Interpretation results

Date: **01.06.2026**

User: **Male, 45 y.o.**

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Test type

Lipid panel / cardiovascular risk assessment markers (fasting)

Summary table of results

Marker	Result	Reference (from the form)	Status
Total cholesterol	275 mg/dL	< 200 mg/dL	HIGH
LDL cholesterol	178 mg/dL	< 100 mg/dL	HIGH
HDL cholesterol	31 mg/dL	> 40 mg/dL for men	LOW
Non-HDL cholesterol	244 mg/dL	< 130 mg/dL	HIGH
Triglycerides	301 mg/dL	< 150 mg/dL	HIGH

Interpretation of deviations

Total cholesterol — 275 mg/dL

- Clinical meaning: **Elevated** total cholesterol is associated with increased risk of atherosclerosis and cardiovascular disease.
- Possible causes: Excess body weight, diet **high** in saturated/trans fats and refined carbohydrates, **low** physical activity, insulin resistance, hypothyroidism, genetics, alcohol intake.

LDL cholesterol — 178 mg/dL

- Clinical meaning: LDL is the main “atherogenic” cholesterol fraction. This level is significantly **elevated** and may increase the risk of coronary artery disease, especially with symptoms such as shortness of breath on exertion and stress-related chest tingling.
- Possible causes: Abdominal obesity, diet, **low** activity, hereditary predisposition, hypothyroidism, diabetes/prediabetes, kidney or liver disorders.

HDL cholesterol — 31 mg/dL

- Clinical meaning: HDL is considered protective; **low** HDL is associated with higher cardiovascular risk.
- Possible causes: Abdominal obesity, smoking if applicable, sedentary lifestyle, insulin resistance, **high** triglycerides, poor sleep quality or possible obstructive sleep apnea.

Non-HDL cholesterol — 244 mg/dL

- Clinical meaning: Non-HDL cholesterol reflects all atherogenic cholesterol particles, including LDL and VLDL. This is markedly **elevated** and is especially useful when triglycerides are **high**.
- Possible causes: Combined dyslipidemia, metabolic syndrome, insulin resistance, excess alcohol, obesity, genetic lipid disorders.

Triglycerides — 301 mg/dL

- Clinical meaning: Moderately **high** triglycerides are associated with increased cardiovascular risk and often reflect insulin resistance/metabolic syndrome. Pancreatitis risk usually becomes more prominent at much higher levels, typically >500 mg/dL, but this still requires correction.
- Possible causes: Abdominal obesity, **high** intake of sugar/refined carbohydrates, alcohol, fatty liver, diabetes/prediabetes, hypothyroidism, some medications, **low** physical activity.

Combined assessment

The lipid profile shows a strongly atherogenic pattern:

- **High** LDL cholesterol
- Very **high** non-HDL cholesterol
- **High** triglycerides
- **Low** HDL cholesterol

Together with abdominal overweight, exertional shortness of breath, chest tingling under stress, and loud snoring, this pattern may suggest increased cardiometabolic risk, possible insulin resistance/metabolic syndrome, and possible obstructive sleep apnea.

Because you report shortness of breath on exertion and chest discomfort/tingling under stress, cardiovascular evaluation should not be delayed. These symptoms do not confirm heart disease by themselves, but in combination with this lipid profile they warrant medical assessment.

Seek urgent medical care immediately if chest discomfort becomes pressure-like, lasts more than several minutes, occurs at rest, radiates to the left arm/jaw/back, or is accompanied by sweating, nausea, severe shortness of breath, fainting, or weakness.

Recommended additional tests

- Blood pressure measurement / home BP monitoring — to assess hypertension risk.
- Fasting glucose and HbA1c — to screen for diabetes or prediabetes/insulin resistance.
- Liver enzymes: ALT, AST, GGT, bilirubin — to assess fatty liver and medication safety before lipid-lowering therapy.
- Kidney function: creatinine, eGFR, electrolytes — cardiovascular risk and medication planning.
- TSH — to exclude hypothyroidism as a contributor to **high** cholesterol and triglycerides.
- ApoB — better assessment of atherogenic particle burden, especially with **high** triglycerides.
- Lipoprotein(a) / Lp(a) — once-in-life cardiovascular risk marker; important if family history of early heart disease.
- Urine albumin-to-creatinine ratio — cardiometabolic/kidney risk screening.
- ECG — baseline heart assessment due to exertional symptoms.
- Exercise stress test, stress echocardiography, or coronary CT angiography — if recommended by a cardiologist based on symptoms and risk assessment.
- Sleep study / polysomnography or home sleep apnea test — loud snoring plus abdominal obesity suggests possible obstructive sleep apnea.
- Repeat fasting lipid panel after treatment/lifestyle changes — usually after 6–12 weeks, depending on physician plan.

Which doctor to consult

- Cardiologist — because of **high** atherogenic cholesterol levels plus exertional shortness of breath and stress-related chest symptoms.
- Primary care physician / internist — for full cardiovascular risk calculation, blood pressure assessment, metabolic screening, and treatment coordination.
- Endocrinologist may be useful — if diabetes/prediabetes, thyroid disease, or metabolic syndrome is found.
- Sleep medicine specialist or ENT/somnologist — for evaluation of loud snoring and possible obstructive sleep apnea.

General recommendations

- Do not ignore the chest-related symptoms. Arrange a medical appointment soon, preferably with a cardiologist.

- Discuss lipid-lowering therapy with a physician. With LDL 178 mg/dL and non-HDL 244 mg/dL, lifestyle changes are important but medication such as a statin is often considered depending on total cardiovascular risk.
- Reduce saturated fats: fatty meats, processed meats, butter, **high**-fat dairy, fried foods.
- Avoid trans fats and minimize ultra-processed foods.
- Reduce refined carbohydrates and sugars: sweets, sugary drinks, white bread, pastries, excess beer/alcohol. This is especially important for triglycerides.
- Increase fiber: vegetables, legumes, oats, barley, berries, whole grains.
- Prefer unsaturated fats: olive oil, nuts in moderate portions, seeds, avocado; include fatty fish if appropriate.
- Weight reduction of even 5–10% can significantly improve triglycerides, HDL, blood pressure, insulin resistance, and snoring/sleep apnea risk.
- Aim for regular physical activity, but because you have exertional shortness of breath/chest symptoms, get medical clearance before starting intense exercise.
- Limit alcohol; with triglycerides at 301 mg/dL, alcohol can significantly worsen the level.
- Improve sleep schedule and evaluate snoring, as untreated sleep apnea can worsen blood pressure, arrhythmia risk, insulin resistance, and cardiovascular risk.

Important: This decoding is preliminary. Reference values are taken from your form. Consult a physician for diagnosis.