disease (CKD) or kidney dysfunction often leads to higher creatinine and BUN levels, along with high uric acid.



Cardiovascular Disease

HDL Cholesterol and Kidney Function



Liver damage, jaundice, metabolic disturbances

Liver Enzymes (ALT, AST) and Bilirubin



Increased fracture risk, muscle weakness

Vitamin D and Calcium Levels

*Health Risk & Concerns are highlighted

Hyperthyroidism

Hyperthyroidism occurs when your thyroid gland produces too much thyroid hormone, leading to rapid metabolism and weight loss. Symptoms can also include increased heart rate, anxiety, tremors, and heat intolerance. People with this condition may feel anxious and have trouble sleeping

Remedies

- Eat several small, balanced meals throughout the day
- Incorporate lean proteins and complex carbohydrates
- Avoid caffeine and substances that might increase heart rate
- Practice stress management techniques such as deep breathing exercises and yoga
- Ensure adequate hydration and rest

Preventive Measures

- Attend regular follow-up appointments
- Avoid excessive consumption of iodine-rich foods
- Stay informed about medication side effects
- Monitor your heart rate regularly
- Maintain a nutrient-rich diet
- Manage stress effectively through relaxation techniques
- Get regular physical activity within your limits

Recommended Diagnostic Tests

- Thyroid function tests
- TSH test
- Free T4 test
- T3 test

Advise
Consult a Endocrinologist

Chronic Stress

Chronic stress can indirectly cause weight loss as it affects digestion and can lead to unhealthy eating patterns. This condition often results in a persistent feeling of being overwhelmed, fatigued, or frustrated.

Remedies

- Engage in regular physical activity, such as jogging or yoga
- Ensure adequate sleep by maintaining a regular sleep schedule
- Reduce alcohol and nicotine consumption
- Try relaxation techniques such as meditation or progressive muscle relaxation
- Talk to friends or a counselor about your stress

Preventive Measures

- Adopt a healthy work-life balance
- Make time for hobbies or activities you enjoy
- Limit exposure to stress-inducing situations when possible
- Build a supportive network of family and friends
- Regularly practice stress-reducing techniques, like meditation or walking in nature
- Ensure regular breaks during the day to rejuvenate

Recommended Diagnostic Tests

- Cortisol level test
- Stress questionnaire

Advise
Consult a Psychologist

Comparative Analysis

Cholesterol Level

24/12/24

15

14/01/25

13.5

-1.5

Best Practices To Stay Fit with Blood Sugar

- Eat Healthy
- Stay Active
- Hydrate - Drink Water
- Sleep Well - 8 Hrs Daily

- Monitor Your Stress
- Monitor Blood Sugar if necessary
- Avoid Smoking & Drinking
- Stay Educated / Informed

HDL Cholesterol

24/12/24

15

14/01/25

13.5

-1.5

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LDL Cholesterol

24/12/24

15

14/01/25

13.5

-1.5

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Comparative Analysis

Triglycerides

24/12/24

15

14/01/25

13.5

-1.5

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Fit with Blood Sugar

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Blood Sugar Fasting

24/12/24

15

14/01/25

13.5

-1.5

Best Practices To Stay
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- Avoid Smoking & Drinking
- Stay Educated / Informed

Post Prandial Blood Sugar

24/12/24

15

14/01/25

13.5

-1.5

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Fit with Blood Sugar

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- Monitor Blood Sugar if necessary
- Avoid Smoking & Drinking
- Stay Educated / Informed

Uric Acid

24/12/24

15

14/01/25

13.5

-1.5

Best Practices To Stay
Fit with Blood Sugar

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- Stay Active
- Hydrate - Drink Water
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- Avoid Smoking & Drinking
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HbA1c

24/12/24

15

14/01/25

13.5

-1.5

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Fit with Blood Sugar

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- Avoid Smoking & Drinking
- Stay Educated / Informed

Creatinine

24/12/24

15

14/01/25

13.5

-1.5

Best Practices To Stay
Fit with Blood Sugar

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- Stay Active
- Hydrate - Drink Water
- Sleep Well - 8 Hrs Daily

- Monitor Your Stress
- Monitor Blood Sugar if necessary
- Avoid Smoking & Drinking
- Stay Educated / Informed