

Dr.SAMPLE REPORT TEST HEALTH CENTRE 123 TEST STREET BURWOOD VIC 3125

SAMPLE REPORT 09-May-1990 **Female**

16 HARKER STREET BURWOOD VIC 3125

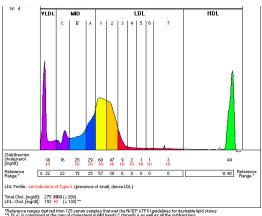
LAB ID: 3814180

UR NO.:

Collection Date: 09-May-2022 Received Date:09-May-2022



BIOCHEMISTRY				
BLOOD - SERUM	Result	Range	Units	
LIPIDS		. 5.		
CHOLESTEROL	<i>6.7</i> *H	0.0 - 5.5	mmol/L	
TRIGLYCERIDES	8.0	0.2 - 1.5	mmol/L	
LIPID STUDIES			_	
HDL(Protective)	2.0	> 1.2	mmol/L	•
LDL(Atherogenic)	4.3 *H	0.5 - 3.5	mmol/L	
Cholesterol/HDL Ratio	3.4			
LDL/HDL RATIO (Risk Factor)	2.2	0.0 - 3.2		
Trig/HDL Ratio	0.4 *L	0.5 - 1.7	RATIO	
Lipoprotein (a)	<i>17</i> 7 *H	0.0 - 75.0	nmol/L	•
LIPOSCREEN LDL Subfractions				
Very Low Density Lipoprotein (VLDL)	0.6	0.1 - 0.6	mmol/L	•
Intermediate Density Lipoprotein (IDL-	1) 0.5	0.1 - 0.6	mmol/L	•
Intermediate Density Lipoprotein (IDL-	2) 0.3	0.1 - 0.4	mmol/L	•
Intermediate Density Lipoprotein (IDL-	3) 0.4	0.1 - 0.6	mmol/L	•
Low Density Lipoprotein (LDL-1)	1.46	0.10 - 1.50	mmol/L	•
Low Density Lipoprotein (LDL-2)	1.23 *H	0.10 - 0.80	mmol/L	•
Low Density Lipoprotein (LDL-3)	<i>0.38</i> *H	0.00 - 0.20	mmol/L	•
Low Density Lipoprotein (LDL-4)	<i>0.08</i> *H	0.00 - 0.01	mmol/L	•
Low Density Lipoprotein (LDL-5)	0.00	0.00 - 0.01	mmol/L	
Low Density Lipoprotein (LDL-6)	0.00	0.00 - 0.01	mmol/L	
Low Density Lipoprotein (LDL-7)	0.00	0.00 - 0.01	mmol/L	
LDL Phenotype Pattern TY	PE B- AI	BNORMAL		
Mean Particle Size	266.0 *L	> 268 0	Angstrom	
	266.0 L 162.0 *H		IU/L	•
OXIGISEG EDE	102.0 П	< 117.0	10/1	



*Reference ranges derived from 125 serum samples that met the NCEP ATPIII guidelines for desirable lipid status
**LDL-C is comprised of the sum of cholesterol in Mid bands C through A as well as all the subfractions

Note: This graph is a sample only



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HDL Subfractions

HDL Subfractions Comment

PLEASE NOTE:

** The HDL subfractions test is intended for Research Use Only (RUO) - Not for use in diagnostic procedures. **

 $\star\star$ It is provided as additional information as to the patients overall lipid metabolism status. $\star\star$

High-Density Lipoproteins (HDL) have long been regarded as protective in nature, by carrying excess cholesterol away from the arteries and back to the liver for disposal. However, recent studies suggest that different HDL subclasses are associated with CHD prevalence, and that measurement of these subclasses could be a better indicator of CHD than measurement of total HDL alone. Some HDL subfractions may actually have the potential of contributing to heart disease.

The HDL family forms a protective part of plasma lipoproteins. It consists of large HDL, intermediate HDL, and small HDL subclasses. The large HDL and intermediate HDL subclasses are considered anti-atherogenic parts of the HDL family. The atherogenicity of the small HDL subclass is currently the subject of much discussion.

Traditionally, HDL has been separated into two major subclasses (HDL-2 and HDL-3), but depending on the separation method used, 10 subfractions have been reported. The Liposcreen HDL System can resolve up to 10 subfractions of HDL, and these are grouped into three main subclasses:

HDL 1-3 represent the Large HDL

commonly referred to as HDL-2, as the most protective of the the arteries, or truly the "good" HDL cholesterol.

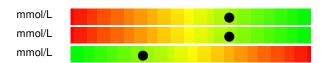
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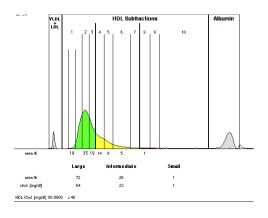
HDL 4-7 represent the Intermediate HDL

HDL 8-10 represent the Small HDL

may indicate increased CHD risk.

HDL Subfraction, Large0.39> 0.26HDL Subfraction, Intermediate0.80> 0.57HDL Subfraction, Small0.39 *H< 0.28</th>





Note: This graph is a sample only



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LIPOSCREEN Comments

RESULT INTERPRETATION

The Liposcreen LDL Subractions test provides a superior indicator for Coronary Artery Disease (CAD) risk than other conventionally available lipid profiles.

Many individuals with normal LDL and HDL cholesterol levels remain at risk from CAD as these conventional tests do not convey the detail of the CAD risk. Liposcreen additionally quantifies the different subfractions.

Liposcreen clearly identifies a patient's LDL phenotype profile;

This patient has a profile Not indicative of Type A, which is deemed ABNORMAL.

This is due to the presence of elevated levels of small dense LDLs (LDL3 and LDL4).

Of note is the elevated VLDL band, which when elevated is also deemed highly atherogenic.

Also of note is the low LDL Mean Particle size of 266 Angstrom, which indicates the presence of LDLs of a size capable of penetrating the endothelial lining and causing the development of atheromatous plaques.

Lipoprotein Pattern Characteristics:

(Patient may have some or all of these present)

Type A

Deemed a normal profile. Predominance of large/buoyant (less atherogenic) LDL

subclasses (LDL 1 and 2).

Mean Particle Size of $\,>\,263$ Angstrom (A). Elevated Cholesterol, Normal Triglycerides, Elevated Apo B

Type B Deemed an ABNORMAL profile.

Predominance of small/dense (more atherogenic) LDL

subclasses (LDL3, 4, 5, 6, 7).
Mean Particle Size of < 258 Angstrom (A).

Raised Cholesterol, Raised Triglycerides, Raised VLDL, Low HDLC

This profile is the designated atherogenic lipoprotein

phenotype, consistent with an increased risk of CAD. It is also It is also characteristically prevalent in insulin-resistant states such as Metabolic Syndrome and Type 2 Diabetes mellitus.

Follow up Liposcreen testing, for this patient, is recommended in 3 months.

Oxidised LDL Comment

ELEVATED OXIDISED LDL LEVEL:

Raised Oxidised LDL levels occur from many causes including smoking, poor blood sugar level control, diets high in trans fat and diets poor in antioxidants. Elevated Oxidised levels are also seen more frequently in diabetic patients than non-diabetics.

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Lipid Profile Comment

CHOLESTEROL COMMENT:

For secondary prevention, total cholesterol Treatment Target is <4.0 mmol/L Triglycerides Treatment Target <2.0 mmol/L HDL Treatment Target Value >1.0 mmol/L

LDL-CHOLESTEROL COMMENT:

As there is an elevated LDL level, we suggest a Liposcreen (LDL Subfractions) Test to determine the presence of small, dense (highly atherogenic) LDLs which are a primary cause of Coronary Artery Disease (CAD).

The LDL subtypes are not detectable through conventional Lipid Profiles.

TRIG/HDL RATIO COMMENT:

HDL is closely related to triglycerides. Commonly, patients with elevated triglycerides also have low HDL levels, and also tend to have elevated levels of clotting factors in their blood stream, which is unhealthy in protecting against heart disease. The triglyceride/HDL ratio is found to be one of the better predictors of heart disease. Research shows that people with an elevated ratio of triglycerides to HDL have 16 times the risk of heart attack as those with the low/normal.

Therefore, in adults, the triglyceride/HDL ratio should ideally be below 2.0 .

TRIG/HDL Reference Range:

< 0.9 Considered ideal (minimal risk)
> 1.7 High (moderate risk)
> 2.6 Very High (high risk)

LIPOPROTEIN(a) ELEVATED:

Consists of an LDL bound to Apolipoprotein component. Causes atherothrombogenesis and strongly associated with peripheral and coronary events.

Consider the following possible causes:

Genetic predisposition, Excessive intake of partially hydrogenated oils/fats, low-fibre, low vegetable-based diet, Hypothyroidism, Post-Menopausal elevation, Diabetes, particularly with central obesity, Chronic renal insufficiency, Simvistatin Therapy, Compounded likelihood of CVD if also high LDL and/or total Cholesterol.

Consider the following actions:

Aerobic Exercise, Dietary modification, 1 g TID Niacin OR inositol hexaniacinate (non-flush if availalable), CoQ10, L-lysine, proline, HRT if indicated, Magnesium, Coronary vasodilator therapy - as elevated Lp(a) may impair normal vasodilation mechanisms.

Vitamin C, L-Lysine and Vitamin E are also beneficial.

Increased HDL levels appear to reduce the threat posed by high levels of Lp(a).

Lp(a) COMMENT:

For Lp(a) levels > 75 nmol/L the relative risk of MI is 1.75 compared to patients with Lp(a) below this level. Lp(a) is an acute phase reactant and the level is elevated in acute illness.

Tests ordered: IMPEI,CFee,HDLSub,LipOx

(*) Result outside normal reference range (H) Result is above upper limit of reference rang (L) Result is below lower limit of reference range

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