

CHANGES TO LIPID TESTING AND REPORTING AT SYDPATH

SydPath is making a number of changes to lipid testing and reporting from the 3rd of April 2017. These changes are consistent with guidelines from the National Heart Foundation and other sources. The key changes are:

1. USE OF ACCEPTING NON-FASTING SAMPLES FOR LIPID TESTING
2. ROUTINE REPORTING OF TOTAL CHOLESTEROL TO HDL RATIO
3. ROUTINE REPORTING OF NON-HDL CHOLESTEROL
4. REPORT FORMATTING CHANGES

For Lipid testing a full lipid profile is recommended. This should be ordered as “Chol, Trig, HDL” or “Lipids + HDL”. These forms of request are Medicare compliant.

1. USE OF NON-FASTING SAMPLES FOR LIPID TESTING

Traditionally fasting samples have been recommended for nearly all lipid testing. A recent international guideline (1) has established the *suitability of non-fasting samples for the majority of lipid testing*. This is based on research showing the effect of meals is minimal on most lipids (i.e. <0.2 mmol/L change for total and HDL cholesterol) and generally produces only a small increase triglycerides (and therefore a small decrease in calculated LDL-cholesterol).

While non-fasting samples usually suitable, fasting samples are preferred in the following situations:

- Known high triglycerides (e.g. >4.0 mmol/L)
- Treatment with drugs known to cause hypertriglyceridaemia
- Collection of a fasting sample required for other purposes (e.g. fasting glucose).

SydPath pathology collectors will collect samples for lipid testing at any time of day unless the doctor specifies “fasting” on the request form, in which case non-fasting patients will be asked to return at an appropriate time. The pathology reports will include the fasting status on the report where provided.

2. ROUTINE REPORTING OF TOTAL CHOLESTEROL TO HDL CHOLESTROL RATIO

SydPath will routinely report the total cholesterol to HDL ratio (TC: HDLC) as part of a lipid profile.

- TC: HDLC is used to predict cardiovascular risk.
- TC: HDLC is combined with age, sex, smoking and diabetes status and blood pressure to produce a probability of a cardiovascular event over the next five years.
- The calculation is performed using a paper or on-line calculator (<https://heartfoundation.org.au/for-professionals/clinical-information/absolute-risk>).
- This ratio is now provided on the SydPath report to facilitate the risk calculation.
- As risk prediction is the only use of this result there is no target or recommended level supplied on the report.

3. ROUTINE REPORTING OF NON-HDL CHOLESTEROL

SydPath will routinely report the Non-HDL Cholesterol as part of a lipid profile. The key points are:

- Non-HDL cholesterol is a result calculated simply from other lipid results.
 - *Non-HDL Cholesterol = total Cholesterol - HDL Cholesterol (all in mmol/L)*
- Non-HDL Cholesterol is a measure of all the lipoproteins which are associated with increased vascular risk and includes the cholesterol in VLDL as well as in LDL.
- Non-HDL cholesterol has an advantage over LDL cholesterol with superior risk prediction and less interference from serum triglycerides.
- ***Non-HDL cholesterol is an approved target for lipid lowering therapy in both fasting and non-fasting samples with a target of <2.5 mmol/L for high risk patients (2).***

4. REPORT FORMATTING

Lipid results will now report under a separate heading, **Lipid Studies**. The targets for therapy are shown in the footnote and are consistent with the Heart Foundation Guidelines (2, 3). There are no Australian guidelines regarding the References and these are unchanged pending national agreement. The current references will flag approximately 15% of the adult population.

EXAMPLE LIPID STUDIES REPORT			
	<u>1-Feb-17</u>	<u>Reference</u>	<u>Units</u>
Fasting Status	Fasting		
Cholesterol	5.6	(0.0 - 6.0)	mmol/L
Triglycerides	1.2	(0.0 - 2.0)	mmol/L
HDL Cholesterol	1.2	(>1.0)	mmol/L
LDL Cholesterol	4.0	(0.0 - 4.0)	mmol/L
Non-HDL Cholesterol	4.4	(0.0 - 4.5)	mmol/L
Chol/HDLc ratio	4.7		

Lipid targets for patients at high risk of cardiovascular disease:
 Total Cholesterol <4.0 mmol/L HDL Cholesterol >1.0 mmol/L
 Non-HDL Cholesterol <2.5 mmol/L Triglycerides <2.0 mmol/L
 LDL Cholesterol <2.0 mmol/L, <1.8 mmol/L for secondary prevention
 (Lipid target ranges from Australian Heart Foundation)

For cardiovascular risk prediction including lipids see www.cvdcheck.org.au.
 Reference limits provided are for general advice only and identify approximately 15% of the adult population.

References

1. Consensus statement on non-fasting lipids. Nordestgaard BL et al. Clin Chem 2016; 62:930-46
2. National Vascular Disease Prevention Alliance. Absolute cardiovascular disease risk management guidelines (2012). Available from www.cvdcheck.org.au
3. Reducing risk in heart disease. An expert guide to clinical practice for secondary prevention of coronary heart disease. Heart Foundation (2012).

For comments or questions please contact Dr Graham Jones on 8382 9160, or email graham.jones@svha.org.au

OTHER REPORTING CHANGES – TEST HEADERS

SydPath will be changing the test headings on reports for the following tests as of April 3, 2017.

The effects of these changes will be as follows:

- Headings on all reports (paper, electronic downloads) will be changed as shown.
- For electronic downloads, the result file names will display the same test header as listed below in the inbox or holding file.

These changes are based on doctors' feedback and aim to make the hardcopy and electronic reports easier to read and review.

Test Heading: **PSA** (previously reported under Routine Chemistry)
Included tests: PSA
Free PSA
Free/total ratio

Test Heading: **Iron Studies** (previously reported under Anaemia Testing)
Included tests: Iron
Transferrin
Ferritin
Transferrin saturation

Test heading: **B12 and Folate** (previous reported under Anaemia Testing)
Included tests: Vitamin B12
Active B12 (holotranscobalamin)
Red Cell Folate
Folate

Test heading: **Glucose Testing** (previously reported under Routine Chemistry)
Included tests: Glucose Fasting
Glucose Random

Test heading: **Lipid Profile** (previously reported under Routine Chemistry)
Including tests: Cholesterol
Triglycerides
HDL Cholesterol
Other lipid tests
(see additional information sheet on changes in lipid reporting)

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