

Health Report for Yash M. Patel

1. Patient Profile

- **Name:** Yash M. Patel
- **Age:** 21
- **Gender:** Male

2. Summary of Results

Your blood tests reveal some important findings:

- **Liver enzymes are elevated:** Specifically, ALT (SGPT) is significantly elevated at 100.50 U/L (reference range: 10.00 - 49.00 U/L), which is marked as high.
- **Other liver enzymes** are within normal ranges: AST (SGOT), GGTP, and Alkaline Phosphatase (though Alkaline Phosphatase is slightly low).
- **Liver function markers** are normal: Bilirubin levels and total protein are within normal ranges.
- **Protein levels** show a slight imbalance: Albumin is low at 2.00 g/dL (ref: 3.20 - 4.80 g/dL), while total protein is normal.

3. Detailed Test Explanations

AST (SGOT) and ALT (SGPT)

- These enzymes are found in liver cells. When liver cells are damaged, they release these enzymes into the bloodstream, causing elevated levels.
- Your ALT level is significantly elevated, suggesting some degree of liver cell inflammation or damage.

AST:ALT Ratio

- Your ratio is 0.50, which is within normal range (typically <1.0 is normal). This suggests a non-alcoholic pattern, though other factors are involved.

GGTP and Alkaline Phosphatase

- Both are associated with liver and bile duct function. Your GGTP is normal, while Alkaline Phosphatase is slightly low. This suggests no significant bile duct involvement.

Bilirubin

- All bilirubin levels are within normal limits, indicating no significant issue with bile processing or jaundice.

Albumin and Total Protein

- Albumin is low, which can occur in various conditions including liver disease, malnutrition, or inflammatory states. Your total protein is normal, suggesting the issue might be more specific.

A:G Ratio

- Your ratio is low (0.10), consistent with low albumin levels.

4. Overall Interpretation

Liver Function Assessment:

- The elevated ALT with normal AST suggests ongoing liver inflammation, likely unrelated to alcohol (given normal GGTP and AST:ALT ratio).
- The normal bilirubin and other markers suggest this is not an acute, severe liver injury, but rather a chronic or low-grade process.

Possible Conditions: Given your age and the pattern:

- **Non-alcoholic fatty liver disease (NAFLD)** is the most likely explanation, as indicated in the remarks. NAFLD is common, often asymptomatic, and related to metabolic health.
- The low albumin might suggest some nutritional factors or early chronic disease, but given your age, it's likely mild.

Risk Factors: NAFLD is associated with:

- Obesity or overweight
- Insulin resistance or pre-diabetes
- High cholesterol or triglycerides
- Sedentary lifestyle

5. Recommendations

1. Confirmatory Tests:

- Given the high ALT, consider an **ultrasound of the liver** to assess for fat accumulation (steatosis).
- Given the low albumin, ensure there are no other symptoms like edema or fatigue; consider checking **serum prealbumin** for nutritional status.

2. Lifestyle Modifications:

- **Diet:** Reduce sugar, refined carbs, and saturated fats. Increase fiber, fruits, vegetables, and lean proteins.
- **Weight management:** If overweight, even a 5-10% weight loss can significantly improve liver enzymes.
- **Exercise:** Aim for 150 minutes of moderate activity per week. This improves insulin sensitivity and reduces liver fat.

3. Follow-up:

- **Repeat liver enzymes** in 2-3 months after lifestyle changes.
- **Monitor blood pressure and cholesterol** as part of metabolic health.
- Consider **fasting glucose or HbA1c** to screen for diabetes.

4. Nutrition:

- Given low albumin, ensure adequate protein intake (e.g., lean meats, legumes, dairy).
- Consider foods rich in antioxidants (berries, nuts, leafy greens) to support liver health.

5. Avoid:

- Alcohol completely, to prevent additional liver stress.
- Unnecessary medications or supplements that are processed by the liver.

6. Disclaimer

This report is generated based on the provided laboratory data and general medical knowledge. It is not a substitute for a comprehensive medical evaluation by a healthcare provider. Please consult with your physician or a

gastroenterologist for a complete assessment and to discuss these findings in the context of your personal and family history.