**Thyroid Function Reference intervals during Pregnancy**

The reference intervals provided are assay specific and therefore Laboratory specific

Waikato Hospital Laboratory: Roche e801

Rural Hospital Laboratories: QuidelOrtho XT7600

Pathlab: Beckman DxI 9000/DxI600

**Please note:**

* Changes in TSH and FT4 during pregnancy are gradual (see graphs below). The reference intervals quoted cannot capture these gradual changes.
* The reference intervals quoted have **significant uncertainty** and are only an approximate guide to interpretation of FT4, FT3 and TSH during pregnancy.
* The change in FT3 during pregnancy is small.
* Roche: use adult (non-pregnant) reference interval for gestation < 7 weeks.
* Beckman FT3: Trimester specific reference intervals are not available, suggest the use of adult values.
* Rural laboratories (Thames, Taumarunui and Tokoroa) do not perform FT3 testing; samples are referred to Waikato Hospital for FT3 testing (Roche).

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| **Roche** | TSH (mU/L) | FT4 (pmol/L) | FT3 (pmol/L) |
| 7 to < 14 weeks | 0.09 – 3.5 | 12 - 21 | 3.2 – 6.8 |
| 14 to < 28 weeks | 0.24 – 3.8 | 10 - 18 | 3.1 – 5.5 |
| 28 – 40 weeks | 0.30 – 3.8 | 9 - 16 | 3 - 6 |
| Adults | 0.27 – 4.2 | 12 - 22 | 3.1 – 6.8 |

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| **Beckman** | TSH (mU/L) | FT4 (pmol/L) | FT3 (pmol/L) |
| 1st trimester | 0.05 – 3.7 | 6 - 16 | Not available |
| 2nd trimester | 0.3 – 4.3 | 5 - 14 | Not available |
| 3rd trimester | 0.4 – 5.2 | 5 - 14 | Not available |
| Adults | 0.3 - 5 | 7 - 16 | 3.6 – 6.5 |

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| **QuidelOrtho** | TSH (mU/L) | FT4 (pmol/L) | FT3 (pmol/L) |
| 1st trimester | 0.13 – 3.1 | 11 - 21 | Referred to Waikato |
| 2nd trimester | 0.28 – 2.7 | 10 - 19 | Referred to Waikato |
| 3rd trimester | 0.31 – 3.0 | 9 - 18 | Referred to Waikato |
| Adults | 0.27 – 4.2 | 10 - 28 |  |

Data from Auckland community patients kindly provided by Dr Cam Kyle. Data from patients with “abnormal” thyroid functions before or after pregnancy, positive TPO antibodies , history of supplementation with T4 or treatment with propylthiouracil/carbimazole was excluded.

TSH as centiles by 2 weekly intervals:

FT4 as centiles by 2 weekly intervals:

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