bostonheart diagnostics®

AMENDED REPORT 08.27.2018

Patient
Name: HART, JANE
DOB: 10.03.1949 Gender: F
Patient ID: 105850 Fasting: Yes
ACC/AHA Risk Score: BMI:
Patient Info:

Provider
Provider: VIKTOR BOUQUETTE MD
9 Dunwoody Park Ste 121
Dunwoody, GA 30338

Account No: 8429

Specimen
Accession No: T009129Q
Requisition No:
Report Date & Time: 05.17.2018 10:30 AM
Received Date & Time: 05.17.2018 9:52 AM
Collection Date & Time: 05.17.2018 09:38 AM

Test Name	Optimal	Borderline	High Risk	Notes	Previous Results
Lipid Tests					
Total Cholesterol		208			
	<200	200-240	>240 mg/dL		
Direct LDL-C		134			
	<100	100-160	>160 mg/dL		
HDL-C			36		
	>60	50-60	<50 mg/dL		
Triglycerides			203		
	<150	150-200	>200 mg/dL		
Non-HDL-C		172			
	<130	130-190	>190 mg/dL		
ApoB			122		
	<80	80-120	>120 mg/dL		
sdLDL-C[1]			43		
	<20	20-40	>40 mg/dL		
%sdLDL-C			32		
	<20	20-30	>30 %		
VLDL-C		38			
	<30	30-40	>40 mg/dL		
Lp(a)			58		
	<30	30-50	>50 mg/dL		
ApoA-1			131.6		
	>180	140-180	<140 mg/dL		
Lipid Ratios					
TC/HDL-C		5.8			
	<4	4-6	>6		
VLDL-C/TG	0.19				
	<0.2	0.2-0.3	>0.3		
ApoB/ApoA-1		0.9			
	<0.6	0.6-0.9	>0.9		
HDL-C/TG			0.18		
	>0.5	0.25-0.5	<0.25		
Inflammation Tests					
Fibrinogen	200				
	<370	370-470	>470 mg/dL		
hs-CRP	0.3				
	<1.0	1.0-3.0	>3.0 mg/L		
MPO[1]	174				
	<470	470-539	≥540 pmol/L		

Boston Heart Cholesterol Balance® Test[1]

Normalized Value (µmol x 100/mmol of Total Cholesterol)
Absolute Value (mg/L)

	Normalized Value	Absolute Value	Notes
Production Markers: HIGH			
Lathosterol (90 / 160)	**269**	**5.6**	
Desmosterol (70 / 90)	**111**	**2.3**	
Absorption Markers: BORDERLINE			
Beta-sitosterol (100 / 180)	**130**	**2.9**	
Campesterol (150 / 260)	**218**	**4.7**	

Cholesterol Balance Score (Production/Absorption) **1.4**

Over Absorber (0.2 / 0.5 / 1.1) Over Producer

Interpretation: Increased amounts of Lathosterol, Desmosterol, Beta-sitosterol and Campesterol may indicate an increased cellular production and intestinal absorption of cholesterol.

Consideration: Consider lifestyle modification, statin and ezetimibe therapy.

Notes

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Metabolic Tests

Test Name	Optimal	Borderline	High Risk	Notes	Previous Results
HbA1c	5.6				
	<5.7	5.7-6.4	>6.4 %		
HOMA-IR	1.3				
	<2	2-3	>3		
Glucose[2]		108			
	70-99	100-125	<70 or >125 mg/dL		
Adiponectin[1]	14.0				
	>13	9-13	<9 µg/mL		

Test Name	Low	Optimal	High	Notes	Previous Results
Insulin[3]		5		9	
	<5	5-15	>15 µU/mL		

Interpretation: BORDERLINE glucose indicates prediabetes as established by the ADA. Prediabetes is a major risk factor for metabolic syndrome and has been associated with increased risk of developing diabetes, hyperlipidemia, hypertension and CVD.

Consideration: Consider encouraging dietary modification supported by education and consider glucose lowering and/or insulin sensitizing medications. If indicated encourage weight reduction, smoking cessation, increased activity and control blood pressure.

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Boston Heart Fatty Acid Balance™ Test[1]

Test Name	Optimal	Borderline	High	Interpretation	Notes	Previous Results
Saturated Fatty Acid Index	**28.8**			Saturated FA Index is OPTIMAL.		
	<30.0	30.0-33.0	>33.0 %			
Trans Fatty Acid Index			**0.85**	Trans FA Index is HIGH. Higher levels of plasma trans fatty acids are associated with an increased risk of CVD. Consider restricting dietary intake of fried foods, foods containing partially hydrogenated fats, shortening, or stick margarine, and replacing with plant based oils.		
	<0.50	0.50-0.70	**>0.70 %**			
	Optimal	Borderline	Low			
Monounsaturated Fatty Acid Index			**16.9**	Monounsaturated FA Index is LOW. Higher plasma levels of MUFA have been associated with a lower risk of CVD. Consider increasing intake of almonds, avocado or plant based oils (including olive).		
	>22.0	19.0–22.0	**<19.0 %**			
Unsaturated/Saturated Ratio Index	**2.37**			Unsaturated/Saturated Ratio Index is OPTIMAL.		
	>2.25	2.00–2.25	<2.00			
Omega-3 Fatty Acid Index		**4.05**		Omega-3 FA Index is BORDERLINE. A lower Omega-3 FA index is associated with an increased risk for CVD. Eicosapentaenoic Acid (EPA) level is OPTIMAL. Docosahexaenoic Acid (DHA) level is OPTIMAL. The Omega-3 FA Index is the amount of EPA and DHA divided by total fatty acids. Consider recommending consumption of at least 2-3 meals of oily fish such as salmon, sardines, herring, tuna, and mackerel weekly or a fish oil supplement.		
	>4.50	**2.50-4.50**	<2.50 %			
EPA	**51.8**					
	>50.0	20.0-50.0	<20.0 µg/mL			
DHA	**100.8**					
	>100.0	60.0-100.0	<60.0 µg/mL			
ALA	**38.0**			Alpha Linolenic Acid (ALA) level is OPTIMAL. Maintain current level of dietary and/or supplemental intake of Omega-3 fatty acids.		
	>30.0	14.0–30.0	<14.0 µg/mL			
	Low	Mid	High			
Omega-6 Fatty Acid Index			**47.5**	Values are reported according to the lowest, middle and highest thirds of our reference population. Some authorities have recommended a goal > 0.20 for the Omega-3/Omega-6 Ratio Index. Some authorities indicate that an EPA/AA ratio of > 0.75 is optimal, usually only achieved with supplementation.		
	<39.0	39.0-43.0	>43.0 %			
Linoleic Acid (LA)			**1248.8**			
	<930.0	930.0-1150.0	>1150.0 µg/mL			
Arachidonic Acid (AA)			**429.2**			
	<250.0	250.0-320.0	>320.0 µg/mL			
AA/EPA Ratio Index		**8.30**				
	<6.67	6.67-12.50	>12.50			
EPA/AA Ratio Index			**2.00**			
	<0.08	0.08-0.15	>0.15			
Omega-3/Omega-6 Ratio Index			**3.00**			
	<0.07	0.07-0.10	>0.10			

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Chemistry Tests

Test Name	Optimal	Borderline	High Risk	Notes	Previous Results
Glucose[2]		**108**			
	70-99	**100-125**	<70 or >125 mg/dL		

Iron Tests

Test Name	Low	Normal	High	Notes	Previous Results
Ferritin			**405**		
	<15	15-150	**>150 ng/mL**		

Other Tests

Test Name	Optimal	Borderline	High Risk	Notes	Previous Results
Homocysteine	**7.6**				
	<10	10-14	>14 µmol/L		
CoQ10[1]		**1.38**		6	
	>1.40	**0.70-1.40**	<0.70 mg/L		

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Campesterol	218

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hs-CRP	0.3
MPO[1]	174

Metabolic Tests

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HOMA-IR	1.3
Glucose[2]	108
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Insulin[3]	5

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Trans Fatty Acid Index	0.85
Monounsaturated Fatty Acid Index	16.9
Unsaturated/Saturated Ratio Index	2.37
Omega-3 Fatty Acid Index	4.05
EPA	51.8
DHA	100.8
ALA	38.0
Omega-6 Fatty Acid Index	47.5
Linoleic Acid (LA)	1248.8
Arachidonic Acid (AA)	429.2
AA/EPA Ratio Index	8.30
EPA/AA Ratio Index	2.00
Omega-3/Omega-6 Ratio Index	3.00

Chemistry Tests

Test Name	05.17.2018 (Current)
Glucose[2]	108

Iron Tests

Test Name	05.17.2018 (Current)
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Footnotes

The intended use of this report is to provide an aid in the physician's treatment decisions. This report is intended for a physician or other qualified health care provider. Please consult with your physician regarding any questions.

[1]This test was developed and its performance characteristics determined by Boston Heart Diagnostics. It has not been cleared or approved by the U.S. Food and Drug Administration (FDA). The FDA has determined that such clearance is not necessary. This test is used for clinical purposes. It should not be regarded as investigational or for research. Methods: HDL Map: Gel electrophoresis; Cholesterol Balance and Fatty Acid Balance: GC/MS; MPO: Immunoturbidometric; CoQ10: UPLC; sdLDL-C: Enzymatic colorimetric; Adiponectin: Latex turbidimetric immunoassay; LDL-P: NMR.

[2]A fasting glucose level of >125 mg/dL indicates the presence of diabetes mellitus, and a fasting glucose level of <70 mg/dL indicates hypoglycemia.

[3]A test result in the low range is normal in a non-diabetic, but low if a patient has diabetes (consistent with diabetes).

[4]Genetic analysis is performed by real time Polymerase Chain Reaction (PCR) using TaqMan® probes. Amplified gene nucleotide sites: APOE - Apolipoprotein E, T471C rs429358, C609T rs7412; F5 - Coagulation Factor V, G1746A rs6025; F2 - Coagulation Factor 2, G20210A rs1799963; CYP2C19 (Clopidogrel response) -Cytochrome P450 2C19, G681A rs4244275, G636A rs4986893, C-806T rs12248560; SLCO1B1 (Statin Myopathy) - Solute Carrier Organic Anion Transporter Family, Member 1B1, T625C rs4149056. MTHFR – Methylenetetrahydrofolate reductase, C677T rs1801133, A1298C rs1801131. Limitations: Other rare mutations not detected by these assays may be present in some individuals.

[6]Test performed at 175 Crossing Boulevard, Framingham, MA 01702. CLIA#: 22D1083041. NYSDOH: 8729.

[9]High doses of biotin (>5mg/day) may interfere with assay results. Patient assumed to be refraining from biotin supplementation for at least 3 days prior to blood draw.

* Tests performed with alternative methodologies are not displayed for comparative purposes.

! = Critical Value, ⚠ = Alert Value, TNP = Test Not Performed, PEND = Test Result Pending, GSP = Glycated Serum Protein, ADA = American Diabetes Association