

**PATHOLOGY SERVICES**

**From: Jamie West, Deputy Head Biomedical Scientist, Clinical Biochemistry and Immunology**

**To: All service users, Clinical Biochemistry**

**Date: 1<sup>st</sup> September 2014**

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**Re: Update of reference ranges for thyroid function tests**

From 1<sup>st</sup> September 2014, the Clinical Biochemistry department at Peterborough City Hospital will implement new reference ranges for thyroid function tests, namely TSH (thyroid stimulating hormone), FT4 (free thyroxine) and FT3 (free tri-iodothyronine).

The changes are as follows:

**Thyroid stimulating hormone (TSH):**

Age/sex	Current reference range	Updated reference range (mU/L)
<12 months	1.36-8.80	0.7-11.0
1 – 6 years old	0.85-6.50	0.7-6.0
>6 years old	0.3-4.2	0.3-4.2
Pregnant 1 <sup>st</sup> Trimester		
Pregnant 2 <sup>nd</sup> Trimester		
Pregnant 3 <sup>rd</sup> Trimester		0.2-3.2

**Free thyroxine (FT4)**

Age/sex	Current reference range	Updated reference range (pmol/L)
All ages	12-22	12-22
Pregnant 1 <sup>st</sup> Trimester		
Pregnant 2 <sup>nd</sup> Trimester		9.6 -17.0
Pregnant 3 <sup>rd</sup> Trimester		8.4-15.6

**Free tri-iodothyronine (FT3)**

Age/sex	Current reference range	Updated reference range (pmol/L)
<12 months	3.1-6.8	3.0-9.3
1 – 20 years old		3.9-8.0
>20 years old		3.1-6.8
Pregnant 1 <sup>st</sup> Trimester		
Pregnant 2 <sup>nd</sup> Trimester		
Pregnant 3 <sup>rd</sup> Trimester		3.1-5.0

The changes are derived from data obtained from the departments supplier of the thyroid function test methods (Roche Diagnostics Ltd) and provide ranges tailored to patient age groups, and also trimester specific reference ranges in pregnancy (as recommended in the 'UK Guidelines for the use of Thyroid Function tests' published by the Association for Clinical Biochemistry and the British Thyroid Association).

If you have any queries regarding these changes, or thyroid function tests, please contact the laboratory via email: [peh-tr.chemimm@nhs.net](mailto:peh-tr.chemimm@nhs.net)