

ENDOCRINE SYSTEM PATHOLOGY: INTRODUCTION, THYROID, PARATHYROID & MEN SYNDROMES 2022

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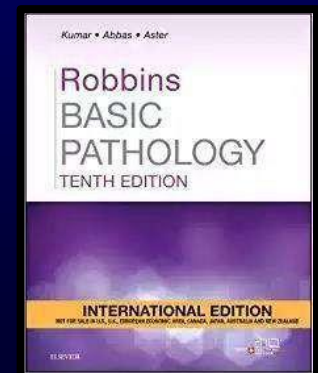
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Lecture

1

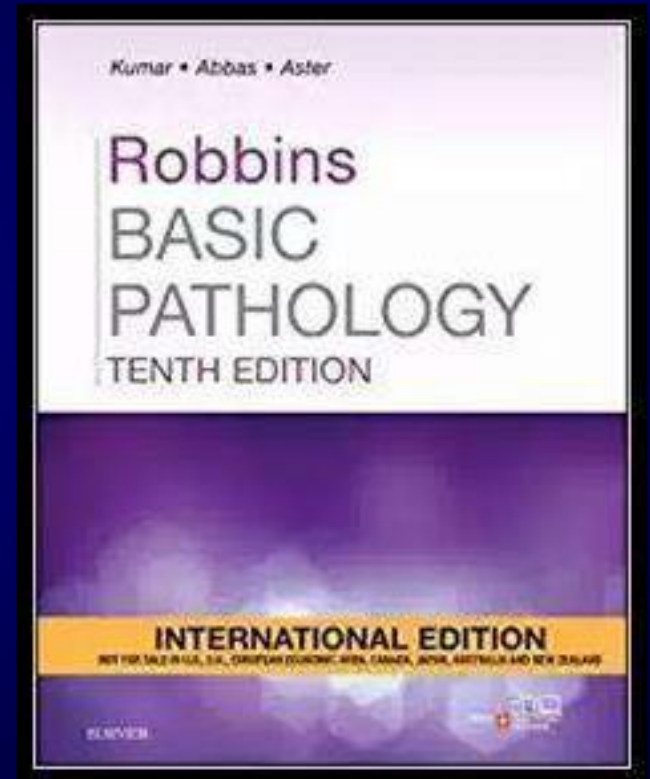
MY DUTIES

- 8 lectures; 50 minutes each
- Simplify
- Understand the concepts
- Help U all Understand...understand...
understand X10...only then memorize and
recall
- Answer questions & inquiries
- Respect



YOUR DUTIES

**This Book is your
main source of
knowledge &
EXAM QUESTIONS**



YOUR DUTIES

- **ON TIME ATTENDANCE**
- Attendance will be taken at the beginning of lecture this system.
- No entrance after the start
- Plz...plz...plz...**NO CHATTING** during lecture
- Understand first then memorize and recall
- Respect to the process
- **NO MOBILE**
- No inquiries about the nature of the exam...I will tell you



**PLEASE DON'T ASK THESE
QUESTIONS AT ALL**

- **How many questions on my material?**
- **What should we concentrate on?**
- **Are the slides enough?**
- **Should we memorize this or that?**
- **Is this or that required?**

REMEMBER

**“Success in life is
90% hard work and
10% talent, luck and
high IQ”**

“ALSO REMEMBER”

**IF YOU ARE LATE...YOU
MAY LOSE YOUR PATIENT**



INTENDED LEARNING OBJECTIVES

- Brief review of the anatomy, physiology and biochemistry of human endocrine system.
- Clear understanding of hyper-function and hypo-function of different glands and grasp the concept of positive and negative feedback control.
- Grasp the general features and causes of hyperthyroidism and hypothyroidism.
- Recognize and understand common autoimmune thyroid diseases including Hashimoto thyroiditis.

ILOs. . .continue

- Absorb the pathology of common benign thyroid diseases including subacute granulomatous thyroiditis (de Quervain thyroiditis), subacute lymphocytic thyroiditis, and Graves disease.
- Recognize all the features of the common diffuse and multi-nodular goiter.
- Recognize the pathology of common thyroid neoplasms, adenomas and carcinomas and understand the concept of evaluation by fine needle aspiration for pre-management diagnosis.
- Understand the clinicopathological characteristics of parathyroid gland diseases including hyper-parathyroidism (primary and secondary) and hypo-parathyroidism.
- Understand the concept of multiple endocrine neoplasia type 1 and 2 and its pathogenesis

What is required for exam?

- Attending the lectures
- Lectures power point file
- Videos (u tube), 9 videos
- Two review papers:
 - Hashimoto thyroiditis
 - Epidemiology and trends in thyroid cancer

Videos topics & links:

ENDOCRINE PATHOLOGY VIDEOS: 2022 Al-Abbadi

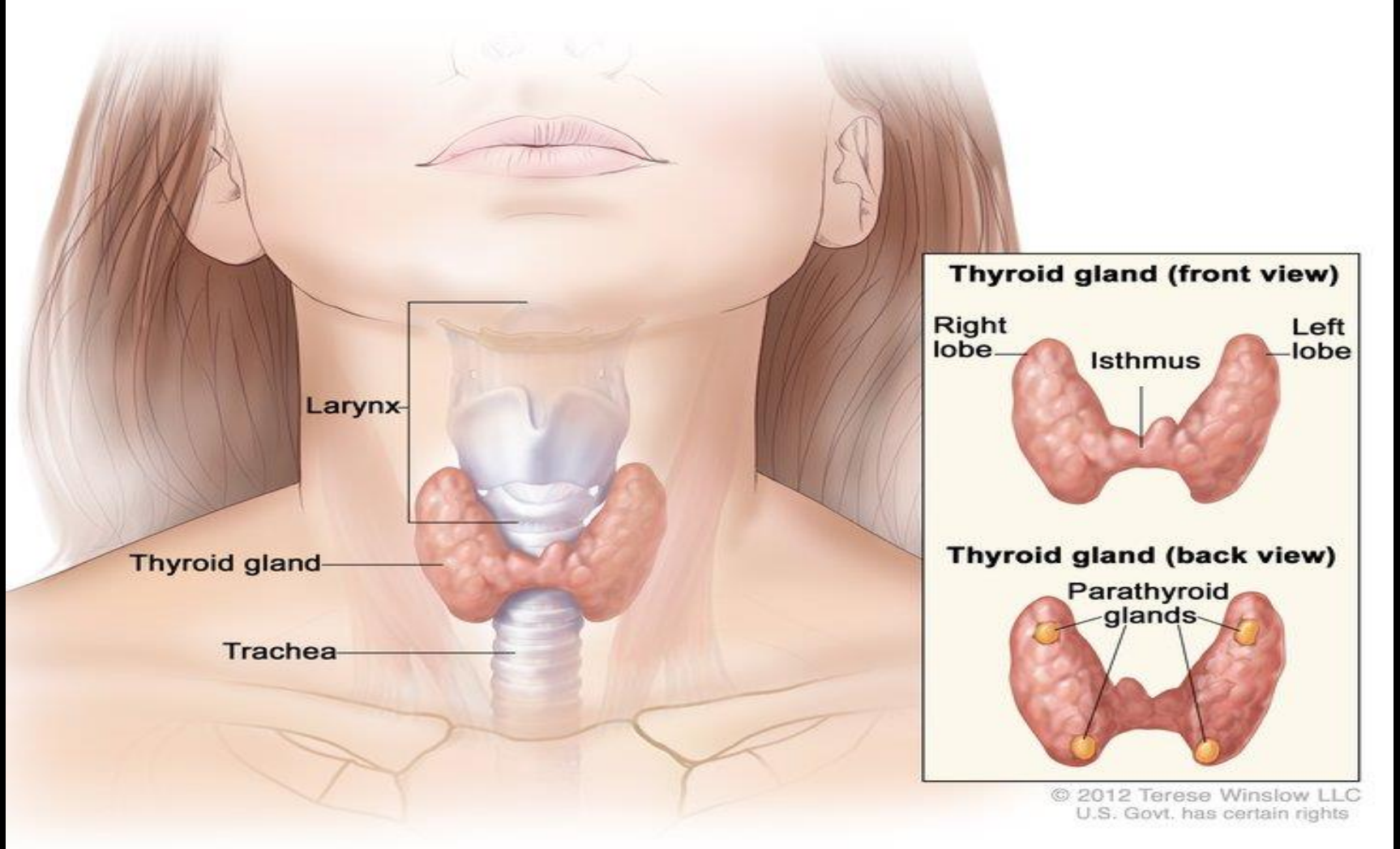
ENTITY/TOPIC	LINK
Introduction	https://www.youtube.com/watch?v=f_Z1zsR9IFM&ab_channel=KhanAcademy
Goiter	https://www.youtube.com/watch?v=x0Z64N0EPM&ab_channel=ClaymanThyroidCancerCenter
Hyper and hypo thyroidism	https://www.youtube.com/watch?v=YyHM9xQyyas&ab_channel=SimpleNursing
Hashimoto thyroiditis	https://www.youtube.com/watch?v=fDFXJxn5mzw&ab_channel=ilovepathology
Thyroid tumors	https://www.youtube.com/watch?v=f8NILVnxQhU&ab_channel=MedLecturesMadeEasy
PTC-1	https://www.youtube.com/watch?v=uujcryXIKtM&ab_channel=Kote%27sMedicalAnimations
PTC-2	https://www.youtube.com/watch?v=l7l8wQRe0lc&ab_channel=Dr.GBhanuPrakashAnimatedMedicalVideos
Parathyroid	https://www.youtube.com/watch?v=viqLRFJha1o
MEN	https://www.youtube.com/watch?v=inzv8Qt39rA&ab_channel=Osmosis

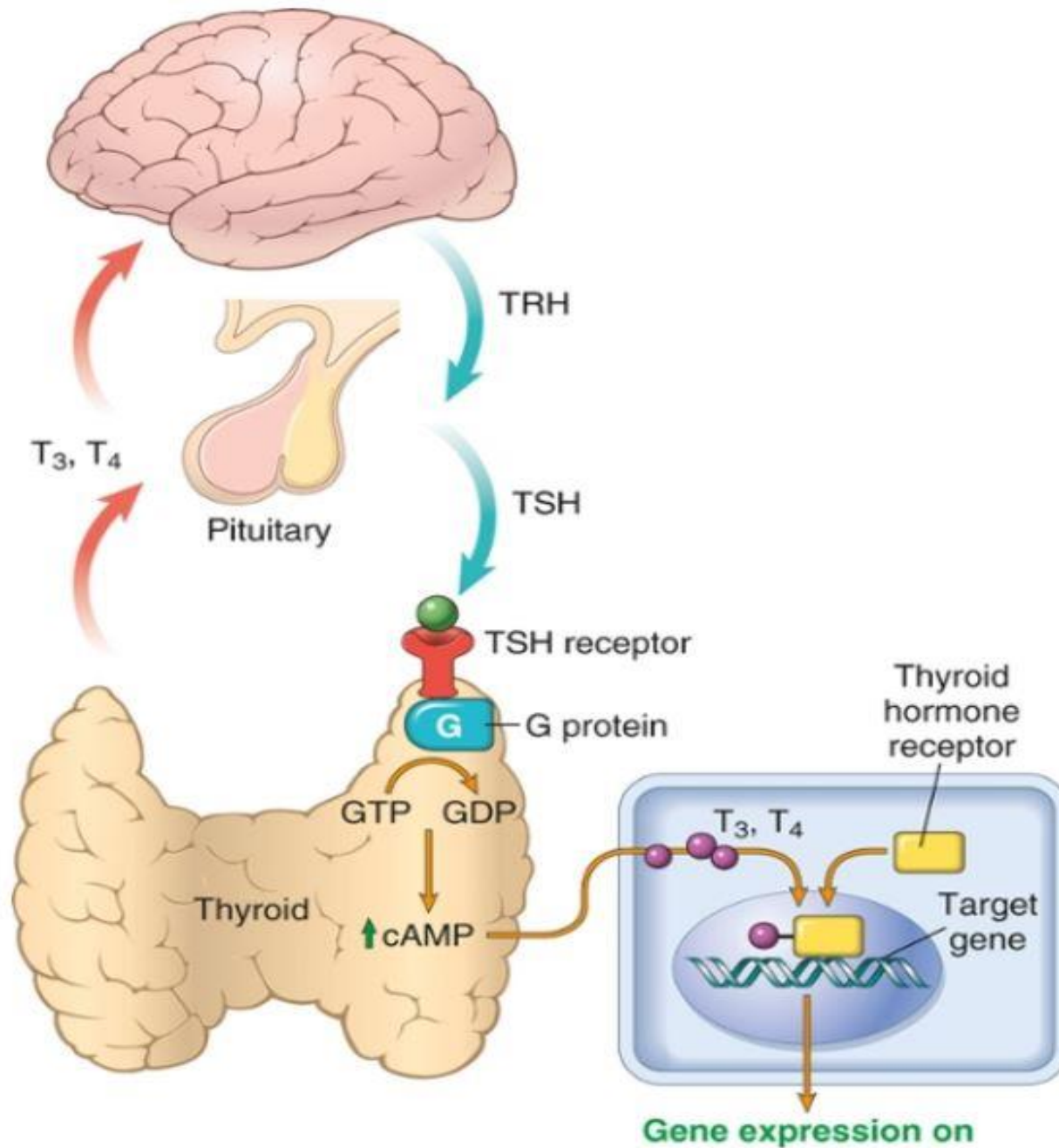
GENERAL CONCEPTS OF ENDOCRINE SYSTEM:

- **Basics of Hormone physiology**
 - Cell surface receptor binding hormones (GH)
 - Intracellular receptor binding hormones (ER)
- **Feedback inhibition**
- **Laboratory chemical testing**
- **Pathology:**
 1. Hyper or hypo production
 2. End organ resistance
 3. Neoplasms (functional or non functional)

THYROID

Anatomy of the Thyroid and Parathyroid Glands





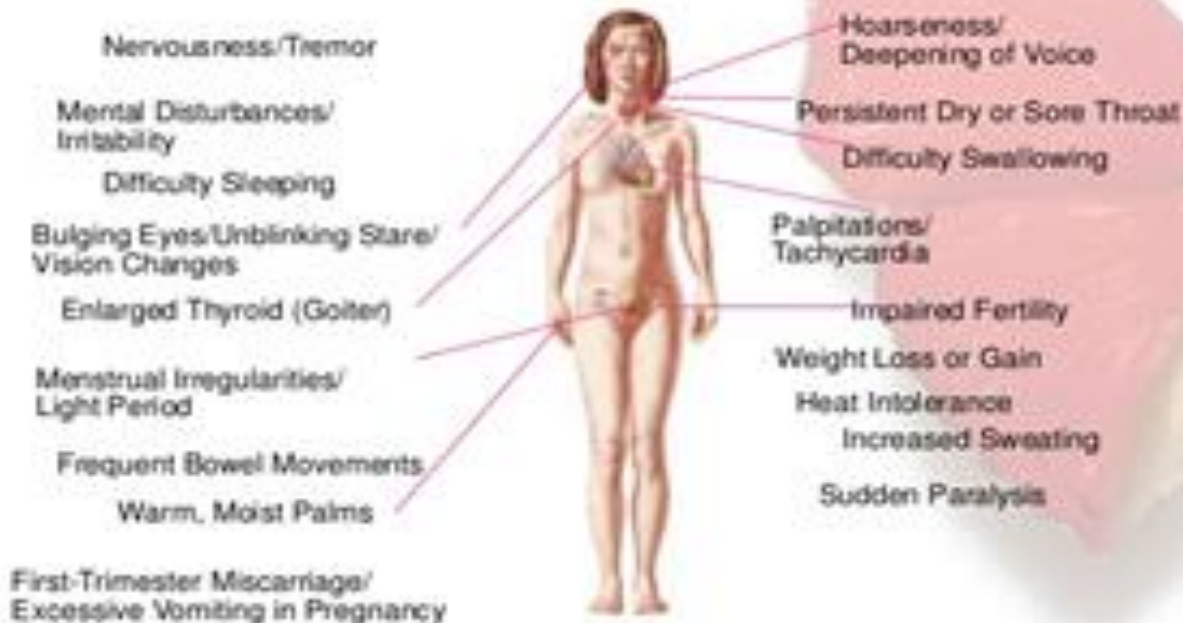
THYROID DISORDERS:

- Very common diseases
- Hypo and hyperthyroidism
- Thyroiditis (autoimmune and others)
- Enlargement (Diffuse and Multinodular Goiter MNG)
- Neoplasms

HYPERTHYROIDISM / THYROTOXICOSIS

-  T3&T4 with  TSH (most sensitive)

Signs and Symptoms of Hyperthyroidism



Associated With Hyperthyroidism

Primary

Diffuse toxic hyperplasia (Graves disease)

Hyperfunctioning (“toxic”) multinodular goiter

Hyperfunctioning (“toxic”) adenoma

Iodine-induced hyperthyroidism

Secondary

TSH-secreting pituitary adenoma (rare)* **(High TSH)**

Not Associated With Hyperthyroidism

Granulomatous (de Quervain) thyroiditis (*painful*)

Subacute lymphocytic thyroiditis (*painless*)

Struma ovarii (ovarian teratoma with thyroid)

Factitious thyrotoxicosis (exogenous thyroxine intake)

