Thyroid Disease in Pregnancy

1. Who to screen pre- or in early pregnancy (TSH)
   - History of thyroid dysfunction, postpartum thyroiditis and/or thyroid surgery
   - Symptoms and/or clinical signs suggestive of thyroid dysfunction or goitre
   - Family history of thyroid disorder
   - Presence of thyroid or other autoantibodies
   - Type 1 diabetes mellitus
   - Prior irradiation of head or neck
   - Infertility (as part of the infertility work-up)
   - History of recurrent miscarriage and/or preterm delivery
   - Age ≥ 35

2. Thyroid function test reference ranges in pregnancy

   Use laboratory- and trimester-specific ranges. If unavailable, a TSH upper reference limit ~0.5mIU/L below the non-pregnant TSH upper reference limit may be used; a TSH lower reference limit of 0.1, 0.2 and 0.3mIU/L may be used for the first, second and third trimesters respectively.

3. RPAH ANC Thyroid referral criteria

   (a) TSH ≥4mIU/L (on early pregnancy screen)

   Please try to limit referrals to those patients you are uncomfortable in managing or if patient has overt hypothyroidism i.e. an elevated TSH with low fT4 or if TSH ≥10 mIU/L

   - Always check TPOAb
   - Can discuss with Endocrinology registrar regarding Thyroxine dose if unsure
   - Monitor TSH every 4-6 weeks till 20 weeks with a final check at 28-32 weeks
   - If Thyroxine is commenced and TPOAb –ve, can stop Thyroxine at term. Check TFT 2-3 months’ postpartum
   - If Thyroxine is commenced and TPOAb +ve, halve Thyroxine dose at term and repeat TFT 2-3 months’ postpartum. Monitor for postpartum thyroiditis at 3.6 and 12 months postpartum
   - Women on Thyroxine pre-pregnancy will generally require a 20 to 50% dose increase once pregnancy is confirmed. The dose of Thyroxine can be reduced to the pre-pregnancy dose at term

   (b) Suppressed TSH (e.g. <0.01mIU/L)

   Check fT4, fT3 and TRAb

   - If fT4 and fT3 are normal with negative TRAb, repeat TFT in 4-6 weeks. May be due to transient gestational hyperthyroidism. Refer if TSH remains suppressed
   - Refer if elevated fT4 and/or fT3 and/or TRAb +ve

   (c) Past or current history of Graves’ disease:

   Check fT4, fT3 and TRAb

   Refer to determine
   - risk of fetal hyperthyroidism
   - need for monitoring and/or treatment in pregnancy
   - risk of postpartum flare

   NB risk of persistent TRAb post RAI and total thyroidectomy

   (d) Thyroid nodule

   Order TSH and ultrasound

Suggested initial Thyroxine dose for hypothyroidism diagnosed in pregnancy:

<table>
<thead>
<tr>
<th>TSH (mIU/L)</th>
<th>Thyroxine dose (weight based calculation) mcg/kg/day</th>
<th>Thyroxine dose (approximate) mcg</th>
</tr>
</thead>
<tbody>
<tr>
<td>ULN-5</td>
<td>1-1.5</td>
<td>50-75</td>
</tr>
<tr>
<td>5-10</td>
<td>1-1.7</td>
<td>75-100</td>
</tr>
<tr>
<td>&gt;10</td>
<td>1.7-2.5</td>
<td>100-200</td>
</tr>
</tbody>
</table>

TPOAb = thyroid peroxidase antibodies

ULN= upper limit of norm

Please ensure that ALL fields are completed on the referral form with CURRENT (ie <3 weeks) pathology prior to faxing to Endocrine Unit: FAX 9515 8728

Source: Dr Ash Gargya - Endocrinologist, RPAH (revised June 2018)
Julie Hetherington - Clinical Nurse Consultant, Endocrinology & Metabolism
Patients who already take Thyroxine will usually need an increase in dose once pregnancy is confirmed
This will usually be between a 20 to 50% increase in the dose
They therefore should have initial and then **4-6 weekly** bloods done with a target TSH within the laboratory trimester-specific reference range or, if unavailable, a target TSH of <2.5 in the 1st trimester, <3.0 in the 2nd trimester and <3.5mU/L in the 3rd trimester
If the target TSH is maintained then the GP can continue to manage patient