

Valley Medical Laboratories

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LABORATORY BULLETIN

Date: 5 May 2019
To: Physicians and Health Care Providers
Re: Updated thyroid reference intervals

PLEASE POST OR DISTRIBUTE AS WIDELY AS APPROPRIATE

As part of a comprehensive review of reference intervals, we wish to inform you of upcoming changes to our reference intervals for thyroid testing. The new ranges are **effective Monday 10 June, 2019** and are as follows:

TSH	U/L	M/F	< 120 years	0.35 – 5.50
FT4	pmol/L	M/F	0 - < 1 m	No range available
			1 m - < 2 yrs	12.1-18.6
			2 - < 13 yrs	11.1-18.1
			13 - < 20 yrs	10.7-18.4
			≥ 20 yrs	11.5 – 22.7
FT3	pmol/L	M/F	0 - < 1 m	No range available
			1 m - < 2 yrs	5.1-8.0
			2 - < 13 yrs	5.1-7.4
			13 - < 20 yrs	4.7-7.2
			≥ 20 yrs	3.5-6.5
Anti TPO	kIU/L(U/mL)	M/F	< 120 yrs	< 60

Our old reference intervals are included below for your reference and comparison.

TSH	U/L	M/F	< 120 yrs	0.10 – 5.00
FT4	pmol/L	M/F	< 120 yrs	11.0-23.0
FT3	pmol/L	M/F	< 120 yrs	3.5-6.5
Anti TPO	kIU/L(U/mL)	M/F	< 120 yrs	< 50

You may notice that most of the changes are minor, however we would like to bring the following to your attention and offer an explanation for the change.

- 1. TSH (males and non-pregnant females):** Traditionally, our reference intervals represented clinical decision levels based on a historical combination of provincial guidelines and recommendations from our local endocrinology colleagues. Though we believe these decision points are still valid in clinical practice, we have elected to update our reference intervals to those recommended by our instrument manufacturer as representing population norms. This would harmonize us with our BC laboratory peers and the latest edition of the BC Thyroid Testing Guideline

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(BCGuidelines.ca), issued last fall. Please-keep in mind that these changes may potentially affect the biochemical classification of your patients' thyroid status but this may not necessarily alter their management. Though it generally goes without saying, every test result, TSH included, should be correlated with clinical findings before being acted upon.

2. **Pregnancy:** As per recent provincial consensus, pregnancy specific reference intervals for TSH and FT4 will be appended as a comment to every TSH and/or FT4 result for women of child bearing age (age 15-50), as follows:

Pregnancy specific TSH reference intervals

Trimester

1st	0.10 – 3.50 mU/L
2nd	0.30 – 3.50 mU/L
3rd	0.45 – 4.00 mU/L

Pregnancy specific FT4 reference intervals

Trimester

1st	11.5 – 22.7 pmol/L
2nd	10.0 – 19.0 pmol/L
3rd	9.0 – 17.0 pmol/L

3. **Pediatric:** The manufacturer has recently expanded the available pediatric ranges for FT4 and FT3 which you will notice above.

This Bulletin will be posted to our website at valleymedicallaboratories.com, under the Physicians tab on the main page. Our main reference interval document will be updated soon and will include all chemistry analytes. Stay tuned for a Physician Newsletter in the near future apprising you of the change.

Please contact me, one of my colleagues (Doug Hardy or Larry Argatoff), or our Chemistry Supervisor (Doris Campbell) should you have any questions or require additional information, at 250-763-4813.

Sincerely,



Jason Doyle MD FRCPC
Medical Director

