

1. Growth Hormone (GH) Stimulating Agents
MOA: Stimulation of release and replacement of GH
Somatropin – GH - SE: Hyperglycemia, carpal tunnel syndrome
Tesamorelin – Synthetic GHRH, visceral adiposity in HIV patients
Mecasermin – Recombinant IGF-1 - SE: Hypoglycemia, LV hypertrophy
 CI: Malignancies

2. Growth Hormone (GH) Reducing Agents
MOA: Blockade of GH release or receptor
Pegvisomant – GH-R antagonist - SE: ↑CYPs, lipodystrophy
Octreotide, Lanreotide – somatostatin analog - SE: B12 deficiency (↓GI motil.), ↓ insulin release
Bromocriptine/Cabergoline – D₂ agonist – SE: psychosis, ↓PRL, ↓TRH, ↓GnRH

3. Prolactin reducing agents (Dopamine Agonists)
MOA: Reduce Prolactin Release
Bromocriptine/Cabergoline – Dopamine agonists (D₂)
 SE: psychosis, ↓GH, ↓GnRH

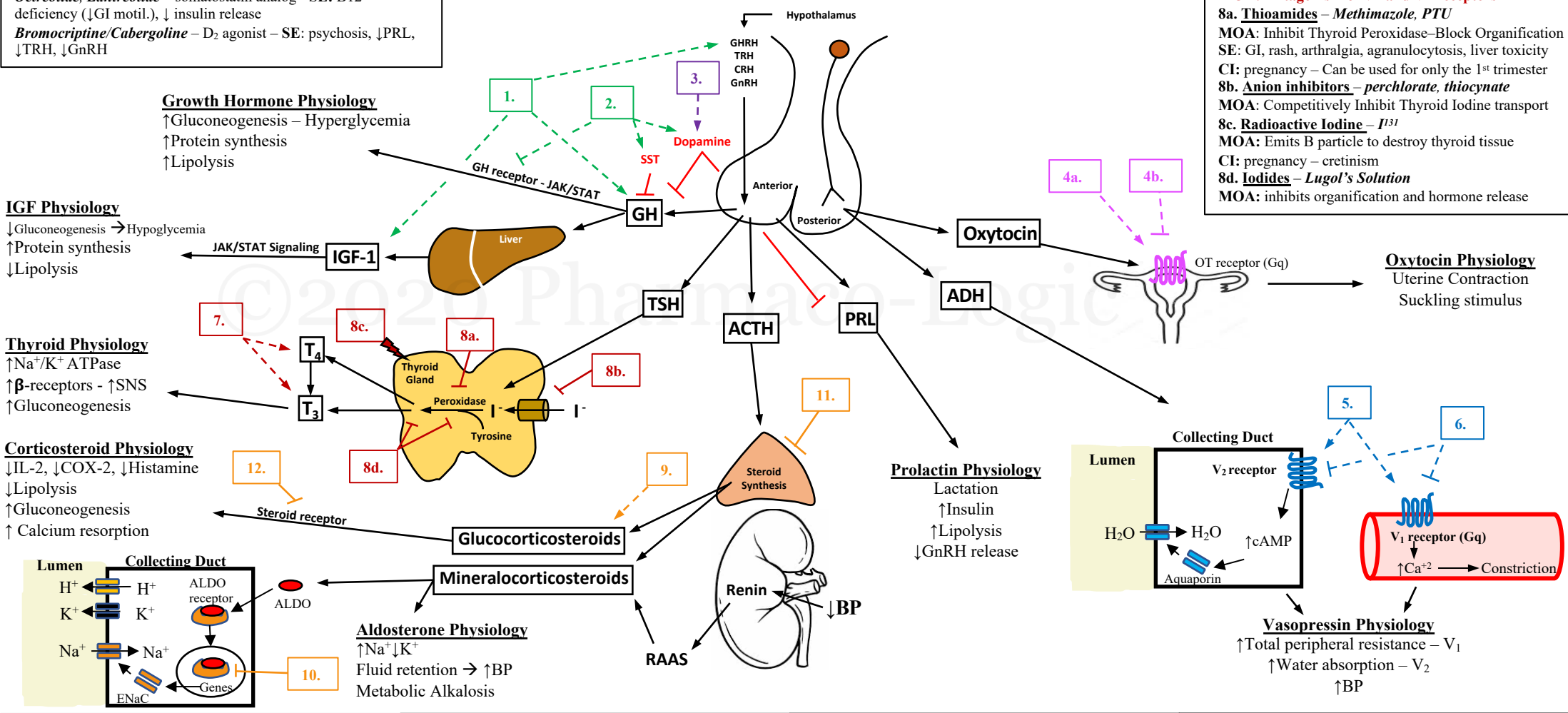
4. Oxytocin agents
MOA: Modulate OT receptors during Delivery
 4A. *Pitocin* – Oxytocin agonist - Must conduct Fetal tolerance test SE: Uterine contractions, fetal distress
 4b. *Atosaban* – Oxytocin receptor antagonist – prevent preterm labor

5. Vasopressin agonists – TX: Diabetes insipidus
MOA: Activates V₁ and V₂ receptors
Vasopressin – Esophageal variceal bleeding
Desmopressin – V₂>V₁-VWb disease, nocturnal enuresis
 SE: Headache, nausea, cramps agitation, allergic reactions

6. Vasopressin Antagonists – TX: SIADH
MOA: Antagonism of V₁ and V₂ receptors
Conivaptan – V_{1a} and V₂ Receptors – IV administration
Tolvaptan – V₂ > V₁ Receptors – Oral
 SE: Hepatotoxicity (tolvaptan)

7. Thyroid Hormone therapy – TX: Hypothyroidism
MOA: Synthetic thyroid hormone replacement
Levothyroxine – Synthetic T₄ – LONG T1/2
Liothyronine – Synthetic T₃ – More potent form
Liotrix – T₃ & T₄
 SE: Weight loss, tachycardia, heat intolerance, insomnia
 CI: PPIs, Bisphosphonates, Cholestyramine, Warfarin, Digoxin, Amiodarone, Oral contraceptives, Myxedema, Coronary Artery Disease

8. Anti-Hyperthyroid Agents
MOA: Antagonism of V₁ and V₂ receptors
 8a. **Thioamides** – *Methimazole, PTU*
MOA: Inhibit Thyroid Peroxidase–Block Organization
 SE: GI, rash, arthralgia, agranulocytosis, liver toxicity
 CI: pregnancy – Can be used for only the 1st trimester
 8b. **Anion inhibitors** – *perchlorate, thiocyanate*
MOA: Competitively Inhibit Thyroid Iodine transport
 8c. **Radioactive Iodine** – *I¹³¹*
MOA: Emits B particle to destroy thyroid tissue
 CI: pregnancy – cretinism
 8d. **Iodides** – *Lugol's Solution*
MOA: inhibits organification and hormone release



Growth Hormone Physiology
 ↑Gluconeogenesis – Hyperglycemia
 ↑Protein synthesis
 ↑Lipolysis

IGF Physiology
 ↓Gluconeogenesis → Hypoglycemia
 ↑Protein synthesis
 ↓Lipolysis

Thyroid Physiology
 ↑Na⁺/K⁺ ATPase
 ↑β-receptors – ↑SNS
 ↑Gluconeogenesis

Corticosteroid Physiology
 ↓IL-2, ↓COX-2, ↓Histamine
 ↓Lipolysis
 ↑Gluconeogenesis
 ↑ Calcium resorption

Aldosterone Physiology
 ↑Na⁺ ↓K⁺
 Fluid retention → ↑BP
 Metabolic Alkalosis

Prolactin Physiology
 Lactation
 ↑Insulin
 ↑Lipolysis
 ↓GnRH release

Oxytocin Physiology
 Uterine Contraction
 Suckling stimulus

Vasopressin Physiology
 ↑Total peripheral resistance – V₁
 ↑Water absorption – V₂
 ↑BP

9. Corticosteroids
MOA: Activate nuclear steroid receptors
Fludrocortisone – mineralocorticosteroids
Hydrocortisone, Betamethasone – Glucocorticosteroids
Cortisol, Prednisone – Mixed gluco/mineralocorticosteroid
 SE: Mineralocorticosteroids – Fluid retention ↑Na⁺, ↓K⁺
 Glucocorticosteroids – Hyperglycemia, Peptic ulcer, infection, Bone resorption, moon face, buffalo hump

10. Mineralocorticosteroid (MCS) receptor antagonists
MOA: Inhibit MCS receptors
Spiroglactone – MCS/androgen antag. SE: ↓Libido, amenorrhea, tender breasts, metabolic acidosis
Eplerenone – MCS antagonist SE: Hypotension, diuresis
Drospirone (Progestin) – MCS/androgen antag.
 SE: ↓Libido
 CI: RAAS inhibitors (hyperkalemia), K-supplements

11. Corticosteroid synthesis inhibitors
MOA: Inhibit steroid synthesis
Aminoglutethimide – Inhibits cholesterol to pregnenolone
 SE: Hepatotoxic, Rash, hypothyroid
Ketoconazole – inhibits side chain cleavage
 SE: Inhibits CYPs, impotence, Long QT
Metyrapone – Inhibits 11-β-Hydroxylase
Etomidate – Adrenal suppression

12. Corticosteroid Receptor Antagonists
MOA: Block corticosteroid receptor activation
Mifepristone – USE: Adrenal carcinoma, ectopic ATCH secretion
 SE: Fetal Death, Long QT, Hypertension
 CI: pregnancy