Oxidized LDL (OxLDL)

Individuals with increased levels of oxidized LDL are 4 times more likely to develop metabolic syndrome\(^1\).

<table>
<thead>
<tr>
<th>Increased OxLDL levels signify increased risk for:</th>
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</thead>
<tbody>
<tr>
<td>Metabolic syndrome</td>
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<tr>
<td>Cardiovascular disease</td>
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<tr>
<td>Acute myocardial infarction</td>
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<th>OxLDL levels may be decreased by:</th>
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<tbody>
<tr>
<td>Maintaining a healthy weight/diet</td>
</tr>
<tr>
<td>Exercising more</td>
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<tr>
<td>Cholesterol-lowering medications</td>
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What is OxLDL?

OxLDL is formed when the ApoB protein on LDL particles becomes oxidized. OxLDL is recognized by scavenger receptors on macrophages which engulf OxLDL, leading to foam cell formation which in turn initiates atherosclerosis and enhances vascular inflammation.

Why measure OxLDL levels?

- Individuals with high levels of OxLDL are 4 times more likely to develop metabolic syndrome in the next 5 years\(^1\).
- Increased OxLDL levels are associated with the presence of coronary artery disease\(^2,4\).
- In healthy middle-aged men, high OxLDL levels are associated with a 4 times greater risk of developing coronary heart disease\(^5\).
- Levels of OxLDL increase in a step-wise fashion as the severity of CAD increases\(^6\).

How often should I order OxLDL?

The OxLDL test can be ordered in conjunction with standard/advanced lipid testing or inflammation testing. OxLDL testing is useful in individuals whose lifestyle puts them at risk for metabolic syndrome and/or cardiovascular disease, or those who have cardiovascular disease and are at risk for an adverse cardiac event. It is a useful marker to assess the impact of lifestyle changes and medical therapy.

Are OxLDL levels elevated in other non-cardiovascular conditions?

OxLDL levels may be elevated in patients with kidney disease and polycystic ovary syndrome. OxLDL levels should also be interpreted with caution in patients with known autoimmune disorders and those with diseases associated with oxidative stress, such as Alzheimer’s disease.

Is the OxLDL test covered by insurance?

There are no LCD (Local Coverage Determination) or NCD (National Coverage Determination) guidelines for Medicare or other commercial carriers for this test.

Relative Risk: Low: \(<45 \text{ U/L}\)  
Moderate: \(45-59 \text{ U/L}\)  
High: \(>59 \text{ U/L}\)

References

Oxidized LDL (OxLDL)

CPT Code 83520
Order Code C335
Sample Type Serum/EDTA Plasma
Tube Type Tiger Top/Lavender Top

OxLDL Treatment Algorithm

- **OxLDL Test Results**
  - **≥45 U/L**
  - **<45 U/L**
    - Retest every 6 months

**Treatment Recommendations**

**Step 1**
Assess lifestyle habits. Consider diet/exercise/weight reduction efforts as appropriate.

**Step 2**
Assess LDL-C levels. If not at goal, consider statins, ezetimibe or combination therapy if not contraindicated.

*These recommendations are for educational purposes only. Specific treatment plans should be provided and reviewed by the treating physician.*

Retest every 3-6 months