Basrah university

college of medicine .

Department of Human Anatomy

Histology 2nd year

(Second semester)

The digestive system

-The small intestine (Duodenum, Jejunum,Ileum)

- Describing its structure and histological features of the different adaptations (like villi , microvilli) that increase the surface area of the small intestine for absorption..

- Recognize the different epithelial cells, including enterocytes, goblet cells, and enteroendocrine cells, and understand their roles in absorption, mucus production, and hormone secretion.

- Understand the presence and function of Peyer's patches and other MALT (mucosa-associated lymphoid tissue) in the lamina propria for immune surveillance and protection against pathogens.

- The large intestine. (Ceacum, colon, rectum, anal canal, Appendix)

- to Describe the characteristic histological features of its four layers (mucosa, submucosa, muscularis externa, serosa/adventitia),

-Recognizing the goblet cells and intestinal crypts within the mucosa support its primary functions of water, electrolyte absorption and mucus secretion.

Assosiated glands

A- The Salivary glands

Learning Objectives:

1. Be able to identify parotid, submandibular and sublingual salivary glands on the basis of histological appearance and by the types of secretion produced by each gland.

2. Be able to identify striated ducts of the salivary gland at the light and electron microscope level and correlate the structural features of the constituent cells to the functions of these ducts.

-Location and histological features of each gland

- Features of serous and mucus alveoli

- Duct system =their lining epithelium and their location

B- Liver, Pancreas and Gall bladder

Learning Objectives.

By the end of this section, you will be able to:

1-Describe the digestive roles of the liver, pancreas, and gallbladder

2-Describe the features of liver histology that are critical to its function

3-Discuss the composition and function of bile .

4-Identify the major types of enzymes and buffers present in pancreatic juice

5-Describe how the secretion and release of bile and pancreatic juice is controlled

6-Histological features of liver lobules,the duct system, function of liver

7-Histological features of pancreas,

-Exocrine part and duct system ,types of cells in endocrine part

8- Histological features of gallbladder.

The rspiratory system.

Learning objective:

-Students learn about the histologic organization of the air conducting nasal

cavities, nasopharynx, larynx, trachea, bronchi and bronchioles and the

respiratory portions (respiratory bronchioles, alveolar ducts,

alveolar sacs, and alveoli; the components of the air-blood respiratory barrier.

-The respiratory epithelium.

-The cell types of respiratory epithelium.

-The nasal cavity.

-The vestibule.

-Nasal fossae.

-Para nasal sinuses.

-The larynx.

-The trachea.

-The lungs.

-Bronchial tubes.

-Bronchioles.

-Alveolar duct.

-Alveoli.

- Respiratory membrane

The endocrine system

Learning objectives:

you should know: The meaning of endocrine and exocrine glands.

How to recognize and describe the histological structure of four major endocrine organs: the pituitary gland, the adrenal gland and the thyroid and parathyroid gland. The names of the hormones secreted by these endocrine glands and their functions.

Introduction.

-Definition of endocrine glands.

-Types of endocrine glands.

-Types of secretion. Pituitary gland.

-Thyroid gland. Parathyroid gland.

- Adrenal gland (Supra renal).

-Pineal body.

(Introduction,Structure, function).

Female reproductive system

Learning objective:

-Study the histology of ovary (follicles, atresia & corpus luteum)

-To know the histology of uterine tube, uterus, different phases of menstrual cycle)

Introduction.

-The ovaries.

-Types of the follicles.

-Development of ovarian follicles.

-Atretic follicle.

-Corpus luteum of ovarian cycle.

-Corpus luteum of pregnancy.

-Corpus albicans.

-Ovulation.

-The uterine tube (Fallopian tube).

-The uterus. The Menstrual cycle.

-The cervix.

The Vagina.

-The mammary glands (Introduction)

The Mammary glands.

Objective: To study the different histological variabilies in the inactive, active & lactating mammary glands

- Introduction.

-Areola and nipple.

-Structure.

-Duct system.

-Inactive mammary glands.

-Mammary gland during pregnancy.

-Lactating mammary gland

Male Reproductive system

Learning objective:

- To identify the histological structure of the different parts of the system as the testes, genital ducts (epididymis vas deferens, ejaculatory duct & urethra), accessory glands (seminal vesicles, bulbourethral & prostate glands) and penis.

Introduction.

-Parts of male reproductive system.

- Testis.

- Seminiferous tubules.

- Genital ducts (Rete testis, Ductuli afferents, Ductus)

-epididymis,

-Ductus deferens, Ejaculatory duct.

-Accessory glands associated with male reproductive system.

-Prostate gland. Seminal vesicles.

- The penis.

- Semen.

The urinary system

Learning objectives :

-Kidneys, Structure and function of each component of nephron.

-What is Blood Filtration barrier? Components of jaxita-glomerular complex.

- Histological features of Ureters, Bladder- & Urethra Functions of this system:

- Introduction.

- Structure of kidneys. (The nephron).

-Urinary filtration barrier

-The excretory passages of the kidney.

- Ureter.

-The urinary bladder.

-Male urethra.

- Female urethra

Special sense organs

-Learning objective:

- To demonstrate bulb of the eye

-To understand histology of each layer of the bulb

-To know eye's chambers To study the histology of lens

-To study histology of uvea (choroid, ciliary & iris)

-To study the histology of retina

A-The eyes

- Introduction

- Layers of the eye (Cornea, sclera, uvea layer Ciliary's portion & choroids), The retina

- Chambers of the eye.

- Iris.

- Lens. Schlemm canal.

Lacrimal gland.

B- The ear

Learning objective:

-To study each part of the ear & its histological structures

-To study the hair cells

-To study bony & membranous labyrinth

-To understand the histology of cochlear duct

- Introduction.

- External ear, Middle ear, Inner ear