

THYROID ANTIBODIES – GUIDELINES FOR REQUESTING

Anti-thyroid peroxidase antibody (TPOAb) measurement should be considered:

- in adults not receiving thyroxine/liothyronine with a new or recent finding of TSH concentration above the reference range: this test should not be repeated
- in children and young people with TSH concentration above the reference range: consider repeating this test at the time of transition to adult services
- patients with goitre, regardless of TFTs
- in children and young people to differentiate between thyrotoxicosis with hyperthyroidism (Graves' disease) and thyrotoxicosis without hyperthyroidism (e.g., transient thyroiditis)
- in patients with polyglandular autoimmune endocrinopathy
- in women with recurrent first trimester miscarriages and/or primary infertility
- to predict post-partum thyroiditis in at risk women

Anti-thyroid peroxidase antibodies are not indicated and should not be requested:

- more than once in an adult with known thyroid disease
- if the TFTs are normal, have not recently been abnormal, and the patient does not have goitre

TSH receptor antibody (TRAb) measurement should be considered:

- in adults and children to confirm Grave's disease (and to differentiate between thyrotoxicosis with hyperthyroidism [for example, Grave's disease or toxic nodular goitre] and thyrotoxicosis without hyperthyroidism [for example, transient thyroiditis])
- early in pregnancy to predict the risk of neonatal hyperthyroidism in pregnant women known to currently have, or previously have had, Grave's disease. Further testing may be indicated at 18-22 weeks gestation and in late pregnancy (30-34 weeks)
- to distinguish postpartum thyroiditis from Graves' disease in postpartum thyrotoxicosis
- in patients with thyroid eye disease including those being managed with immunosuppression: repeat testing may be required in this setting

Indication for requesting anti-thyroglobulin antibodies:

- to assess the risk of interference with thyroglobulin estimation in patients with being monitored for disseminated thyroid carcinoma.

These indications are for guidance only. The laboratory is always willing to undertake further testing when clinically indicated and is happy to discuss individual cases. The duty biochemist can be contacted on **01233 616287** or **ext 723-6287**

These guidelines were originally developed following a thyroid antibody requesting audit in 2004 and based on subsequently published expert opinion (Sinclair D. Ann Clin Biochem 2006;43;173-183). They have been reviewed and revised following publication of NICE guideline Thyroid Disease: Assessment and Management [NG145, published January 2020, <https://www.ncbi.nlm.nih.gov/books/NBK550888/>]. They have been circulated and commented on by consultant endocrinologists (Dr S Joseph, Dr K Steer, Dr L Faghahati) and by Dr M Mota (Consultant Ophthalmologist and Oculoplastic Surgeon).

Recommendations regarding TRAb measurements in pregnancy are based on:

Alexander EK, et al. Guidelines of the American Thyroid Association for the diagnosis and management of thyroid disease during pregnancy and the postpartum. Thyroid; 2017:

<https://www.liebertpub.com/doi/full/10.1089/thy.2016.0457>