Hypothyroidism

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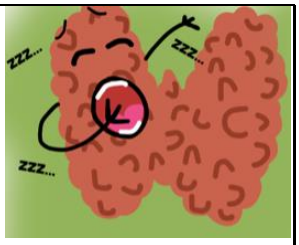
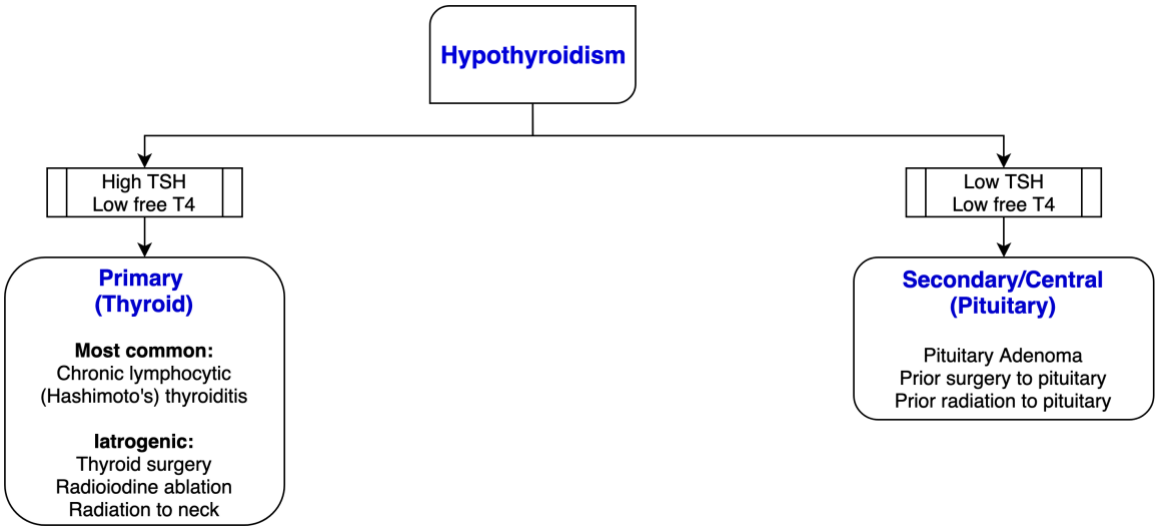


1. History: Often non-specific like fatigue, difficulty losing weight. Can include constipation, cold intolerance, myalgias, irregular/heavy periods, dry skin, coarse hair, depressed mood. Keep a broad DDx for fatigue (e.g. major depression, sleep disorders).
2. Physical:
   - Vitals: usually normal (bradycardia or hypothermia seen in severe cases)
   - Thyroid: can have symmetric enlargement in Hashimoto's
   - Other: dry skin, delayed relaxation phase of deep tendon reflexes
3. Approach/Framework:



(Reminder: when thyroid itself is not making enough hormone in primary, the signal from the pituitary appropriately increases and a HIGH TSH is seen. In contrast, the pituitary itself is not making enough TSH in secondary.)

1. Evaluation:
   - Initial labs for nonspecific symptoms (fatigue): CBC, BMP, Iron studies, Vitamin D, TSH → Free T4
   - TSH & Free T4 pearls:
     - If abnormal, repeat in 4 – 6 weeks. Can fluctuate with acute illness or stress (recovery from sick euthyroid syndrome/non-thyroidal illness can cause an elevated TSH).
     - High TSH with normal free T4: if repeat check 4-6 weeks later still abnormal = *subclinical hypothyroidism*. If TSH ≥ 10, treat. Management for moderately elevated TSH (4.5-9):
       - asymptomatic → continue to monitor (note: TSH rises with age)
       - symptomatic → treat with levothyroxine
       - patient planning pregnancy: order anti-TPO Ab and treat. Good time to refer to endocrine!
2. Management:
   - Levothyroxine. Typically, 1.6 microgram/kg is a typical full replacement dose, can round down in overweight/obese patients. (Often start lower in elderly pts or those with CAD).
   - Key counseling: taken in morning on empty stomach, wait ½ hour to eat. Ca/Fe supplementation should be separated by 4-6 hours. If a dose is missed, it is long-acting: can take 2 the next day
   - Re-check TSH 4-6 weeks to see if dose is appropriate
   - Additional resources: NEJM Resident 360 section on thyroid disorders