

Hormone Axes

Endocrinology is understood based on feedback loops

Example: Hypothalamus → Pituitary → Target Gland → Hormone → Feedback

Systems Review History

Thyroid	Diabetes	Adrenal	Pituitary	Past History
Weight loss/gain	Polyuria, polydipsia	Fatigue, dizziness	Headache, vision	Endocrine/autoimmune disorders
Heat/cold intolerance	Fatigue	Pigmentation	Libido/fertility	Surgeries, radiation
Palpitations, tremor	Infections	Nausea, salt craving	Galactorrhea	
Neck swelling	Neuropathy, vision		Growth changes	

Hair/skin/mood changes

Systems Review Physical

General Inspection	Vitals	Hands/Arms	Face & Neck	Chest	Abdomen	Legs	Neuro
Body habitus	BP (± orthostatic)	Tremor	Eye signs (lid lag, exophthalmos)	Gynecomastia	Central obesity	Myopathy	Visual fields
Skin/hair/voice	HR	Palmar erythema	Eye signs (lid lag, exophthalmos)	Hair distribution	Striae	Reflexes	CN exam (pituitary)
Scars, pigmentation, striae	Blood glucose	Myopathy	Thyroid: inspect, palpate, auscultate		Masses	Neuropathy	
	Temp	Reflexes				Edema	
		Skin changes					

The Five Systems and Their Common Disorders

Thyroid	Hypo-/Hyperthyroidism, Nodules, Goiter, Thyroiditis
Adrenal	Addison's, Cushing's, Conn's (Hyperaldosteronism), Pheochromocytoma
Pituitary	Prolactinoma, Acromegaly, Hypopituitarism, Diabetes Insipidus
Pancreas	Diabetes Mellitus (Type 1 & 2), Hypoglycemia
Gonadal	PCOS, Hypogonadism, Menstrual disorders

Key Symptoms

<input type="checkbox"/> Hypo	<input type="checkbox"/> Hyper
Weight Gain	Weight Loss
Fatigue	Sweating/Palpitations
Cold Intolerance	Anxiety, Tremors
Constipation	Diarrhea
Depression	Heat Intolerance
Amenorrhea	Irregular Periods

Symptom-Based Differentials

Symptom	Possible Differential
Weight loss	Hyperthyroid, diabetes, Addison's, cancer
Weight gain	Hypothyroid, Cushing's, insulin therapy
Amenorrhea	PCOS, prolactinoma, hypothalamic causes
Polyuria/polydipsia	Diabetes mellitus, diabetes insipidus, hypercalcemia
Fatigue	Hypothyroid, Addison's, diabetes, anemia

Considerations

Hormone excess/deficiency
Primary/secondary gland problem
Mass effects (compression, vision)
Systemic effects (metabolic, menstrual, growth)
Timeline (acute, chronic, fluctuating)

Labs

Lab	Indication
TSH + Free T4	Thyroid function (hypo/hyper)
Cortisol ± ACTH	Adrenal function (Addison's/Cushing's)
OGTT + HbA1c	Glucose tolerance & diabetes control
Prolactin	Pituitary tumors, galactorrhea, amenorrhea
PTH + Calcium	Hyper-/Hypoparathyroidism
LH/FSH + Sex hormones	Gonadal axis function
Insulin/C-peptide	Differentiating type 1/2 diabetes, insulinomas

Common Syndromes

Syndrome	Key Features
Cushing's	Central obesity, moon face, purple striae, HTN, glucose intolerance
Addison's	Hyperpigmentation, fatigue, hypotension, salt craving, weight loss
Graves'	Hyperthyroid + eye signs (exophthalmos, lid lag), diffuse goiter
Hypothyroid	Cold intolerance, dry skin, weight gain, fatigue, slow reflexes
Acromegaly	Enlarged hands/feet, coarse features, diabetes, spacing of teeth
Prolactinoma	Galactorrhea, amenorrhea, reduced libido, visual changes



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Common Syndromes (cont)

PCOS Irregular menses, hirsutism, acne, insulin resistance, obesity

Clinical Skills

Glucose (pin prick)

Visual field via confrontation

Thyroid exam (palpate, swallow, auscultate)

Visual signs (Cushingoid features, tremor, myxedema)

Diabetic foot exam (vibration, pinprick, monofilament)



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