

Thyroid disorders in pregnancy

Management of antenatal subclinical hypothyroidism and subclinical hyperthyroidism

Thank you for referring your patient with an abnormal Thyroid Stimulating Hormone (TSH) measurement, to the Maternity Outpatient's Department of the Royal Brisbane and Women's Hospital (RBWH).

The Endocrine and Obstetric Medicine Departments of the RBWH have developed the following recommendations for the management of mildly elevated or low TSH levels measured in the first trimester of pregnancy. These recommendations, which are based on the recently published American Thyroid Association¹ (ATA) guidelines, will assist you to manage your patient without the need for referral to a specialist clinic.

Important changes to this version include:

1. Thyroxine is no longer recommended to women with TSH less than 2.5mIU/L who are antibody positive.
2. Thyroxine is no longer recommended to women with TSH from 2.5 – 4.0mIU/L who are antibody negative.
3. Advice regarding the management of sub-clinical hyperthyroidism is provided.

Current recommendations

1. Antenatal Subclinical hypothyroidism

A) If the initial TSH \geq 2.5 – 4.0 mIU/l:

Repeat the TSH, FT4 and fT3, and measure the anti-thyroid antibody titres.

If repeat TSH < 2.5 mIU/L and antibodies are normal - no further testing

If repeat TSH < 2.5 mIU/L but positive antibodies - thyroxine not required.

If repeat TSH \geq 2.5 mIU/L with positive antibodies - commence thyroxine 50 ugm daily.

If repeat TSH \geq 4.0 mIU/L without positive antibodies - commence thyroxine 50 ugm daily.

NOTE: If TSH is between 2.5 – 4.0 mIU/l and antibodies are normal - thyroxine is not required.

B) If initial TSH > 4.0 mIU/L - commence thyroxine 50 ugm daily.

C) Repeat TSH in 4 weeks:

If TSH \geq 2.5 mIU/L, increase thyroxine to 75 ugm/day

If TSH < 0.4 mIU/L, decrease thyroxine to 25 ugm/day

Next step:

D) Repeat TSH ~ 18 weeks

~ 26 weeks (with gestational diabetes screening test or GTT)

~ 34 weeks

Adjust Thyroxine dose to maintain TSH between 0.4 and 2.5 mIU/L

E.g. increase/decrease thyroxine by 25 ug/day

If dose needs to be adjusted, recheck TSH in 4 weeks.

Post-partum Management

Following delivery, the on-going need for thyroxine needs to be re-assessed.

1. If initial TSH < 4.0 mIU/L and antibody positive,
Stop thyroxine.
Repeat TSH in 3 months.

If TSH < 4.0 mIU/L, check TSH annually.

If TSH > 4.0 mIU/L, re-commence thyroxine to treat established hypothyroidism.

2. If initial TSH > 4.0 mIU/L and antibody negative,
Stop thyroxine.
Repeat TSH in 3 months.

If TSH < 4.0 mIU/L, continue off thyroxine. Re-check at 9 months (6 months later).

If TSH \geq 4.0 mIU/L, consider re-commencing Thyroxine

At 9 months:-

If TSH < 4.0 mIU/L, no further testing unless clinically indicated.

If TSH \geq 4.0 mIU/L, consider recommencing thyroxine.

3. If initial TSH > 4.0 mIU/L and antibody positive
Continue thyroxine.

2. Antenatal Subclinical hyperthyroidism

If the initial TSH < 0.4 mIU/L:-

Repeat the TSH, FT4 and FT3.

If the TSH < 0.05 mIU/L, also measure the TSH receptor antibody titre (TRAb; this may be referred to as the TSH receptor stimulating immunoglobulin (TSI) by some laboratories).

i) If repeat TSH > 0.4 mIU/L and TRAb is normal - no further testing

ii) If repeat TSH > 0.05 and < 2.5 mIU/L and TRAb is normal

Repeat the TFTs every 4 weeks to ensure the TSH normalises. Once normal, no further testing required.

Mild suppression of TSH in the first trimester is a normal phenomenon and is due to the action of HCG to partially mimic TSH, resulting in a reduction in TSH levels. It typically normalises in the second trimester. It does not require any therapy.

iii) If repeat TSH > 0.05 and the TRAB is elevated:

Consider referral to endocrinology service.

iii) If repeat TSH < 0.05 mIU/L:

Refer to an endocrinology service.

Please manage your patient according to the above guidelines. We have written to your patient advising them to make an appointment to see you as soon as possible.

If you have any concerns about your patient's management, then please contact either:

A/Prof Michael d'Emden
A/Prof Karin Lust

Michael.dEmden@health.qld.gov.au
karin.lust@health.qld.gov.au

Ph. (07) 3646 7780
Ph. (07) 3646 0766

We would appreciate it if copies of your patient's TFTs could be forwarded to the Department so that we can audit the effectiveness of this protocol.

Yours sincerely,

A/Prof Michael d'Emden
Director of Endocrinology
Department of Endocrinology & Diabetes
Royal Brisbane and Women's Hospital

A/Prof Karin Lust
Interim Clinical Director Obstetrics & Gynaecology and
General & Obstetric Physician Womens & Newborn
Services
Royal Brisbane and Women's Hospital

Reference

1. 2017 Guidelines of the American Thyroid Association for the Diagnosis and Management of Thyroid Disease during Pregnancy and the Postpartum. DOI: 10.1089/thy.2016.0457

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