Triglycerides - measured

Important note: This is an archived metadata standard from the AIHW Knowledgebase. For current metadata standards and related information please access METeOR, the AIHW's Metadata Online Registry at http://meteor.aihw.gov.au

Identifying and Definitional Attributes

Data Dictionary:	NHDD		
Knowledgebase ID:	000658	Version number:	1
Metadata type:	DATA ELEMENT		
Registration Authority:	NHIMG	Admin status:	SUPERSEDED
		Effective date:	01-MAR-05
Definition:	A person's measured triglycerides.		
Context:	Public health, health care and clinical setting.		

Relational and Representational Attributes

Datatype:	Numeric	
Representational form:	QUANTITATIVE VALUE	
Representation layout:	NN.N	
Minimum Size:	3	
Maximum Size:	4	
Data Domain:	99.9	Not stated / inadequately described
	NOVAL	Measurement in mmol / L to 1 decimal place

Guide For Use: Record the absolute result of the Total Triglyceride measurement.

Collection Methods: Measurement of lipid levels should be carried out by laboratories, or practices, which have been accredited to perform these tests by the National Association of Testing Authorities.

-To be collected as a single venous blood sample, preferably following a 12-hour fast where only water and medications have been consumed.

Note that to calculate the low-density lipoprotein - cholesterol (LDL-C) from the Friedwald Equation (Friedwald et al, 1972):-

- a fasting level of plasma triglyceride and knowledge of the levels of plasma total cholesterol and low-density lipoprotein - cholesterol (HDL-C) is required,

- the Friedwald equation becomes unreliable when the plasma triglyceride exceeds 4.5 mmol / L, and

- that while levels are reliable for the first 24 hours after the onset of acute coronary syndromes, they may be unreliable for the subsequent 6 weeks after an event. (Lipid Management Guidelines - 2001, MJA 2001; 175: S57-S88.. National Heart Foundation of Australia and the Cardiac Society of Australia and New Zealand.)

Related metadata: is used in conjunction with Service contact date version 1
relates to the data element Waist circumference - measured version 2
relates to the data element Cholesterol-HDL - measured version 1
is used in the calculation of Cholesterol-LDL calculated version 1
relates to the data element Cholesterol-total - measured version 1
relates to the data element Dyslipidaemia - treatment version 1
is used in conjunction with Fasting status version 1

Administrative Attributes

Source Document:

Source Organisation: CV-Data Working Group

Comments: DSS Cardiovascular disease (clinical):
A relationship between triglyceride and HDL-C and chronic heart disease (CHD) event rates has been shown. This view is supported by the observation that the remnants of triglyceride-rich lipoproteins are the particles that occur in dysbetalipoproteinaemia, a condition associated with a very high risk of premature atherosclerotic vascular disease. There have been two comprehensive reviews of the relationship between plasma triglyceride and CHD (see Criqui et al. 1993 and Austin et al. 1991). Criqui concludes that triglyceride is not an independent predictor of CHD and is probably not causally related to the disease, while Austin provides a compelling case for a causal role of (at least) some triglyceride rich lipoproteins.

Conclusions drawn from population studies of the relationship between plasma triglyceride and the risk of CHD include the following: -

-An elevated concentration of plasma triglyceride (> 2.0 mmol / L) is predictive of CHD when associated with either an increased concentration of LDL-C or a decreased concentration of HDL-C.

-The relationship between CHD risk and plasma triglyceride is not

continuous, with evidence that the risk is greatest in people with triglyceride levels between 2 and 6 mmol / L. (Lipid Management Guidelines - 2001, MJA 2001; 175: S57-S88. National Heart Foundation of Australia and the Cardiac Society of Australia and New Zealand.)

It is likely that the positive relationship between plasma triglyceride and CHD, as observed in many population studies, is because an elevated level of plasma triglyceride in some people is a reflection of an accumulation of the atherogenic remnants of chylomicrons and very low density lipoprotein. These particles are rich in both triglyceride and cholesterol and appear to be at least as atherogenic as LDL.

Diabetes (clinical):
Following Principles of Care and Guidelines for the Clinical Management of Diabetes Mellitus, the targets for lipids management are :
-To reduce total cholesterol to less than 5.5 mmol / L
-To reduce triglyceride level to less than 2.0 mmol / L
-To increase HDL-C to more than or equal to 1.0 mmol / L.

Alterations in fat transport, often resulting in hyper-triglyceridaemia, are well-recognised concomitants of diabetes mellitus.

Elevated plasma triglyceride levels are present in about one third of diabetic patients. It seems that triglycerides are related to the critical role of insulin in the production and removal from plasma of triglyceride-rich lipoproteins.

Lifestyle modifications, including weight loss and reduction of excess alcohol intake, are particularly effective for reducing triglyceride and increasing HDL-C.

References:
National Heart Foundation of Australia - Lipid Management Guidelines 2001.

Hypertriglyceridaemia; Australian Medicines Handbook.

Data Element Links

Information Model Entities linked to this Data Element

NHIM	Service provision event

Data Agreements which include this Data Element

DSS - Cardiovascular disease (clinical)	From 01-Jan-03 to
DSS - Diabetes (clinical)	From 01-Jan-03 to
DSS - Acute coronary syndrome (clinical)	From 04-Jun-04 to