**Understanding the NMR LipoProfile® Test Report**

**LDL-P**
- LDL-P is the direct measure of low density lipoprotein particles - the causal link between high levels of LDL-P and development of cardiovascular disease (CVD) is well established.
- Studies have demonstrated per-particle cholesterol amount varies in patients with type II diabetes, statin-treated patients, and those with cardiometabolic risk factors (CMR) listed below:
  - **Age**: men ≥45 yrs, women ≥ 55 yrs
  - **Elevated BP**: (≥130/≥85 mmHg; on antihypertensive medication)
  - **Abdominal obesity/waist circumference**: male ≥ 40” (Asian ≥ 35”), female ≥ 35” (Asian ≥ 31”)
  - **Elevated triglycerides**: (≥150 mg/dL), low HDL (men < 40 mg/dL, women < 50 mg/dL), increased numbers of small dense LDL particles, on drug treatment for elevated triglycerides or HDL-C.
  - **Elevated fasting blood glucose**: (≥ 100 mg/dL), on drug treatment for elevated glucose
  - **Insulin resistance**: (IR)

  Many expert panels recommend use of LDL-P values to optimize treatment decisions in these at-risk patients.

  NMR LipoProfile® Test is FDA cleared for use in conjunction with other lipid measurements and clinical evaluation to aid in the management of lipoprotein disorders associated with CVD.

**Lipids**
- Traditional lipid panel includes LDL-C, HDL-C, triglycerides and total cholesterol.
- Whether calculated or measured directly, LDL-C is an estimate of the amount of cholesterol contained within LDL-P.

**Historical Reporting**
Patient LDL-P and LDL-C values and dates of services are tracked over time, providing opportunities for clinician/patient discussions regarding treatment strategies.

**NMR LipoProfile® test**

<table>
<thead>
<tr>
<th>Reference Range¹</th>
<th>20th</th>
<th>50th</th>
<th>80th</th>
<th>95th</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDL-P (LDL Particle Number)</td>
<td>nmol/L</td>
<td>Low</td>
<td>Moderate</td>
<td>Borderline</td>
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<tr>
<td>1600</td>
<td>&lt; 1000</td>
<td>1000 - 1299</td>
<td>1300 - 1599</td>
<td>1600 - 2000</td>
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</tbody>
</table>


**Personalized LDL Management**

**Targets of Therapy** (Adapted with permission from International Guidelines Center)

- **LOW**
- **BORDERLINE**
- **HIGH**

**Historical Reporting**

- LDL-P and LDL-C values are tracked over time, allowing for discussions with patients about treatment strategies.
### LDL and HDL Particles

- HDL-P is the direct measure of high density lipoprotein particles; it has been shown to be more strongly and independently related to atherosclerotic risk than high density lipoprotein cholesterol (HDL-C). The LP-IR score is a laboratory developed index that has been associated with insulin resistance and diabetes risk and should be used as one component of clinical assessment.
- Many with CMR factors have increased numbers of small lipoprotein particles (Small LDL-P) and other atherogenic lipoproteins.
- The IR score may be an early alert to a heightened risk of developing T2DM.

### Insulin Resistance (IR) Score

- A laboratory developed index that has been associated with IR and diabetes risk, the IR Score can be used as one component of clinical assessment.
- Insulin resistance (IR) is the precursor to type 2 diabetes (T2DM) and manifests its earliest measurable abnormalities though changes in lipoproteins.
- The IR score may be an early alert to a heightened risk of developing T2DM.

### Test Name

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Test No</th>
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<tbody>
<tr>
<td>NMR LipoProfile(R) With Insulin Resistance Markers (With Graph)</td>
<td>123638</td>
</tr>
<tr>
<td>NMR LipoProfile(R) With Insulin Resistance Markers Without Lipids (With Graph)</td>
<td>123497</td>
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<td>NMR LipoProfile® (With Graph)</td>
<td>123810</td>
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<tr>
<td>NMR LipoProfile® (Without Graph)</td>
<td>884247</td>
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</tbody>
</table>

For the most current information regarding test options, including specimen requirements and CPT codes, please consult the online Test Menu at www.LabCorp.com.

### References

7. NMR LipoProfile® (package insert). Raleigh, NC: Laboratory Corporation of America; 2015.