



**TEST PATIENT**

Sample Test Name  
 Sex : F  
 Date Collected : 00-00-0000

**LAB ID: 00000000** UR#:0000000

**TEST PHYSICIAN**

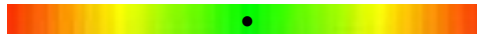
DR EDWARD CHAN  
 111-1, WISMA LAXTON,  
 JALAN DESA, TAMAN  
 DESA, 58100, KL

**HAEMATOTOLOGY**

BLOOD - CITRAT

**FIBRINOGEN**

Result **3.1** Range 2.0 - 4.5 Units g/L



**BIOCHEMISTRY**

BLOOD - SERUM

**CHOLESTEROL**

Result **6.6 \*H** Range 0.0 - 5.5 Units mmol/L



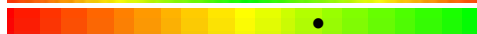
**TRIGLYCERIDES**

Result **1.5** Range 0.2 - 1.5 Units mmol/L



**HDL(Protective)**

Result **1.6** Range > 1.2 Units mmol/L



**LDL(Atherogenic)**

Result **4.4 \*H** Range 0.5 - 3.5 Units mmol/L



**LDL/HDL RATIO (Risk Factor)**

Result **2.8** Range 0.0 - 3.2



**Lipoprotein (a)**

Result **273 \*H** Range 0.0 - 75.0 Units nmol/L



**Apolipoprotein B**

Result **1.32 \*\*H** Range 0.50 - 1.30 Units g/L



**Apolipoprotein A-1**

Result **1.70** Range 1.10 - 2.05 Units g/L



**RATIO (APO B / APO A-1)**

Result **0.78** Range 0.35 - 1.15



**HOMOCYSTEINE**

Result **11.0** Range 5.0 - 12.0 Units umol/L



**HIGH SEN CRP**

Result **0.90** Range 0.00 - 10.00 Units mg/L



(\*) Result outside normal reference range

(H) Result is above upper limit of reference rang

(\*\*) Result is critically abnormal

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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 Subtractions) 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.

**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, Simvastatin 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 available), 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 > 0.30 g/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.

**APOLIPOPROTEIN B ELEVATED:**

Apolipoprotein B levels increase during pregnancy, hypercholesteremia, LDL receptor defect, bile obstruction, hyperlipemia type II, and nephrotic syndrome.  
Suspect: Elevated LDL, Hyperlipoproteinemia type 2a or 2b, Hyper-beta-lipoproteinemia, Arterial Stenosis (High Apo B can be associated with carotid or coronary stenosis).  
Consider the following actions: Treat as for elevated Cholesterol and Triglycerides, 1 g TID Niacin OR inositol hexaniacinate (non-flush if available), use Psyllium and other water soluble fibres, vegetable-based diet including soy products, Zinc supplementation and Anti-oxidants.



**WellLab**

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**General ChemistryComment**

**ELEVATED HOMOCYSTEINE LEVEL:**

Hyperhomocysteinemia is a risk factor for arterial and venous thrombosis. Highest 25th percentile of Homocysteine levels showed 3 fold greater MI risk than the lowest 25th percentile. Homocysteine is elevated in B12, B6 and folate deficiency as well as renal impairment. A fasting specimen is required as homocysteine is affected by diet.

In the Methylation process, Homocysteine levels may be lowered by one of the following;

1. Conversion to Methionine to SAME (via TMG or methylB12)
2. Conversion to Cystathionine to Glutathione (via Vit B6)
3. Conversion to Tetrahydrofolate to 5MTHF (via VitB2, VitB6)

<b>GLUCOSE (FASTING)</b>	<b>5.3</b>	3.5 - 6.0	mmol/L	
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