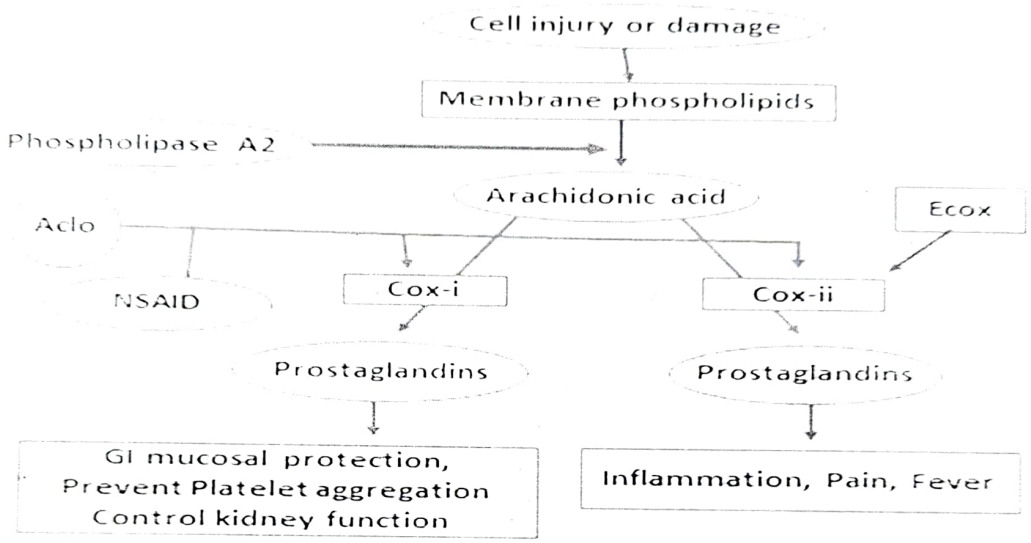
NSAIDs

What is NSAID?

- NSAID (Non-Steroidal Anti-inflammatory Drug)
- NSAID is drug, which shows analgesic, antipyretics & anti-inflammatory action.

NSAIDs Mechanism Action



Common Terms:

Analgesic: Analgesic is a drug that is use to relieve pain.

i. **Opioid (Narcotic) analgesics:** acts in the CNS & causes drowsiness (Narcosis). Ex. Morphine, Pethidine etc.

ii. **Non- opioid (Non-Narcotic) analgesics:** acts chiefly peripherally & produce no narcosis.

Ex. NSAIDs (Aspirin, Diclofenac etc.)

iii. **Local anesthetics**

Antipyretic: Antipyretics are drugs that reduce body temperature in situation of fever.

However, they will not affect the normal body temperature if ones do not have fever.

Anti-inflammatory: Refers to the property of a substance that reduces inflammation.

Cyclooxygenase (COX): An enzyme responsible for prostaglandins synthesis.

- **Cox-1:** Responsible for the baseline levels of prostaglandins.

- **Function of Cox-1:**

i. Prevent platelet aggregation within the body.
ii. Protect mucous layer of stomach.
iii. Control kidney function.

- **Cox-2:** Responsible for inflammation creating prostaglandins.
- **Prostaglandins:** A chemical substance responsible for inflammation, pain & fever.

NSAIDs of Alco pharma

Non Selective NSAID	Generic	Strength	Cox-ii Selective NSAID	Generic	Strength
Aclo	Aceclofenac	100 mg	Ecox	Etoricoxib	60 mg, 90 mg, 120 mg
Napren	Naproxen	250 mg, 500 mg			
Napren ES	Naproxen + Esomeprazole	Naproxen 375 mg + Esomeprazole 20 mg & Naproxen 500 mg + ESomeprazole 20 mg			
Tolec	Ketorolac	10 mg			

Aclo

Brand Name : Aclo
Generic Name : Aceclofenac
Strength : 100 mg
Dosage form : Tablet

Advantages of Aclo:

First choice for the treatment of arthritic pain,
Helps in Cartilage synthesis,
Nearest to Paracetamol in case of safety,
Excellent GI tolerability profile.

Indication : Osteoarthritis, Rheumatoid arthritis, Ankylosing spondylitis, Acute gouty arthritis

Dose & Administration : 100 mg twice daily

Ecox

Brand Name : Ecox
Generic Name : Etoricoxib
Strength : 60 mg, 90 mg & 120 mg
Dosage form : Tablet
Mechanism Action : Highly Selective Cox-ii Inhibitor

Indication : Osteoarthritis, Rheumatoid arthritis, Ankylosing spondylitis, Acute gouty arthritis.

Dose & Administration : Osteoarthritis : 60 mg once daily, Rheumatoid arthritis : 90 mg once daily, Ankylosing spondylitis : 90 mg once daily, Acute gouty arthritis : 120 mg once daily

Tolec

Brand Name : Tolec
Generic Name : Ketorolac
Strength : 10 mg
Dosage form : Tablet

Indication: Acute pain, Moderate to severe Pain, Post-operative pain.

Dose & Administration : 10 mg every 6-8 hr. (Max. 5 days)

P+C

Generic: Paracetamol + Caffeine
Strength: Paracetamol 500 mg + Caffeine 65 mg

Indication:
Fever & Pain (Headache, Sore Throat, Earache, Backache, Muscle Pain)

Training manual

Anti ulcerant

What is antiulcerant

The drugs that use to prevention and treatment of ulcer disease by reduction of gastric acids.

Antiulcerant drugs of Alco pharma

Brand Name	Generic Name	Strength	Dosage form
Rani 150	Ranitidine USP	150 mg	Tablet
Omepra	Omeprazole BP	20mg & 40mg	Capsule
Esopra	Esomeprazole USP	20mg & 40mg	Tablet /Capsule
Pantopra	Pantoprazole BP	20mg & 40mg	Tablet
Desopra	Dexlansoprazole	30 mg	Capsule
Acipra	Rabeprzaole	20 mg	Capsule

Esopra

- Brand Name : Esopra
- Generic Name :Esomeprazole
- Strength : 20 mg & 40 mg
- Dosage form : Tablet & Capsule
- Mechanism Action : Proton pump Inhibitors (PPI)
- Indication :
  - * Gastro esophageal Reflux Disease (GERD)
  - * Erosive Esophagitis
  - * NSAID-induced Ulcer
  - * Duodenal Ulcer
- Dose & Administration : Recommended dose is Esopra 20 mg or 40 mg should be taken once daily with or without food 4 to 8 weeks.
- In Pregnancy: Pregnancy Category B

Omepra

- Brand Name : Omepra
- Generic Name : Omeprazole BP
- Strength : 20 mg & 40 mg
- Dosage form : Capsule
- Mechanism Action : Proton pump Inhibitors (PPI)
- Indication :
  - * Gastro esophageal Reflux Disease (GERD)
  - * Erosive Esophagitis
  - * NSAID-induced Ulcer
  - * Duodenal Ulcer
  - * Eradication of Helicobacter pylori
  - * peptic ulcer
- Dose & Administration : Recommended dose is Omepra 20 mg or 40 mg should be taken once daily with or without food 4 to 8 weeks.
- In Pregnancy: Pregnancy Category B

Thank you

Topical Preparation

The preparation which applied on the skin or mucous membrane is called Topical Preparation.

Common types of topical formulations:

1 Cream

A Cream is an emulsion of oil and water in approximately equal proportions.

2. Ointment

An ointment is a homogeneous, viscous, semi-solid preparation, most commonly a greasy, thick oil (oil 80% - water 20%) with a high viscosity, that is intended for external application to the skin or mucous membranes.

3. Paste

Paste combines three agents - oil, water, and powder. It is an ointment in which a powder is suspended.

4. Lotion

Lotion are similar to solutions but are thicker and tend to be more emollient in nature than solution.

5. Gel

Gel are thicker than a solution.

Sl. No.	Brand Name	Generic Name	Pack Size	Therapeutic Class
1	Bendil Cream	Diphenhydramine Hcl + Zinc Acetate	5 gm, 10 gm, 30 gm	Topical anti-histamine
2	Closten Cream	Clotrimazole	10 gm	Anti-fungal
3	Derfin Cream	Terbinafine Hcl	10 gm	Anti-fungal
4	Dazine Cream	Silver Sulfadiazine	25 gm	Topical Antibiotic
5	Mupi Ointment	Mupirocin	5 gm, 10 gm	Topical Antibiotic
6	Nenol Powder	Neomycin Sulphate + Bacitracin Zinc	5 gm	Amino glycoside antibiotic
7	P-Cool Cream	Methyl Salicylate & Menthol	10 gm, 25 gm	Analgesic
8	Nuprin Cream	Neomycin Sulphate + Polymyxin B Sulphate + Pramoxine Hydrochloride	5 gm, 10 gm, 30 gm	Topical Antibiotic
9	Povidine Ointment	Povidone Iodine	15 gm	Antiseptic

Training Manual ON Vitamins & Minerals

Vitamins: Vitamins are essential nutrients the body cannot produce but needs in small amounts for health and development.

Minerals: Minerals are inorganic substances that come from the earth and our body cannot produce them. They provide many structures in your body, help certain enzymes to convert food into energy and fight infections and prevent diseases.

Types of Vitamin: Vitamins are two types
1. Fat Soluble Vitamin: The fat soluble vitamins are soluble in lipids (fats).
2. Water Soluble Vitamin: The water soluble vitamins are soluble in Water.

Fat Soluble Vitamin

Name of Vitamin	Chemical Name	Deficiency Syndrome
Vitamin-A	Retinol, beta-Carotene	Night blindness(রাতকানা), Impaired vision (দৃষ্টিশক্তির সমস্যা)
Vitamin-D	Cholecalciferol	Rickets (হাড়ের বক্রতা এবং বিকৃতি) in children; Osteomalacia (Soft bones বা হাড়ের কোমলতা) in adults.
Vitamin-E	Alpha-Tocopherol	Slow growth in children(শিশুদের স্বাভাবিক বৃদ্ধি ব্যাহত হওয়া), Mild anemia(রক্তশূন্যতা), Disorders related to reproduction and infertility (প্রজননে অক্ষম)
Vitamin-K	Phylloquinone	Excessive bleeding (অতিরিক্ত রক্তপাত)

Water Soluble Vitamin

Name of Vitamin	Chemical Name	Deficiency Syndrome
Vitamin-C	Ascorbic Acid	Scurvy (ভিটামিন-সি এর অভাবজনিত রোগ)
Vitamin- B1	Thiamine Hydrochloride	Beriberi (থায়ামিনের অভাবজনিত রোগ)
Vitamin-B2	Riboflavin	Cracking of the lips and corners of the mouth (ঠোঁট ফাঁটা এবং মুখের কোনায় ঘাঁ), An inflamed tongue (জিহবার প্রদাহ)
Vitamin- B3	Niacin	Pellagra(নায়াসিনের অভাবজনিত রোগ)
Vitamin- B5	Pantothenic Acid	Fatigue(ক্লান্তি),Burning foot syndrome(পা জ্বালা পোড়া)
Vitamin- B6	Pyridoxine Hydrochloride	Anemia (রক্তশূন্যতা), impaired nerve function (স্নায়ুতন্ত্রের অস্বাভিবকতা), cracked lips and tongue (ঠোঁট ফাঁটা এবং জিহবার ঘাঁ), headaches(মাথা ব্যাথা), hair loss(চুল পড়া) and eczema (এক ধরনের চর্মরোগ)

Vitamin -B7	Biotin	Hair loss (চুল পড়া), Anemia (রক্তশূন্যতা) and Mental conditions including hallucinations (এক ধরনের মানসিক সমস্যা), Drowsiness (ঘুম ঘুম ভাব) and Depression (হতাশা).
Vitamin- B9	Folic Acid	Anemia(রক্তশূন্যতা)
Vitamin- B12	Cyanocobalamin	Pernicious anemia (ভিটামিন বি-১২ এর অভাবজনিত রক্তশূন্যতা)

Minerals

Name of Mineral	Deficiency Syndrome
Calcium	Different types of Bone disorder (বিভিন্ন ধরনের হাড়ের সমস্যা যেমন:Osteoporosis, and osteomalacia) Burning or prickling sensation (জ্বালা পোড়া), Bone pain or Bone Fracture (হাড়ের ব্যাথা বা হাড় ভেঙ্গে যাওয়া)
Zinc	Anorexia (ক্ষুধামন্দা), Diarrhea, Growth retardation (স্বাভাবিক বৃদ্ধি ব্যাহত হওয়া), Delayed sexual maturation (দেরীতে প্রজননতন্ত্রের উন্নতি), Impaired taste and smell, alopecia.

Vitamin & Mineral Products from ALCO

Product Name	Generic	Strength	Pack Size
B-One Tab.	Thiamine HCl	100 mg	100's
C-4 Tab.	Calcium Carbonate + Calcium gluconate + Calcium lactate + Ascorbic acid.		10's
Calcarb Tab.	Calcium Carbonate	1250 mg	50's
Calmi-D Tab.	Calcium+ Vit.D3+ Minerals		15's & 30's
Fecon-BC Cap.	Ferrous Sulphate +Folic Acid + Vit.C+ Vit.B complex		50's
Fecon-TR Cap.	Ferrous sulphate+ Folic acid		30's
Fecon-Z Cap.	Ferrous sulphate+ Folic acid+ Zinc		30's
Life Gold Tab.	Multivitamin & Multimineral		15's & 30's
Life Silver Tab.	Multivitamin & Multimineral		15's & 30's
Nox Tab.	Vit.A +Vit.C +Vit.E		20's
Renep Tab.	Vit.B1+B6+B12		30's
Vitcod Syp.	Multivitamin + Cod liver oil		100ml &200ml
Zep Syp.	Zinc	10mg/5ml	100ml
Zep junior Syp.	Zinc	4.05mg/5ml	100ml
Zinc-DT Tab.	Zinc	20mg	10's
Zivit syp.	Zinc+ Vit.B complex		100ml &200ml
Zivit-I	Zinc+ Vit.B complex + Iron		100ml &200ml

Vitamin -B7	Biotin	Hair loss (চুল পড়া), Anemia (রক্তশূন্যতা) and Mental conditions including hallucinations (এক ধরনের মানসিক সমস্যা), Drowsiness (ঘুম ঘুম ভাব) and Depression (হতাশা).
Vitamin- B9	Folic Acid	Anemia(রক্তশূন্যতা)
Vitamin- B12	Cyanocobalamin	Pernicious anemia (ভিটামিন বি-১২ এর অভাবজনিত রক্তশূন্যতা)

Minerals

Name of Mineral	Deficiency Syndrome
Calcium	Different types of Bone disorder (বিভিন্ন ধরনের হাড়ের সমস্যা যেমন:Osteoporosis, and osteomalacia) Burning or prickling sensation (জ্বালা পোড়া), Bone pain or Bone Fracture (হাড়ের ব্যাথা বা হাড় ভেঙ্গে যাওয়া)
Zinc	Anorexia (ক্ষুধামন্দা), Diarrhea, Growth retardation (স্বাভাবিক বৃদ্ধি ব্যাহত হওয়া), Delayed sexual maturation (দেরীতে প্রজননতন্ত্রের উন্নতি), Impaired taste and smell, alopecia.

Vitamin & Mineral Products from ALCO

Product Name	Generic	Strength	Pack Size
B-One Tab.	Thiamine HCl	100 mg	100's
C-4 Tab.	Calcium Carbonate + Calcium gluconate + Calcium lactate + Ascorbic acid.		10's
Calcarb Tab.	Calcium Carbonate	1250 mg	50's
Calmi-D Tab.	Calcium+ Vit.D3+ Minerals		15's & 30's
Fecon-BC Cap.	Ferrous Sulphate +Folic Acid + Vit.C+ Vit.B complex		50's
Fecon-TR Cap.	Ferrous sulphate+ Folic acid		30's
Fecon-Z Cap.	Ferrous sulphate+ Folic acid+ Zinc		30's
Life Gold Tab.	Multivitamin & Multimineral		15's & 30's
Life Silver Tab.	Multivitamin & Multimineral		15's & 30's
Nox Tab.	Vit.A +Vit.C +Vit.E		20's
Renep Tab.	Vit.B1+B6+B12		30's
Vitcod Syp.	Multivitamin + Cod liver oil		100ml &200ml
Zep Syp.	Zinc	10mg/5ml	100ml
Zep junior Syp.	Zinc	4.05mg/5ml	100ml
Zinc-DT Tab.	Zinc	20mg	10's
Zivit syp.	Zinc+ Vit.B complex		100ml &200ml
Zivit-I	Zinc+ Vit.B complex + Iron		100ml &200ml

Antidiabetic Drugs

Diabetes Mellitus
Diabetes mellitus is a condition in which the level of blood sugar (glucose) is high, either because the body does not produce enough insulin, or because cells do not respond to the insulin that is produced or both.

Insulin
Insulin is a hormone that is central to regulating carbohydrate and fat metabolism in the body. Insulin causes cells in the liver, muscle, and fat tissue to take up glucose from the blood.

Types of diabetes
- **Type-1 (Insulin Dependent Diabetes Mellitus, IDDM)**
- **Type-2 (Non Insulin Dependent Diabetes Mellitus, NIDDM)**

Type-1 (Insulin Dependent Diabetes Mellitus, IDDM or Juvenile Diabetes):
Type-1 diabetes occurs due to autoimmune destruction of insulin-producing beta cells of the pancreas. People with Type-1 diabetes produce little or no insulin.

Symptoms: The classical symptoms of type-1 diabetes include:
- Polyuria (frequent urination)
- Polydipsia (increased thirst)
- Polyphagia (increased hunger)
- Tiredness
- Weight loss
- Blurred vision
- Headaches

Management
- Taking insulin
- Exercising regularly and maintaining a healthy weight
- Eating healthy foods
- Monitoring blood sugar

Type-2 (Non Insulin Dependent Diabetes Mellitus, NIDDM):
People with Type-2 diabetes produce insulin. But, the insulin they produce is either not enough or does not work properly in the body.

Symptoms: The symptoms can be same as Type-1 diabetes. Other symptoms of Type-2 diabetes may include:
- Slow-healing sores or cuts
- Itching of the skin (usually around the vaginal or groin area)
- Recent weight gain

Management

- Diet control
- Exercise
- Weight loss
- Drug

Antidiabetic Drug Or Hypoglycemic Drug

Drug that causes reduction of blood glucose level is called Antidiabetic Drug Or Hypoglycemic Drug.

Classification of Antidiabetic Drug Or Hypoglycemic Drug

1. **Injectable Hypoglycemic Drug**
   - Insulin

2. **Oral Hypoglycemic Drug**

Alco Pharma Ltd.

Anti- Diabetic Products

Brand Name	Diaprid	Gipid	Metmin	Repaglid	Gluvil
Generic Name	Gliclazide BP	Glimepiride USP	Metformin HCL BP	Repaglinide INN	Vildagliptin INN
Therapeutic Class	Sulfonylureas	Sulfonylureas	Biguanides	Meglitinides	Dipeptidyl peptidase 4 (DPP-4) Inhibitors
Dosages Form	Tablet	Tablet	Tablet	Tablet	Tablet
Strength	80 mg	1 & 2 mg	500 & 850 mg	1 & 2 mg	50 mg
Mode of Action	Increase Insulin Secretion	Increase Insulin Secretion	• Decreases Hepatic Glucose Production • Decreases intestinal absorption of glucose	Increase Insulin Secretion	• Increase Insulin Secretion (Glucose -dependent) • Decrease Glucagon Secretion (Glucose - dependent)
Indication	Type II Diabetes	Type II Diabetes	Type II Diabetes	Type II Diabetes	Type II Diabetes
Dose & Administration	The usual initial dose is 40 to 80 mg daily. The dose can be increased up to 320 mg daily in divided doses when needed. The drug should be taken before meal.	Initial dose is 1 to 2 mg once daily. Usual maintenance dose is 1 to 4 mg once daily. The maximum recommended dose is 8 mg once daily.	Usual starting dose is 500 mg b.i.d. or 850 mg once daily. Dosage increase should be made in increments of 500 mg weekly or 850 mg every 2 weeks up to 2000 mg per day, given in divided dosage. Maximum daily dose is 2550 mg.	Repaglinide should be taken immediately or up to 30 minutes before each meal. Dosage should be adjusted according to response at intervals of 1-2 weeks; up to 4 mg may be given as a single dose, maximum 16 mg daily. For patients not previously treated or whose (Glycated hemoglobin) HbA1C is < 8%, the starting dose should be 0.5 mg before each meal. For patients previously treated with blood glucose-lowering drugs and whose HbA1C is > 8%, the initial dose is 1 or 2 mg before each meal.	The recommended dose of Vildagliptin is 50 mg or 100 mg daily as monotherapy whereas the 100 mg dose is administered in two divided doses of 50 mg given in morning and evening.

Advantages	Decrease Microvascular risk	Decrease Microvascular risk	• No hypoglycemia • Decrease CVD events	• Decrease Postprandial glucose excursions • Dosing flexibility	• No hypoglycemia • Well tolerated
Competitors Brand Name	Comprid (Square), Consucon (Incepta), Diatrol (Pacific), Glad (Novertis), Glizide (Opsonin), Glucozid (Aristopharma), Gluzit (Popular)	Losucon (Incepta), Diata (Pacific), Amaryl (Novertis), Glims (Opsonin), Gluconor (Aristopharma), Limaryl (Popular),Secrin (Square)	Nobesit (Incepta), Metfo (Pacific),Etform(Novertis) Met(Opsonin), Glucomet (Aristopharma), Metarin (Popular),Comet(Square), Informet (Beximco), Sugamet (General), Bigmet (Renata),	Nomopil (Incepta) , Gluretor (Pacific), Premil (Beximco), Reglin (General), Singlin (Renata)	Galvus(Novertis),Vida(Pacific), Viglita(Square),Vildus(Opsonin), Viptin(General), Vigatin(SK+F) Vildapin(ACME)
Price/Tab (M.R.P)	6.02 Tk.	3.01Tk. & 5.02 Tk.	3.01Tk. & 4.01 Tk.	3.01Tk. & 5.02 Tk.	20.00 Tk.
Pack size	30's	30's & 30's	50's & 100's	30's & 30's	20's

Microvascular: relating to the smallest blood vessels.

FPG: Fasting Plasma Glucose

Fasting is defined as no caloric intake for at least 8 hours

GTT: Glucose Tolerance Test

HbA1c: Haemoglobin in blood joins up with glucose to form the chemical called HbA1c or glycosylated haemoglobin.

Criteria for the diagnosis of diabetes	
Normal	**Diabetes**
• FPG : 5.6 to 6.9 mmol/L • GTT: 7.8 to 11.0 mmol/L • HbA1C: 5.7–6.4%	• FPG: ≥ 7 mmol/L • GTT: 2 hours Plasma glucose ≥ 11.1 mmol/L • HbA1c(%): ≥ 6.5 %
	Ref: American Diabetic Association Guideline 2015

Digestive System

What is Digestive System?

The digestive system is the group of organs in the body those are responsible for getting food into the body, break down of food so that the nutrients can be absorbed by the body and excrete wastes from the body.

What is Digestion?

It is the process of biochemical transformation by which complex and large food particles are broken down into small particles with the help of enzymes so that they become suitable for absorption and assimilation.

Parts of Digestive System

All the parts of Digestive System are divided into –

A. Main Parts &

B. Accessory Parts

Continue...

MAIN PARTS OF GIT

1. Mouth or buccal cavity
2. Tongue
3. Oropharynx
4. Oesophagus
5. Stomach

Continue...

6. Small intestine:

a. Duodenum

b. Jejunum

c. Ileum.

7. Large intestine:

a. Caecum

b. Ascending colon.

c. Transverse colon.

d. Descending colon.

e. Sigmoid colon.

f. Rectum

(i) Anal canal

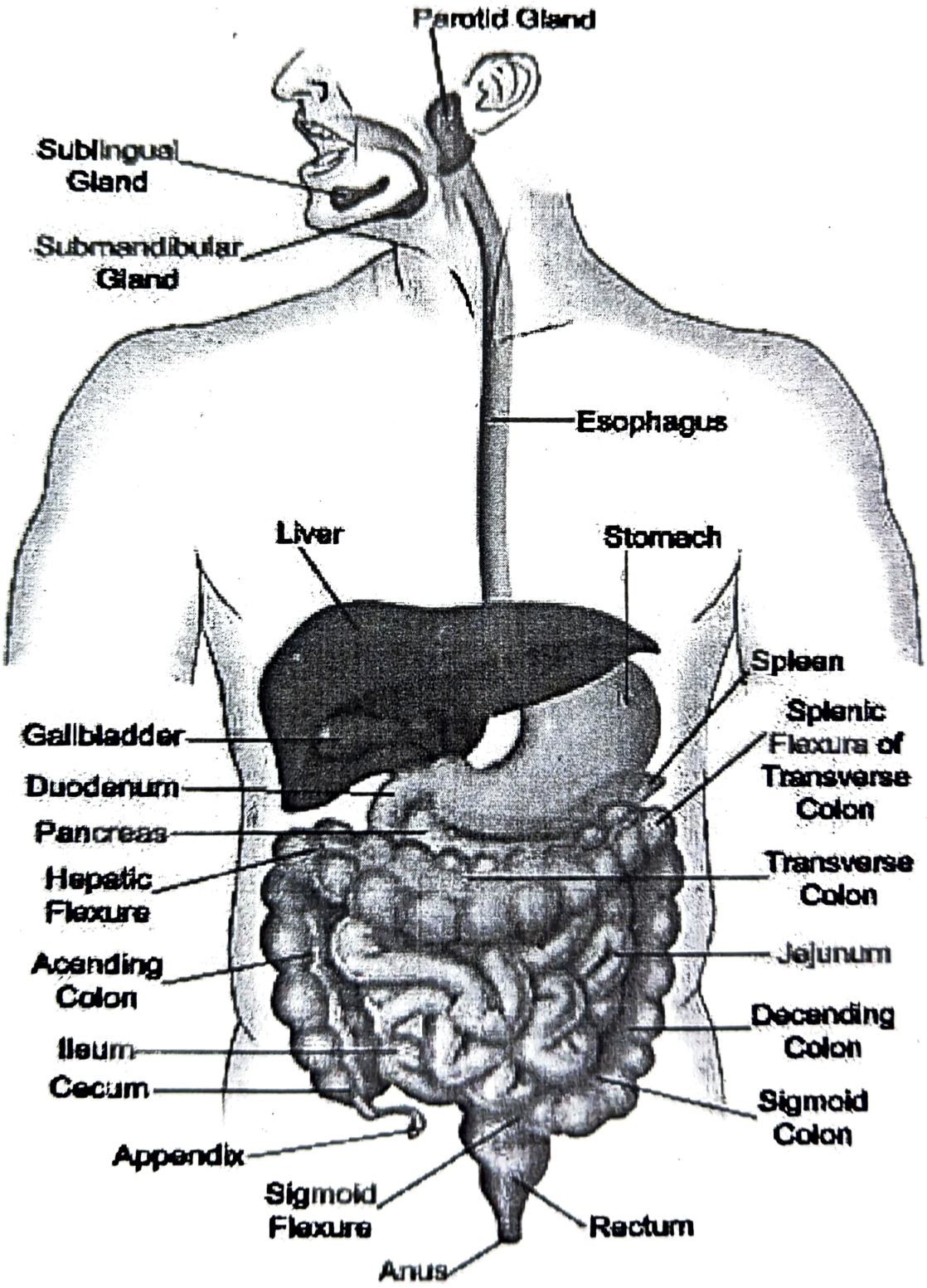
(ii) Anus

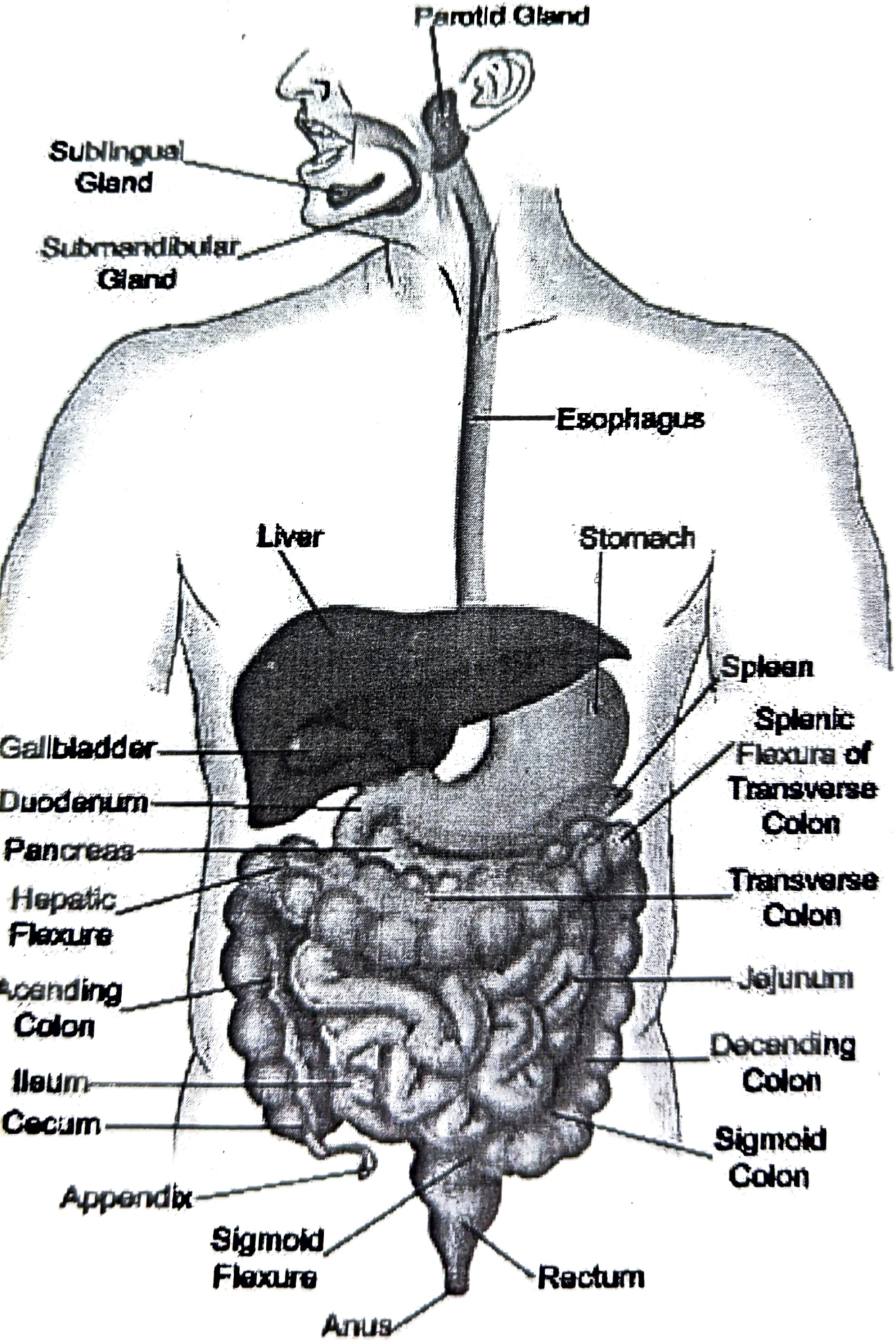
Continue...

ACCESSORY PARTS OF GIT

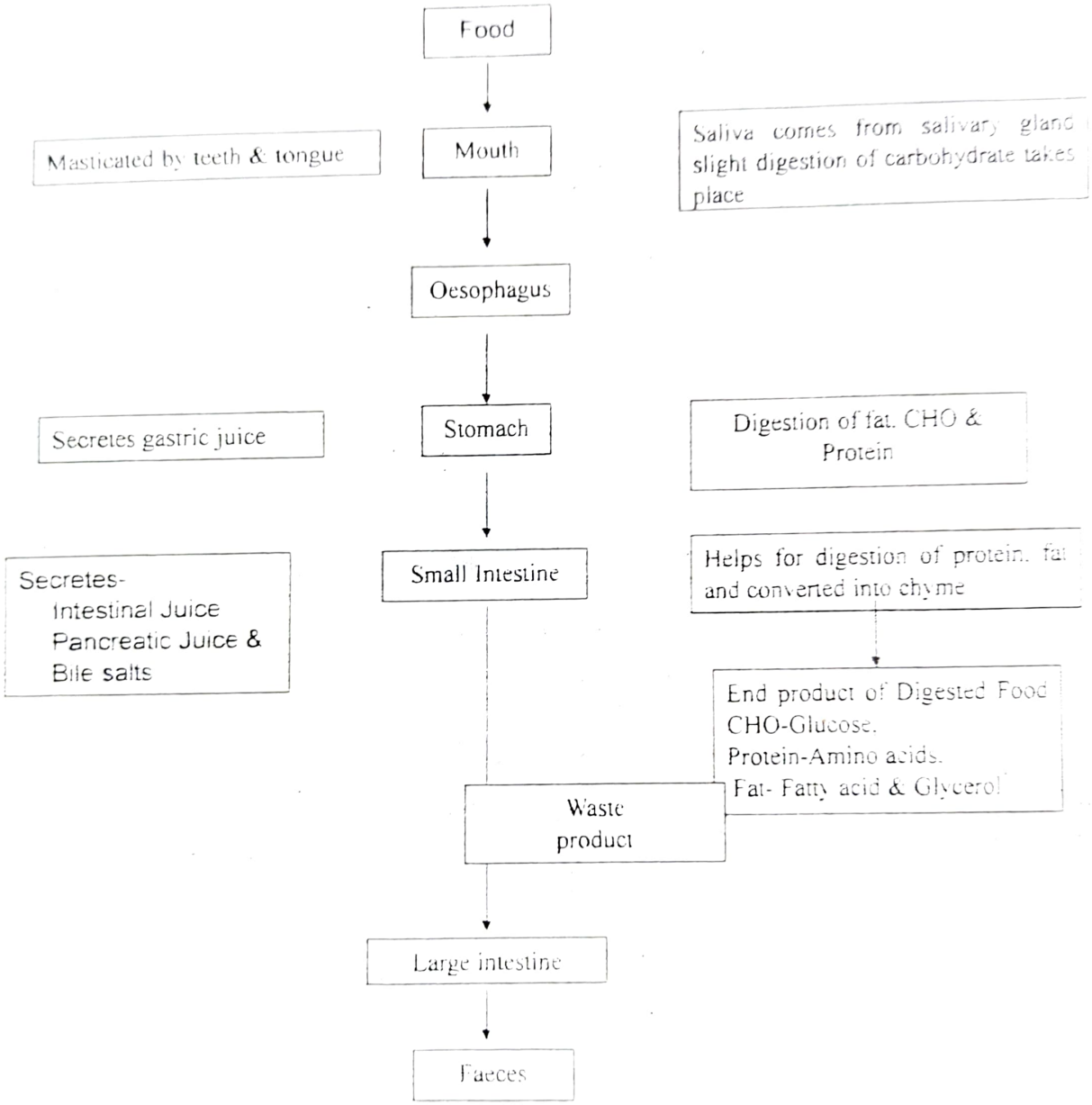
1. Teeth
2. Salivary glands (Parotid, sublingual and submandibular)
3. Liver
4. Pancreas
5. Gall bladder

Figure of Digestive System




Parotid Gland
Sublingual Gland
Submandibular Gland
Esophagus
Liver
Stomach
Spleen
Splenic Flexure of Transverse Colon
Gallbladder
Duodenum
Pancreas
Hepatic Flexure
Transverse Colon
Jejunum
Ascending Colon
Descending Colon
Ileum
Cecum
Sigmoid Colon
Appendix
Sigmoid Flexure
Rectum
Anus

Process of Digestion



EXCRETORY SYSTEMS

Excretory systems regulate the chemical composition of body fluids by removing metabolic wastes and retaining the proper amounts of water, salts, and nutrients.

Components of Excretory system include:

- Kidneys
- Liver
- Lungs and
- Skin.

Functions of Excretory System:

- Collect water and filter body fluids.
- Remove [redacted] waste products from body fluids and return other substances to body fluids as necessary for homeostasis.
- Eliminate excretory products from the body.

URINARY SYSTEM

The **urinary system** (also called excretory system) is the organ system that produces, stores, and eliminates urine. [redacted]

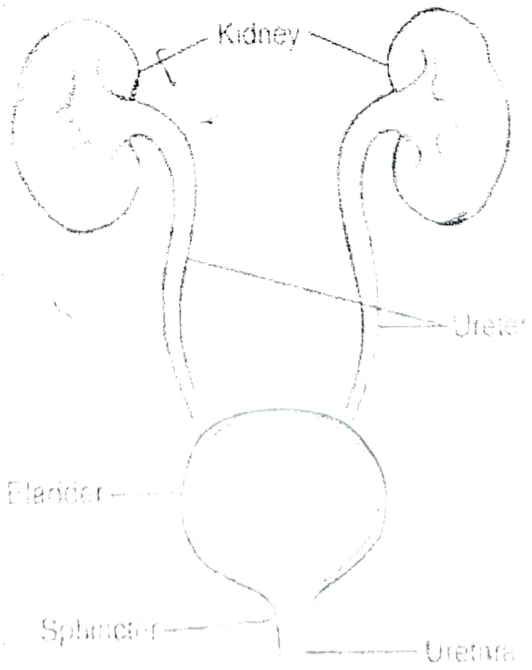
In humans it includes:

Two kidneys: Formation of urine

Two ureters: Channel for urine to each reach into the urinary bladder.

The bladder: Reservoir of urine.

The urethra: Outgoing pathway of urine.



The Kidneys:
The kidney is the essential organ for life. Each kidney is composed of approximately 1 million nephrons and weights approximately 150 gram.

Function of Kidney:

- Water balance
- Electrolyte balance
- Maintains Plasma volume
- Acid-base balance
- Excretion
- [redacted]

The Nephron:
The structural and functional unit of the kidney is called Nephron. [redacted]

Disease of Urinary system:

Nephritis: Inflammation of Nephron

Cystitis: Inflammation of urinary bladder

Pyelonephritis: Inflammation of the kidney [redacted]

Urethritis: Inflammation of urethra.

Prostatitis: Inflammation of prostrate gland

Hematuria: Blood in Urine.

Respiration

Respiration is defined as the transport of oxygen from the outside air to the cells (within the tissue) and the transport of Carbon dioxide in the opposite direction.

Respiratory System

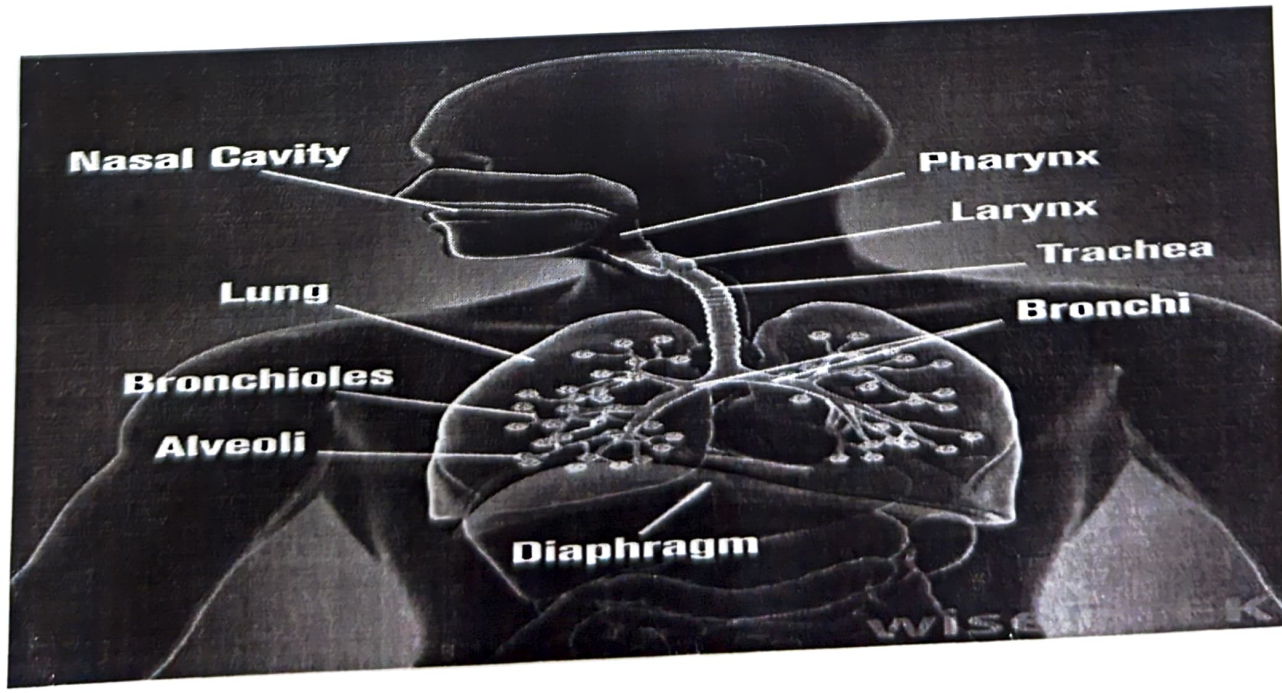
The Respiratory System is the system in the body that takes in oxygen and gives off Carbon dioxide.

Classification:

Respiratory system is divided into two sections:

1. Upper Respiratory tract
2. Lower Respiratory tract

Upper Respiratory Tract	Lower Respiratory tract
Nostrils	Trachea
Nasal Cavities	Bronchi
Pharynx	Bronchioles
Epiglottis	Alveoli
Larynx	Lungs



Respiratory Diseases

Upper Respiratory Tract Infection	Lower Respiratory Tract Infection
Common cold (Affects the nose)	**Pneumonia** (Inflammation of the lungs)
Sinusitis (Inflammation of the sinuses)	
Tonsillitis (Inflammation of the tonsils)	**Asthma** (Inflames and narrows the airways causes difficulty breathing)
Otitis media (Inflammatory diseases of the middle ear)	
Pharyngitis (Inflammation of the pharynx)	**Bronchitis** (Inflammation of the lining of bronchial tubes)
Laryngitis (An inflammation of the larynx)	

Pharmacology

The science of drugs including their origin, composition, pharmacokinetics, therapeutic use, and toxicology

Pharmacology is two types:

1. Pharmacokinetics
2. Pharmacodynamics

Pharmacokinetics

It deals with Absorption, Distribution, Metabolism & Excretion (ADME) of drug.

Pharmacodynamics

It deals with mechanism of drug action.

* Diabeta ~~Rong~~ — increase insulin secretion
Glielazid

* Gipid
Glimepiride — increase insulin secreation

* Repaglide — increase insulin secreation

me