# **BOSTON HEART DIAGNOSTICS**

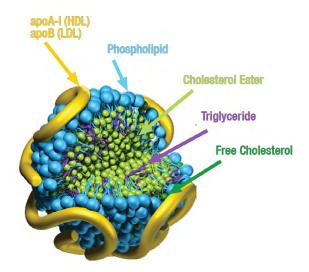
**LipoMap - NMR Lipid Testing** 

# Boston Heart is proud to offer a panel of 33 lipid tests performed by our high resolution 600 MHz NMR instruments.

This analysis provides the most complete commercially available map of lipoprotein particles for use in clinical practice. Our newer high-resolution 600 MHz NMR instruments are superior to the 400 MHz NMR used by other laboratories and now allows us to measure a large number of specific lipid, apolipoprotein and lipoprotein particle parameters.<sup>1</sup>

### **Clinical Utility of LipoMap**

- 50% of people who suffer a heart attack or stroke have normal LDL cholesterol <sup>2,3</sup>, hinting at hidden risk factors.
- Provides a thorough tool to measure and optimize the full spectrum of lipids lipoproteins and apolipoproteins.
- Studies show that LDL Particle Number (LDL-P) and HDL Particle Number (HDL-P) are superior to LDL-C, HDL-C, and cholesterol efflux capacity measurement in CVD risk assessment. <sup>2-14</sup>
- Characterizes atherogenic dislipidemia associated with metabolic syndrome and improvements resulting from treatment.
- Helps identify dysbetalipoproteinemia, familial combined hyperlipidemia, and certain genetic HDL-C deficiencies by measuring a broader array of lipoproteins such as IDL-C and particle number, VLDL-C and particle number, and the LDL-FC/LDL-C and HDL-FC/HDL-C ratios.



The most complete assessment of lipid metabolism commercially available

# Tests Included with LipoMap:

Lipid, Lipoprotein, and Apolipoproteins

- Includes basic lipids, direct LDL-C, sdLDL-C, apoA-I, apoA-II, and apoB, as well as the atherogenic ratios of LDL-C/HDL-C and apoB/apoA-I.
- Greater than 96% correlation with standard chemistry tests.

### **Atherogenic Lipoprotein Particles**

- Includes LDL, IDL, and VLDL particle numbers as well as apoB, cholesterol, and triglyceride levels in these particles.
- Provides particle number for six LDL sub-particles, with the smaller particles being the most atherogenic.
- Medications like statins lower the concentration of all LDL particles, while lifestyle changes improve the size distribution.

#### **HDL Particles**

- HDL particles protect against CVD and participate in reverse cholesterol transport to remove cholesterol from the body.
- Low values of HDL-P are associated with an increased risk of CVD.
- Lifestyle modifications improve the concentration and size distribution of HDL particles.

#### **Lipoprotein Cholesterol Esterification**

- LDL-FC/LDL-C and HDL-FC/HDL-C are the ratios of free cholesterol to esterified cholesterol within LDL and HDL.
- A high ratio indicates markedly decreased cholesterol esterification as seen in patients with liver disease or certain genetic HDL deficiency disorders.

### ApoB-100 and Triglyceride in Atherogenic Lipoproteins

- Includes measurements of the amount of apoB-100 and tryglycerides contained in the LDL, IDL, and VLDL particles.
- High values may be associated with an increased risk of CVD.



# **LipoMap - NMR Lipid Testing**

### ORDERING, REPORTING, AND SAMPLE INFORMATION

### **Ordering Information**

• Order Code: **98050** 

### Specimen Requirements

- Specimen type: Fasting (8 hr minimum) serum collected in Greiner Bio-one Vacuette Z-serum clot activator, red/yellow top tube; or approved alternatives: NMR LipoTube (manufactured by Greiner, Inc.), or S-Monovette® Serum (Sarstedt).
- Volume: Minimum of 1mL
- Stability: 3 days at 2-8°C.

### **Payment Information**

- A patient payment of \$129 is required
- This test is not billed to insurance.

## Lab Report of the LDL Particle Section

| LDL Particles | Optimal | Borderline | Increased Risk | % of Total<br>LDLC | LDL<br>Particles | Interpretation                                                                                                                                                                                    | Notes | Previous<br>Results<br>12.24.17 |
|---------------|---------|------------|----------------|--------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------------------|
| LDL1-P        |         | 157        |                | 11%                |                  | LDL1-P is Borderline, LDL2-P is Optimal, LDL3-P is Border-                                                                                                                                        |       | 156                             |
|               | <140    | 140-190    | >190 nmol/L    |                    |                  | line, LDL4-P is Borderline, LDL5-P is Optimal and LDL6-P is                                                                                                                                       |       |                                 |
| LDL2-P        | 129     |            |                | 9%                 |                  | LDL1 being the largest. Smaller particles are more atherogen-                                                                                                                                     |       | 130                             |
|               | < 150   | 150-200    | >200 nmol/L    |                    |                  |                                                                                                                                                                                                   |       |                                 |
| LDL3-P        |         | 197        |                | 14%                |                  |                                                                                                                                                                                                   | 1     | 189                             |
| [             | <190    | 190-260    | >260 nmol/L    |                    |                  |                                                                                                                                                                                                   |       |                                 |
| LDL4-P        |         | 235        |                | 17%                |                  |                                                                                                                                                                                                   |       | 229                             |
|               | <230    | 230-330    | >330 nmol/L    |                    |                  | Cholesterol lowering medications like statins lower the con-                                                                                                                                      |       |                                 |
| LDL5-P        | 287     |            |                | 20%                | <u>&amp;</u>     | centration of all LDL particles. Lifestyle changes like weight loss, healthy diet and exercise improve the size distribution of LDL particles resulting in a more favorable LDL particle profile. |       | 289                             |
|               | <290    | 290-400    | > 400 nmol/L   |                    |                  |                                                                                                                                                                                                   |       |                                 |
| LDL6-P        |         |            | 411            | 29%                | a L              | LDE particles resulting in a more lavorable LDE particle profile.                                                                                                                                 |       | 406                             |
|               | <300    | 300-350    | > 350 nmol/L   |                    |                  |                                                                                                                                                                                                   |       |                                 |

# For more information, contact your **Area Sales Manager** or Customer Care at **877.425.1252** or **customercare@bostonheartdx.com**

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