

Assessment of the Endocrine System

Skin

Hyperpigmentation - High MSH, Low ACTH

Depigmentation - Autoimmune endocrine disorders

Striae - High ACTH and Cortisol

Dry skin - Low Thyroid

Thick leathery oily skin - High GH (acromegaly)

Hirsutism - High ACTH and Cortisol

Cardiovascular

Chest pain - High or low thyroid

Dysrhythmias - High or low PTH or Pheochromocytoma

Hypertension - High thyroid, Cushing's

Fluid Overload - High ADH, myxedema

Musculoskeletal

Muscle weakness - Low PTH, thyroid, adrenal and pituitary hormones

Low muscle mass - Low GH and High ACTH

Large long bones and extremities - Acromegaly and high GH

Neurological

Lethargy - Low thyroid

Tetany - Low PTH causing low Ca^{++}

Seizure - High or low ADH, Pituitary tumor

Gastrointestinal

Constipation - High or low thyroid

Genitourinary

Polyuria - Diabetes mellitus or low ADH

Decreased urine output - High ADH

Reproductive

Menstrual Irregularities - Low pituitary, low libido, low fertility, high GH, high or low T_3T_4

Head and Neck

Exophthalmos (bulging eyes) - High thyroid

Moon face - High cortisol and ACTH

Goiter - High or low thyroid

Visual changes - Pituitary tumor

Lab reference values

ACTH

Morning - <120 pg/mL

Evening - <85 pg/mL

Aldosterone

Upright - 7-30 ng/dL

Supine - 3-16 ng/dL

Growth Hormone

Men - <4 ng/mL

Women - <18 ng/mL

TSH

0.4 - 4.2 μ U/mL

Parathyroid Hormone

50-330 pg/mL

T_3

Age 20-50 - 70-204 ng/dL

Age 50+ - 40-181 ng/dL

T_4

4.6-11.0 mcg/dL

Cortisol

20-90 mcg/24 hours

Fasting Blood Glucose

70-90 mg/dL