PIPADOR REVISION

MRCOG Part 1 Revision Notes

Hypothyroidism

ENDOCRINOLOGY • LECTURE 190

VISUAL EXAMINATION REVISION NOTES

2026 Edition

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MRCOG PART 1 REVISION NOTES | ENDOCRINOLOGY

Hypothyroidism

Causes, interpretation of thyroid tests, effects in pregnancy and management before, during and after pregnancy

≈ 2–3%	↑ 25–30%	< 2.5	4 hours
Pregnancies with hypothyroidism (incl. subclinical)	Levothyroxine at pregnancy confirmation	TSH target (mU/L) — 1st trimester	Separate from iron/calcium

■ KEY FACTS: Learning objectives

- Describe the causes and diagnosis of hypothyroidism and interpret thyroid function tests.
- Describe the maternal and fetal effects of hypothyroidism in pregnancy.
- Describe management before, during and after pregnancy, including subclinical disease and TPO antibodies.

190.1 Causes and diagnosis

Cause	Notes
Hashimoto's thyroiditis	Commonest in iodine-sufficient areas; TPO antibodies; associated autoimmunity (type 1 DM, pernicious anaemia, coeliac, POI)
Post-ablative	Radioiodine or thyroidectomy for Graves'/cancer (TRAb may persist — fetal risk)
Iodine deficiency	Commonest worldwide — goitre, cretinism
Drugs	Amiodarone, lithium, antithyroid drugs, checkpoint inhibitors
Secondary	Pituitary disease (Sheehan's), hypophysitis — low/normal TSH with low fT_4
Congenital	Dysgenesis, dyshormonogenesis — newborn bloodspot

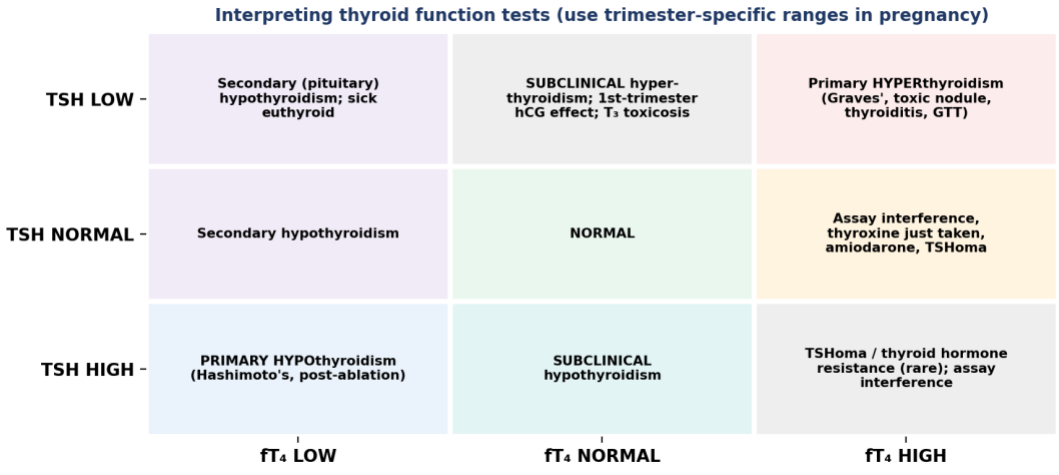


Figure 190.1 — Interpreting thyroid function tests

Symptoms (fatigue, weight gain, cold intolerance, constipation, dry skin, depression) overlap with pregnancy — diagnosis rests on **TSH and free T_4 using trimester-specific ranges** (Lecture 179).

190.2 Effects in pregnancy

Maternal	Fetal / neonatal
Subfertility/anovulation, miscarriage, anaemia, pre-eclampsia, placental abruption, PPH, preterm birth	Impaired neurodevelopment (maternal T_4 is critical before ≈ 18–20 wk), low birthweight, stillbirth; TRAb-mediated fetal hypothyroidism/hyperthyroidism after Graves' ablation (TRAb can be blocking or stimulating)

190.3 Management

Stage	Management
Pre-conception	Optimise levothyroxine to TSH within the lower part of the reference range (≈ < 2.5 mU/L); advise to increase dose as soon as pregnancy confirmed
Early pregnancy	Increase levothyroxine by ≈ 25–30% (e.g. 2 extra doses per week, or 25–50 µg/day) on a positive test; check TFTs every 4–6 weeks to 20 weeks, then at least once (≈ 28 wk); aim TSH within trimester-specific range
New overt hypothyroidism	Start full replacement promptly (≈ 1.6–2 µg/kg/day) and recheck in 2–4 weeks
Subclinical hypothyroidism	Treat if TSH above trimester-specific range (especially with TPO antibodies or > 10 mU/L); benefit for child IQ not shown in trials when started mid-pregnancy
TPO antibodies, euthyroid	Levothyroxine does not improve live birth (TABLET trial); monitor TSH; ↑ postpartum thyroiditis risk
Absorption	Take on an empty stomach; separate from iron, calcium, PPIs (≈ 4 h); hyperemesis may impair absorption
Postnatal	Return to pre-pregnancy dose; TFTs at ≈ 6–8 weeks; if started in pregnancy, review need; breastfeeding safe

190.4 Must-know summary

■ **EXAM TIP**

- Commonest cause: **Hashimoto's** (TPO antibodies); worldwide: iodine deficiency.
- Fetus depends on **maternal T_4** in the first half — untreated hypothyroidism impairs neurodevelopment.
- **↑ Levothyroxine 25–30% at confirmation**; TFTs 4–6-weekly; return to pre-pregnancy dose after birth.
- Separate levothyroxine from iron/calcium; TPO+ euthyroid women: monitor, no treatment benefit for miscarriage.

■ **MNEMONIC / MEMORY AID**

'Two extra tablets a week as soon as the test is positive'.