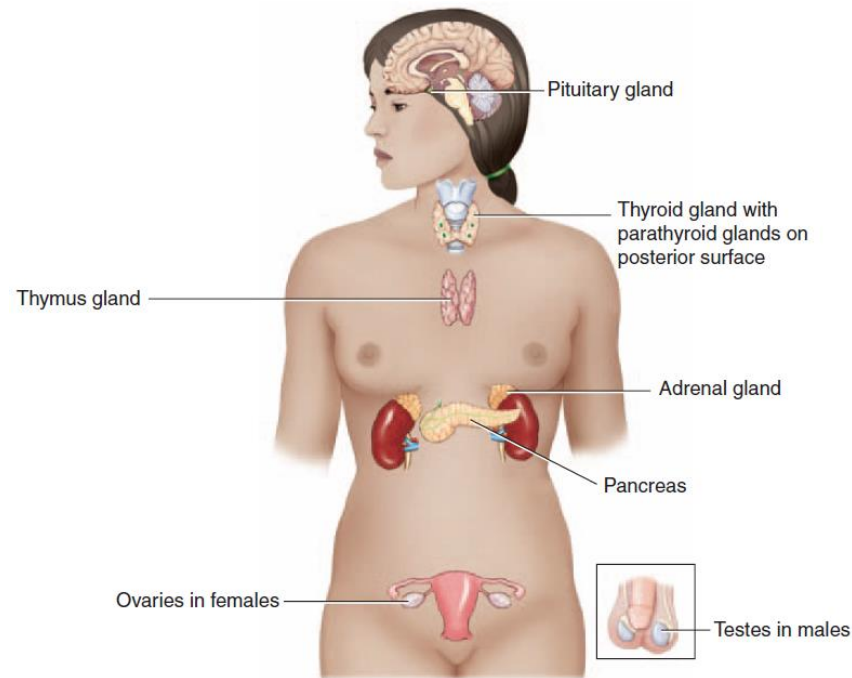


Chapter 16

Endocrine System



Chapter 16

Objective 1: Pronounce glands and hormones of the endocrine system.

Endocrine System

The endocrine system is composed of glands distributed throughout the body:

pituitary gland

(pi-TOO-i-tar-ē (gland))

hypothalamus

(hī-pō-THAL-a-mus)

thyroid gland

(THĪ-royd) (gland)

parathyroid glands

(par-a-THĪ-royd)

(glans)

islets of Langerhans

(Ī-lets) (LAHNG-er-hahnz)

adrenal glands

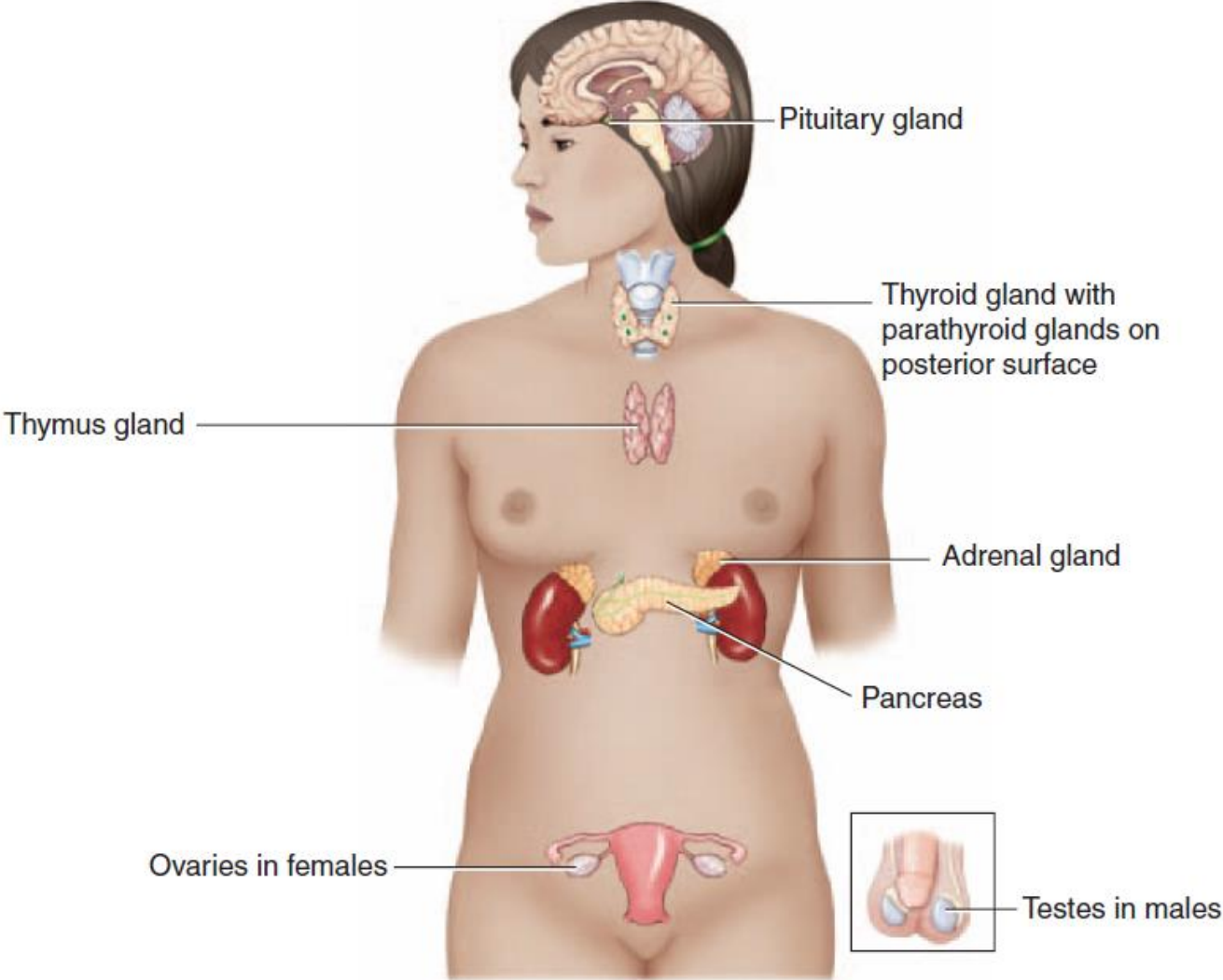
(a-DRE-nal) (glans)

PRESENTED IN EARLIER CHAPTERS

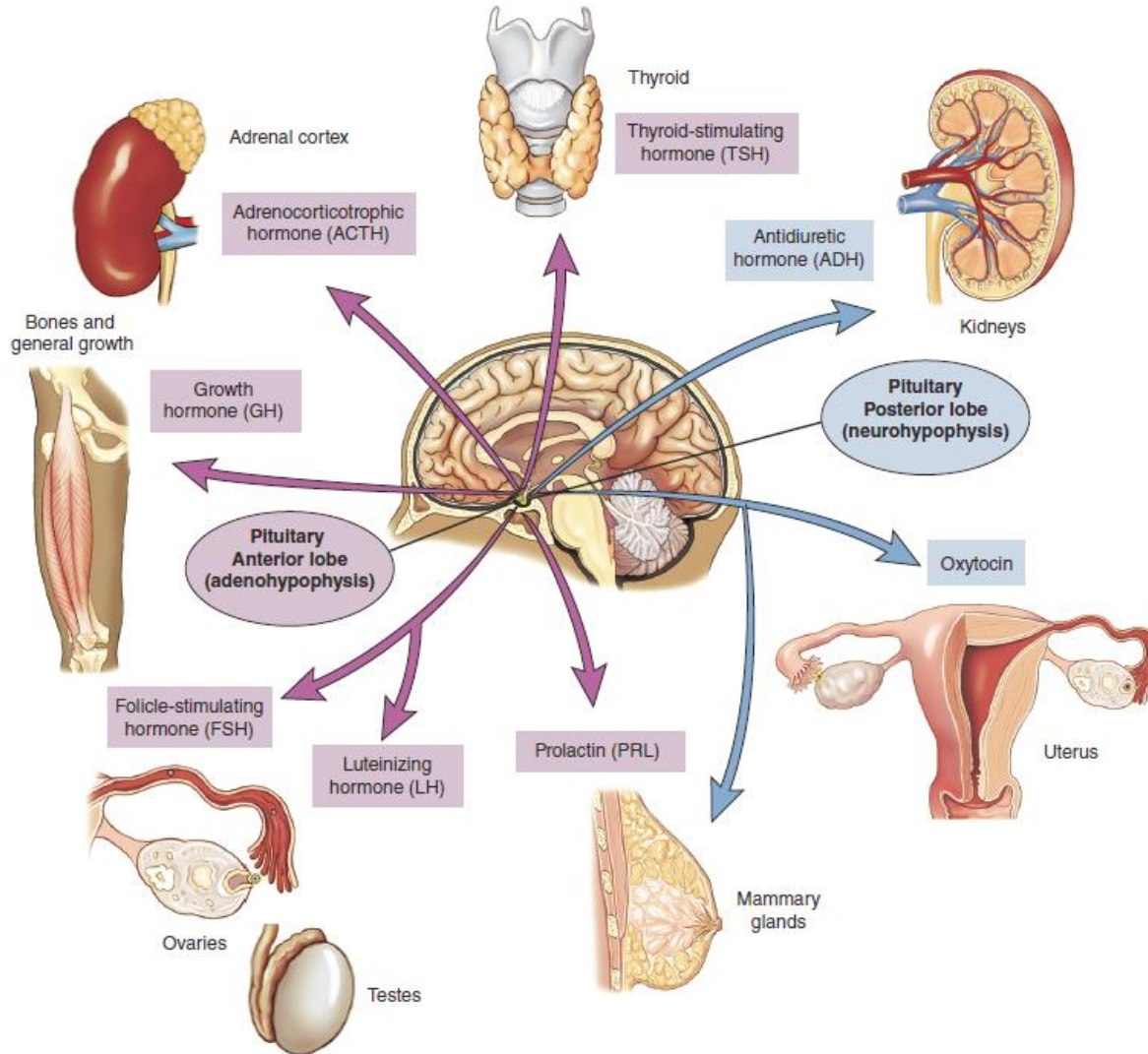
gonads (ovaries and testes)

thymus gland

The Endocrine System

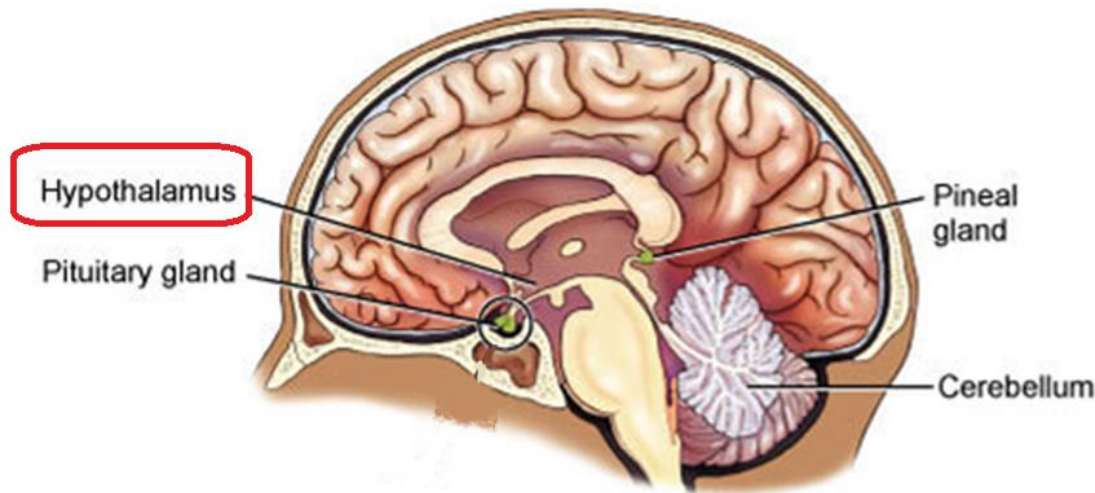


Pituitary Gland, Hormones Secreted, and Target Organs



Endocrine Glands


- **hypothalamus:** located superior to the pituitary gland in the brain; secretes “releasing” hormones that functions to stimulate or inhibit the release of pituitary gland hormones



Can you solve the MedTerm Mix Up?

MEDTERM MIX UP

M.T. LOOKING FORWARD TO HIS VACATION ON A SMALL ISLAND ON THE PANCREATIC COAST.



□ □ L □ □ □ □ F

□ □ □ □ □ H □ □ □ □

**SLIEST FO
ARLHGNAESN**

CLUE: M.T. will not need to take his insulin with him.

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Chapter 16

Objective 2: Define and spell word parts related to the endocrine system.

Combining Forms Commonly Used with the Endocrine System Terms

Can you define these combining forms?

1. acr/o

2. calc/i

3. dips/o

4. kal/i

5. natr/o

1. extremities, height

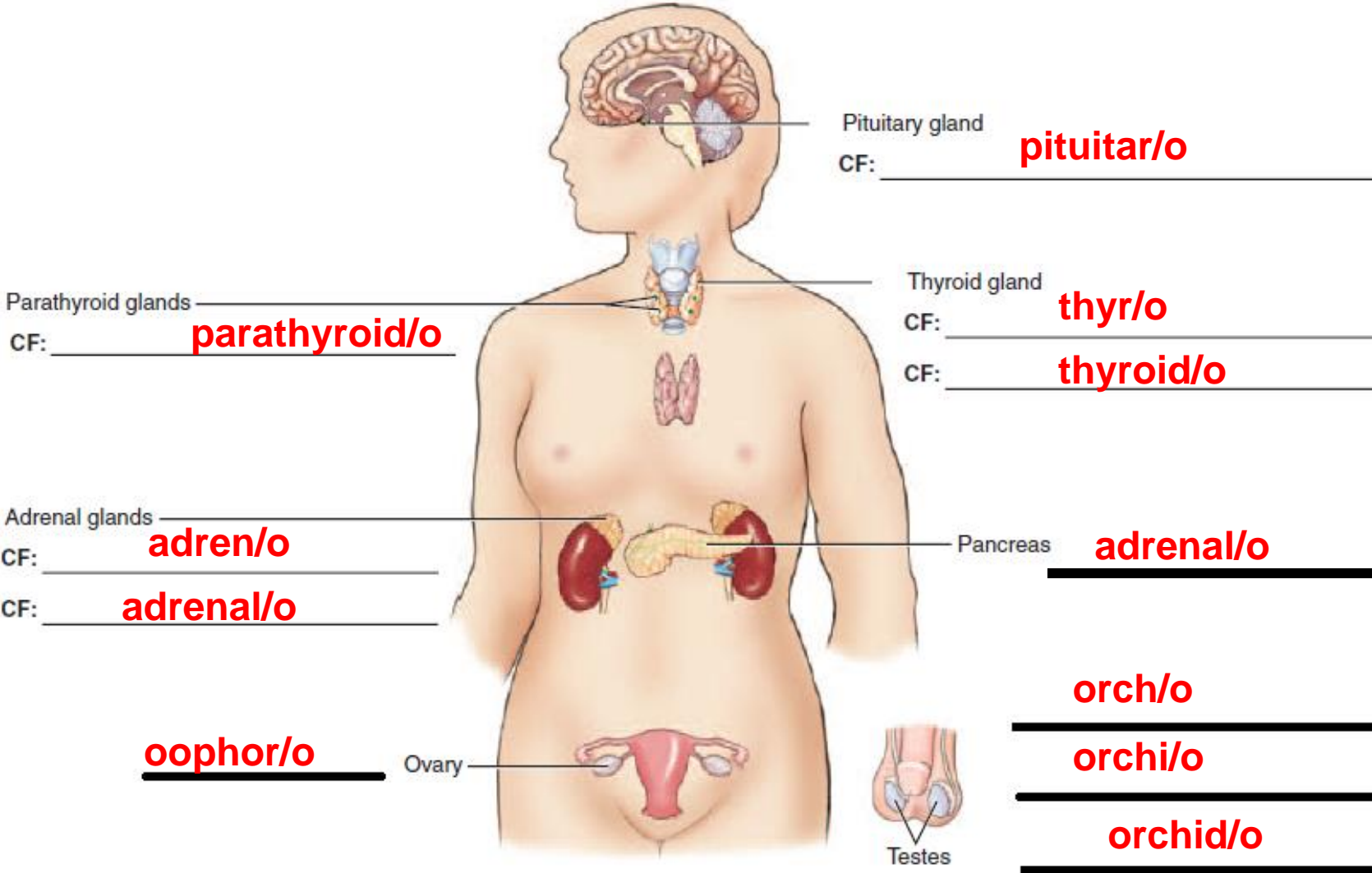
2. calcium

3. thirst

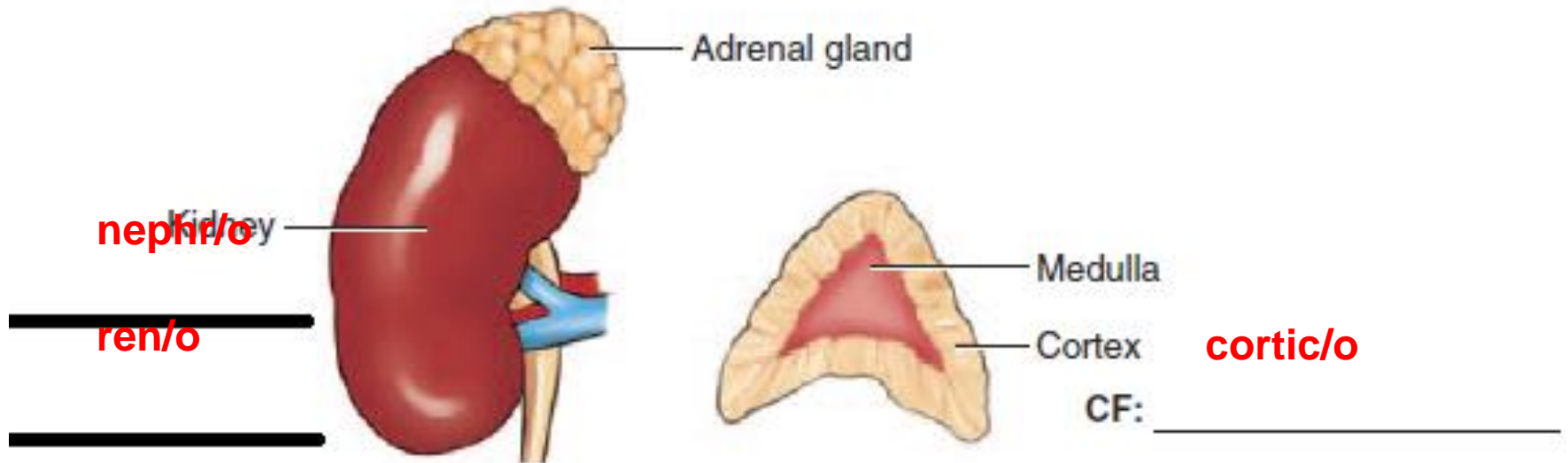
4. potassium

5. sodium

Combining Forms of the Endocrine System



More Combining Forms of the Endocrine System



Combining Forms Review

Can you define these combining forms?

1. adrenal/o

1. adrenal gland

2. dips/o

2. thirst

3. cortic/o

3. cortex

4. natr/o

4. sodium

5. thyroid/o

5. thyroid gland

Suffix

-drome

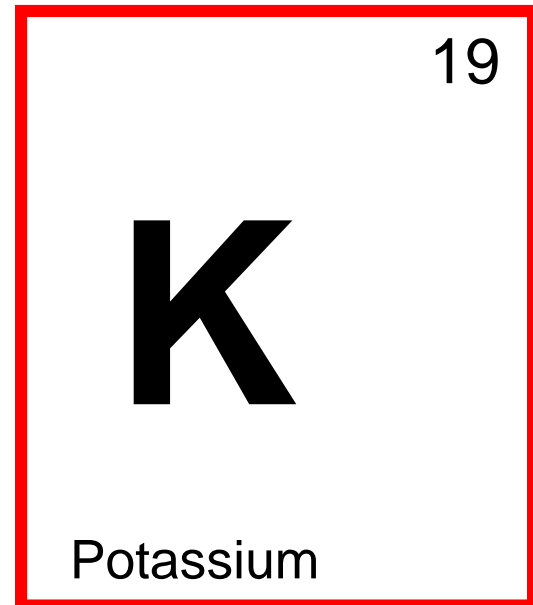
run, running

Might a DRONE **run, running across the sky
help you recall the definition for the suffix
-DROME?**

Review Question

Which of the following contains the word root meaning potassium?

- a) hypokalemia
- b) hyponatremia



Chapter 16

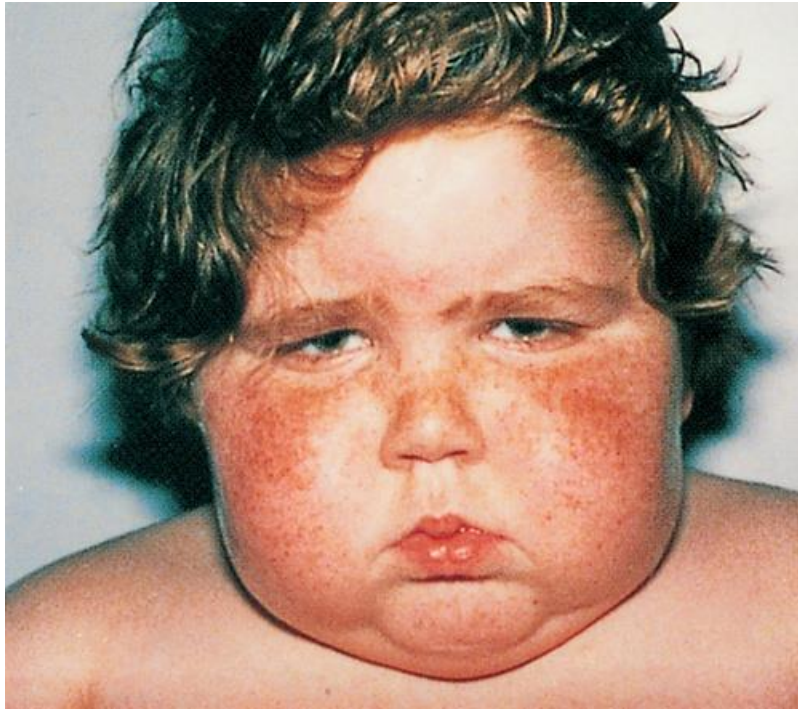
Objective 3: Define, pronounce, and spell disease and disorder terms related to the endocrine system.

enlargement of the extremities

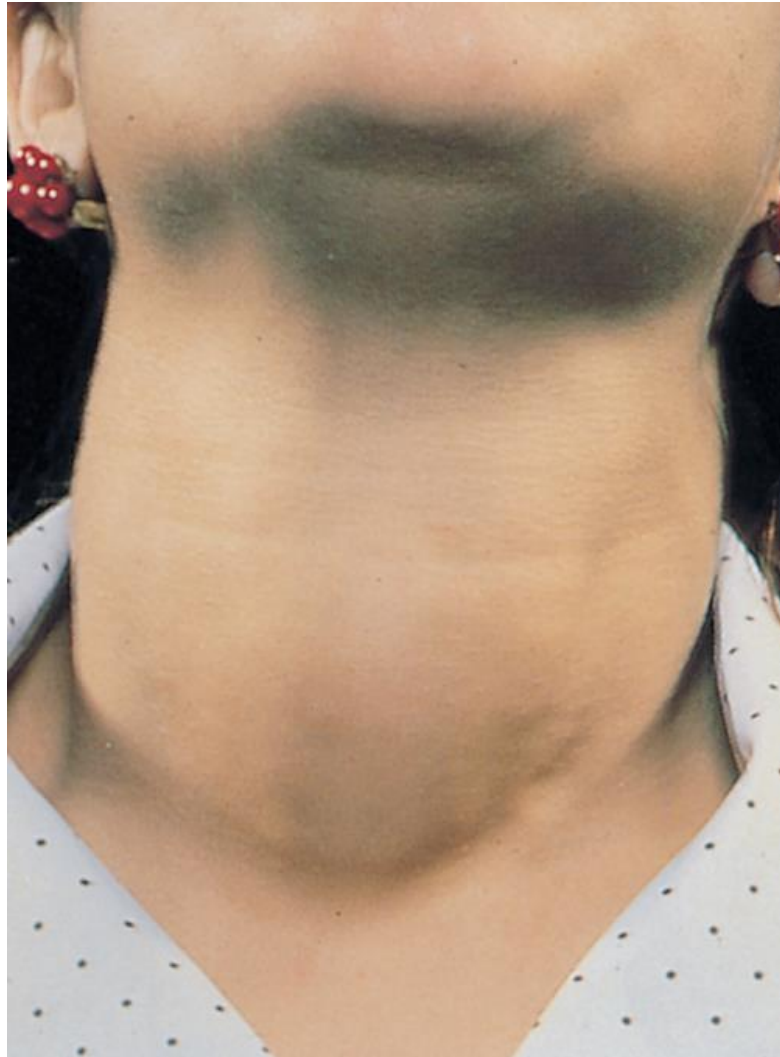


acr / **o** / **megaly**
extremities / cv / enlargement

Cushing Syndrome



Goiter



Chapter 16

Objective 4: Define, pronounce, and surgical terms related to the endocrine system.

Surgical Terms Built from Word Parts

- adrenalectomy
- pancreatectomy
- parathyroidectomy
- thyroidectomy

Chapter 16

Objective 5: Define, pronounce, and diagnostic terms related to the endocrine system.

At Home “Fasting Blood Sugar”

Many diabetics check their blood sugar upon awakening. If nothing has been eaten in the previous eight to ten hours prior to the test, this could be considered a “fasting blood sugar.”

Chapter 16

Objective 6: Define, pronounce, and complementary terms related to the endocrine system.

SYNDROMES REVIEWED IN THE TEXTBOOK

CHAPTER	SYNDROME
5	acute respiratory distress syndrome (ARDS)
7	acquired immunodeficiency syndrome (AIDS)
8	polycystic ovary syndrome (PCOS)
8	toxic shock syndrome (TSS)
8	premenstrual syndrome (PMS)
9	Down syndrome
9	fetal alcohol syndrome (FAS)
9	respiratory distress syndrome (RDS)
10	acute coronary syndrome (ACS)
11	celiac disease (malabsorption syndrome)
11	irritable bowel syndrome (IBS)
11	(familial) polyposis (syndrome)
14	carpal tunnel syndrome (CTS)
16	Addison disease (chronic syndrome)
16	Cushing syndrome
16	metabolic syndrome

Review Question

Hypothyroidism can be detected by:

- a) FBS
- b) TSH

Learn More about Diabetes at
<http://www.diabetes.org>



Chapter 16

Objective 7: Interpret meaning of abbreviations related to the endocrine system.

Abbreviation Review (1 of 2)

(see Exercise 35)

During workup for complaints of excessive urination, excessive thirst, and fatigue, Josephina Blackwater received this blood test used to diagnose diabetes.

HbA1C

Abbreviation Review (2 of 2)

(see Exercise 35)

A glucometer, lancing device, lancets, and test strips will soon be used by Josephina Blackwater who is newly diagnosed with this chronic disease involving a disorder of carbohydrate metabolism, characterized by hyperglycemia.

DM

Review for Overachievers ...

Name the Abbreviation

1. biopsy technique that uses a narrow hollow needle to obtain tiny amounts of tissue for pathologic examination
2. blood test that gives the direct measurement of the amount of thyroxine in the patient's blood
3. blood test to determine the amount of glucose (sugar) in the blood after fasting for 8 to 10 hours
4. provides an indication of blood sugar level over the past three months
5. nuclear medicine scan that measures thyroid function particularly when distinguishing different causes of hyperthyroidism

1. FNA

2. T4

3. FBS

4. HbA1C

5. RAIU

Chapter 16

Objective 8: Apply medical language in clinical contexts.

Pronounce Medical Terms in Use

A 65-year-old female patient presented to her doctor because of a 10-pound weight gain, fatigue, hair loss, dry skin, and cold intolerance. She was referred to an **endocrinologist** (en-dō -kri-NOL-ō-jist) who established a diagnosis of **hypothyroidism** (hī-pō-THĪ -royd-izm) after test results indicated an elevated **thyroid (THĪ -royd)-stimulating hormone level** and a low **thyroxine** (thī-ROK-sin) level. Approximately 20 years ago she had a painless thyroid nodule. At that time, **thyroid sonography** (THĪ -royd) (so-nog-ra-fē) and **fine needle aspiration** were performed; a diagnosis of thyroid cancer was confirmed, but it had not spread beyond the gland. She underwent a **thyroidectomy** (thī-royd-EK-to-mē) and received thyroid hormone replacement therapy thereafter. She remained in a **euthyroid** (ū-THĪ-royd) state until she stopped taking the medication 6 months ago. Consequently she became hypothyroid and could have easily developed **myxedema** (mik-se-DĒ-ma) if she had not sought treatment.

Comprehend Medical Terms in Use

(1 of 3)

Test your comprehension of the terms in the previous medical document by circling the correct answer.

1. On a recent visit to the endocrinologist the patient was diagnosed with:
 - a. a state of deficient thyroid gland activity
 - b. an enlargement of the thyroid gland
 - c. a state of excessive thyroid gland activity
 - d. Graves disease

Comprehend Medical Terms in Use

(2 of 3)

2. After a thyroidectomy the patient remained in a state resembling a:
 - a. stressed thyroid gland
 - b. normal thyroid gland
 - c. hyperactive thyroid gland
 - d. hypoactive thyroid gland
3. The patient's earlier diagnosis of Graves disease was characterized by:
 - a. thirst, excessive thyroid activity, protruding eyes
 - b. protruding eyes, spasms, excessive thyroid activity
 - c. excessive thyroid activity, enlargement of the thyroid gland, protruding eyes
 - d. enlargement of the extremities, excessive thyroid activities, protruding eyes

Comprehend Medical Terms in Use

(3 of 3)

4. What type of diagnostic procedure was used to assist in diagnosing hypothyroidism?
 - a. computed tomography
 - b. nuclear medicine
 - c. ultrasound
 - d. blood test