CARDIOVASCULAR PROFILE – Comprehensive (serum)

Cardiovascular disease (CVD) is one of the leading causes of death worldwide. In the past decade CVD has been the cause of over one-third of all premature deaths in Australia. The conventional risk factors for CVD include hypertension, dyslipidaemia, smoking, and diabetes mellitus. However, in a given individual, the presence of only one of these factors has a low positive predictive value. The most advanced strategy for coronary risk assessment is therefore to combine the information of several risk factors; a 'multi-marker' approach which enhances risk stratification.

NutriPATH provides the most comprehensive cardiovascular profile available, reporting conventional risk factors and other state of the art CVD biomarkers such as lipoprotein (a), apolipoproteins A & B, homocysteine, fibrinogen and C-reactive protein (CRP).

Cardiovascular Disease

Being one of the leading causes of death worldwide, more years of potential life before the age of 75 are lost due to this disease than any other condition. Fortunately, over the past thirty years significant progress has been made in the areas of diagnosis, prevention, and treatment of CVD. One of the most critical advances has been the identification of the major risk factors for CVD, which arose from studies such as the Framingham Heart Study and the Seven Countries Study.

Conventional Risk Factors for CVD

The conventional risk factors for CVD include hypertension, smoking, diabetes mellitus, hypercholesterolemia, hypertriglyceridemia and low HDL cholesterol. However, in a given individual, the presence of only one of these factors has a low positive predictive value. Furthermore, a significant number of cardiovascular events still occur in individuals without these established risk indicators. At present, the most advanced strategy for coronary risk assessment is therefore to combine the information of several risk factors. This 'multi-marker' approach can enhance risk stratification, identifying those individuals with a moderate baseline risk who might benefit from aggressive risk reduction strategies.

SIGNS AND SYMPTOMS ASSOCIATED WITH CARDIOVASCULAR DISEASE	
Slow heartbeat (bradycardia)	Racing heartbeat (tachycardia)
Dizziness	Chest pain or discomfort
Lightheadedness	Shortness of breath
Fatigue	Fainting (syncope) or near-fainting

Cholesterol is an organic lipid molecule required to maintain cell structure, integrity and fluidity. It acts as a precursor to biosynthesis of steroid hormones, Vitamin D and bile acids. Triglycerides are a combination of glycerol and fatty acids enables adipose fat and blood glucose transport from the liver. The HDL (high density lipoproteins) acts to transfer fats away from cells, artery walls and tissues through the bloodstream, back to LDL particles or the liver for other disposition; and LDL (low density lipoproteins) are associated with increased risk of carotid atherosclerosis, angina, myocardial infarction, and future coronary events.

Lipoprotein (a) is a LDL-like particle associated with coronary and peripheral cardiac events is synthesised in the liver and is influenced by genetic hereditary factors, not age or diet. Apolipoprotein A is an anti-inflammatory protein constituent of HDL which activates the lecithin cholesterol acyltransferase enzyme thus esterifying cholesterol and increasing the lipid carrying capacity of the lipoproteins. Apolipoprotein B is a pro-inflammatory protein constituent of LDL. The APO B / APO A-1 ratio is an indicator of the risk of developing atherosclerosis.

Homocysteine is an amino acid test used to screen high risk of cardiovascular disease, stroke, heart attack, methylation defects and Vitamin B12 or folate deficiency. Homocysteine is linked to damaged endothelium, increased platelet aggregation, and the formation of atherosclerotic lesions.

Fibrinogen has a role in arterial occlusion by promoting thrombus formation, endothelial injury, and hyper-viscosity. High sensitive C-reactive Protein (CRP) is an acute phase reactant to inflammation and high levels are linked to coagulation and vascular endothelium damage.

CARDIOVASCULAR Profile – Comprehensive [Test code: 4001]

❖ Cholesterol, Triglycerides, HDL, LDL, Ratios, Fasting Glucose, Lipoprotein (a), Apolipoproteins A & B, Homocysteine, Fibrinogen, C-reactive Protein (CRP)

Other cardiovascular and hypercholesteremia tests available:

- **Cardiovascular Profile – Comprehensive 2:** Cholesterol, Triglycerides, HDL, LDL, ratios, Fasting Glucose, Homocysteine, Apolipoproteins A & B, Lipoprotein (a), Fibrinogen, hsCRP AND LIPOSCREEN LDL subfractions (x7)
- **LIPOSCREEN LDL Subfractions**: Cholesterol, Triglycerides, HDL, LDL, VLDL, IDL, LDL subfractions (x7)
- **Oxidised LDL**: Oxidised LDL
- **HDL Subfractions**: Cholesterol, Triglycerides, HDL, HDL subfractions (x3)
- **LIPOSCREEN LDL Subfractions & Oxidised LDL**: Cholesterol, Triglycerides, HDL, LDL, VLDL, IDL, LDL subfractions (x7), Oxidised LDL
- **LIPOSCREEN LDL Subfractions & Oxidised LDL & HDL Subfractions**: Cholesterol, Triglycerides, HDL, LDL, VLDL, IDL, LDL subfractions (x7), Oxidised LDL; HDL subfractions (x3)
- **Lipoprotein (a):** Apolipoprotein (a)

How to order a test kit:

To order a test kit simply request the test name and/or test code on a NutriPATH request form and have the patient phone NutriPATH Customer Service on 1300 688 522.

Phone **1300 688 522** for further details

www.nutripath.com.au