

## Interpretation results

Date: 01.06.2026

User: Female, 29 y.o.



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### Test type

Lipid panel / cardiovascular risk assessment

### Summary table of results

Marker	Result	Reference (from the form)	Status
Total cholesterol	263 mg/dL	< 200 desirable	<b>HIGH</b>
LDL cholesterol	189 mg/dL	< 100 optimal	<b>HIGH</b>
HDL cholesterol	54 mg/dL	≥ 50 for women	<b>NORMAL</b>
Triglycerides	97 mg/dL	< 150	<b>NORMAL</b>

### Interpretation of deviations

#### Total cholesterol — 263 mg/dL

- **Clinical meaning:** **Elevated** total cholesterol mainly reflects increased cholesterol carried in LDL particles in this result.

- **Possible causes:** In a slim, asymptomatic 29-year-old with strong family history of early heart attack and **high** cholesterol, an inherited lipid disorder such as familial hypercholesterolemia may be possible. Diet, thyroid disease, kidney disease, liver/bile disorders, and some medications can also contribute.

#### LDL cholesterol — 189 mg/dL

- **Clinical meaning:** This is markedly **elevated** and very close to the ≥190 mg/dL threshold commonly used to identify severe hypercholesterolemia. At this level, lifetime cardiovascular risk can be significantly increased, especially with a strong family history of premature heart disease.

- **Possible causes:** Family history makes inherited **high** LDL a key concern. Secondary

causes should still be excluded, including hypothyroidism, nephrotic-range protein loss, cholestatic liver disease, diabetes/insulin resistance, and medication effects.

### Combined assessment

The pattern is: **high LDL and total cholesterol with normal triglycerides and normal HDL**. This pattern is compatible with **isolated LDL elevation**, which is often seen in genetic forms of hypercholesterolemia.

Because you are 29, slim, asymptomatic, and have a strong family history of early heart attack/**high** cholesterol, this result should not be dismissed. It does **not** diagnose familial hypercholesterolemia by itself, but it **strongly supports the need for formal cardiovascular risk evaluation and treatment discussion**.

### Recommended additional tests

- **Repeat fasting lipid panel** — to confirm the LDL level, especially because it is near 190 mg/dL.
- **Apolipoprotein B, ApoB** — estimates the number of atherogenic particles.
- **Lipoprotein(a), Lp(a)** — important inherited risk factor, especially with early heart attack in the family.
- **Non-HDL cholesterol calculation** — useful additional risk marker. From your values:  $263 - 54 = 209$  mg/dL, which is **elevated**.
- **TSH and free T4** — to rule out hypothyroidism as a cause of **high** LDL.
- **Fasting glucose and/or HbA1c** — to assess metabolic risk.
- **Liver enzymes and bilirubin/alkaline phosphatase** — to check liver or bile-related causes before treatment decisions.
- **Creatinine/eGFR and urinalysis with urine protein/albumin** — to screen for kidney-related causes.
- **Consider genetic testing or formal familial hypercholesterolemia scoring** — especially if relatives had early myocardial infarction or very **high** LDL.
- **Cascade screening of first-degree relatives** — lipid testing for parents, siblings, and possibly children if applicable.

### Which doctor to consult

- **Cardiologist or lipid specialist** — because LDL is markedly **elevated** and there is a strong family history of early heart attack.
- **Primary care physician/internist** — to rule out secondary causes and coordinate follow-up testing.

- If pregnancy is planned or possible: **physician consultation before starting medication** is especially important, because some lipid-lowering drugs are not used during pregnancy.

### General recommendations

- Arrange medical follow-up soon, not urgently/emergency, but this should be addressed proactively.
- Discuss whether lipid-lowering therapy is appropriate. With LDL around 190 mg/dL and strong family history, medication is often considered even in young adults.
- Continue heart-healthy lifestyle measures:
  - Mediterranean-style diet: vegetables, legumes, whole grains, fish, nuts, olive oil.
  - Reduce saturated fats: butter, **high**-fat dairy, fatty/processed meats, coconut/palm oils.
  - Avoid trans fats.
  - Increase soluble fiber: oats, barley, beans, lentils, psyllium.
  - Regular aerobic activity plus resistance training.
  - Avoid smoking/vaping; minimize excess alcohol.
- Because HDL and triglycerides are **normal**, the main target is **LDL reduction**.

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

#### **Important notice**

This interpretation is for informational purposes only and is not medical advice, a diagnosis, or a treatment recommendation. Test results must be reviewed by a qualified physician taking into account your medical history and clinical picture.