



Pharmacological

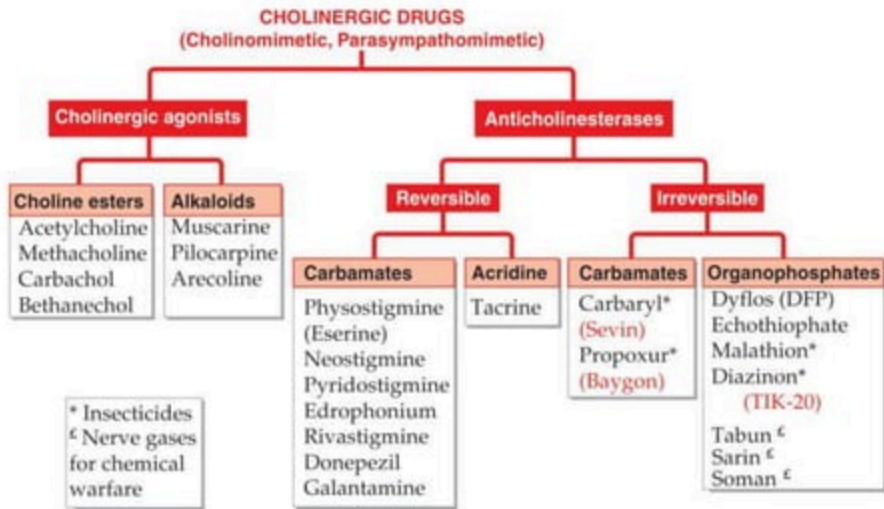
Classification Of Drugs



MSK



Drugs Acting on Autonomic Nervous System



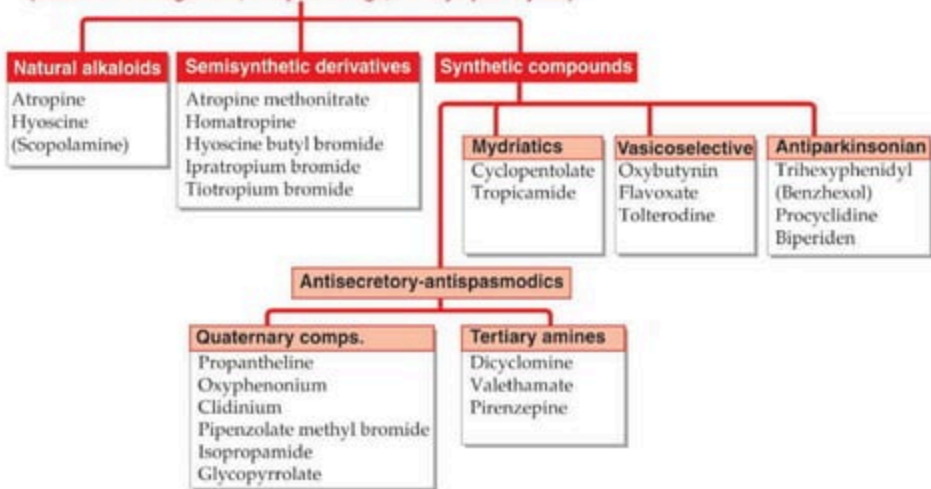
The Autonomic Nervous System



Drugs Acting on Autonomic Nervous System

ANTICHOLINERGIC DRUGS

(Muscarinic antagonists, Atropinic drugs, Parasympatholytics)



The Autonomic Nervous System



Drugs Acting on Autonomic Nervous System

GANGLIONIC STIMULANTS

Selective nicotinic agonists

Nicotine (small dose)
Lobeline
Dimethyl phenyl piperazinium (DMPP)
Tetramethyl ammonium (TMA)
Varenicline

Nonselective/muscarinic agonists

Acetylcholine
Carbachol
Pilocarpine
Anticholinesterases
MCN 343-A

GANGLIONIC BLOCKING AGENTS

Competitive blockers

Quaternary ammonium comps.

Hexamethonium
Pentolinium

Amines

Mecamylamine
Pempidine

Monosulfonium comp.

Trimethaphan-camforsulfonate

Persistent depolarizing blockers

Nicotine (large dose)
Anticholinesterases (large dose)

The Autonomic Nervous System



Drugs Acting on Autonomic Nervous System

ADRENERGIC DRUGS (Sympathomimetics)

Pressor agents

Noradrenaline
(Norepinephrine)
Ephedrine
Dopamine
Phenylephrine
Methoxamine
Mephentermine

Bronchodilators

Isoprenaline
Salbutamol
(Albuterol)
Terbutaline
Salmeterol
Formoterol
Bambuterol

CNS stimulants

Amphetamine
Dexamphetamine
Methamphetamine
Methylphenidate

Uterine relaxants

Ritodrine
Isoxsuprine
Salbutamol
Terbutaline

Cardiac stimulants

Adrenaline
Isoprenaline
Dobutamine

Nasal decongestants

Xylometazoline
Oxymetazoline
Naphazoline
Phenylephrine
Phenylpropanolamine
Pseudoephedrine

Anorectics

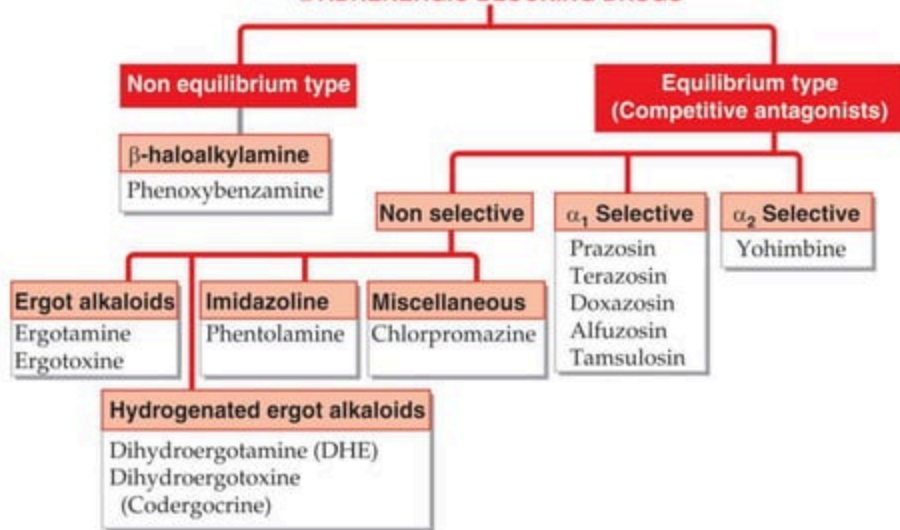
Amphetamine
Fenfluramine
Dexfenfluramine
Sibutramine

The Autonomic Nervous System



Drugs Acting on Autonomic Nervous System

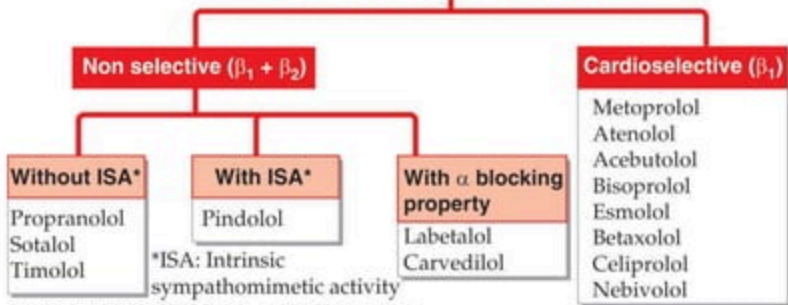
α ADRENERGIC BLOCKING DRUGS



The Autonomic Nervous System

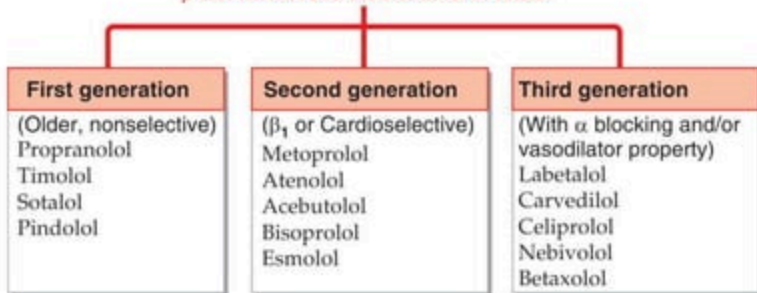


β ADRENERGIC BLOCKING DRUGS

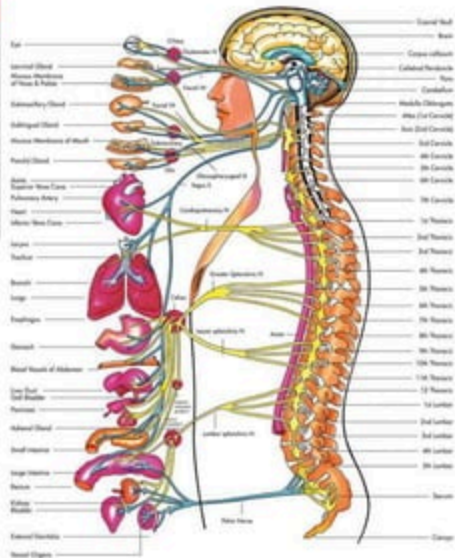


GENERATIONWISE CLASSIFICATION

β ADRENERGIC BLOCKING DRUGS

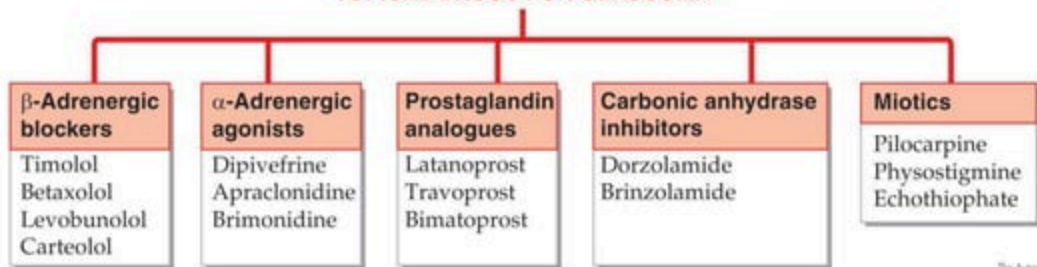


The Autonomic Nervous System



Drugs Acting on Autonomic Nervous System

TOPICAL DRUGS FOR GLAUCOMA



The Autonomic Nervous System



Autacoids and Related Drugs



HISTAMINERGIC AGONISTS

Nonselective agonists ($H_1 + H_2 + H_3$)	Selective H_1 agonists	Selective H_2 agonists	Selective H_3 agonists
Histamine Betahistine	2-Methyl histamine 2-Pyridyl ethylamine 2-Thizolyl ethylamine	Dimaprit Impromidine	(R) α -Methylhistamine Imetit

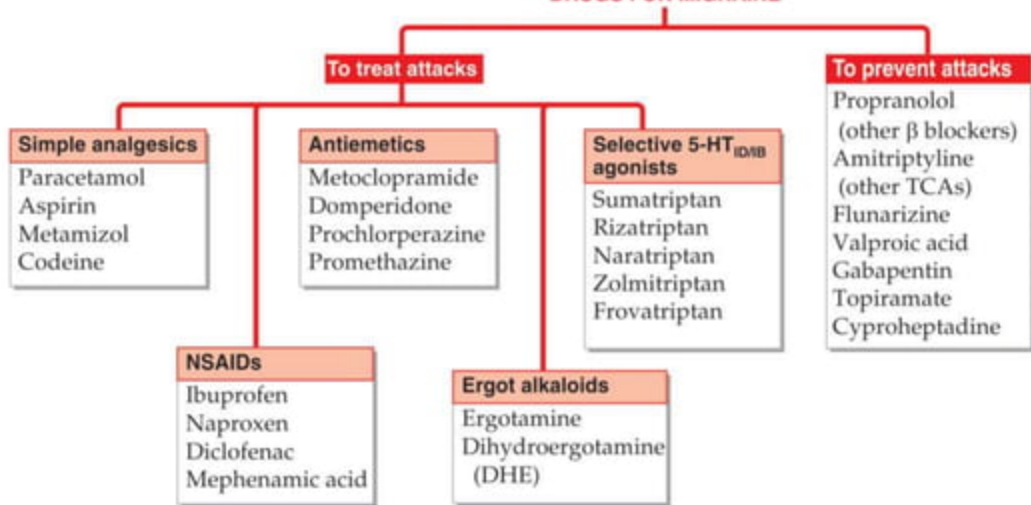
H_1 ANTAGONISTS (Conventional antihistaminics)

Highly sedative	Moderately sedative	Mildly sedative	Second generation (nonsedating) anti- histaminics
Diphenhydramine Dimenhydrinate Promethazine Hydroxyzine	Pheniramine Cyproheptadine Meclozine Cinnarizine	Chlorpheniramine Dexchlorpheniramine Triprolidine Clemastine	Fexofenadine Loratadine Desloratadine Cetirizine Levocetirizine Azelastine Mizolastine Ebastine

Autacoids and Related Drugs



DRUGS FOR MIGRAINE



Autacoids and Related Drugs



5-HYDROXY TRYPTAMINE (5-HT) ANTAGONISTS

Nonselective antagonists & partial agonists/antagonists

Ergotamine
Lysergic acid diethyl
amide (LSD)
2-Bromo LSD
Methysergide
Cyproheptadine
Cinnarizine

5-HT₂ Antagonists

Ketanserin
Ritanserin
Clozapine
Risperidone

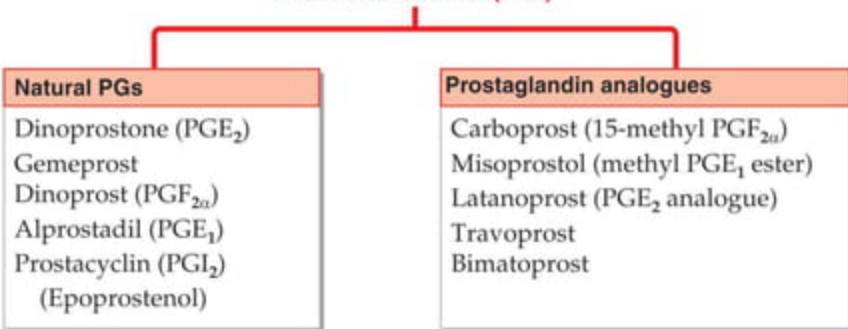
5-HT₃ Antagonists

Ondansetron
Granisetron
Tropisetron
Palonosetron
Ramosetron

Autacoids and Related Drugs



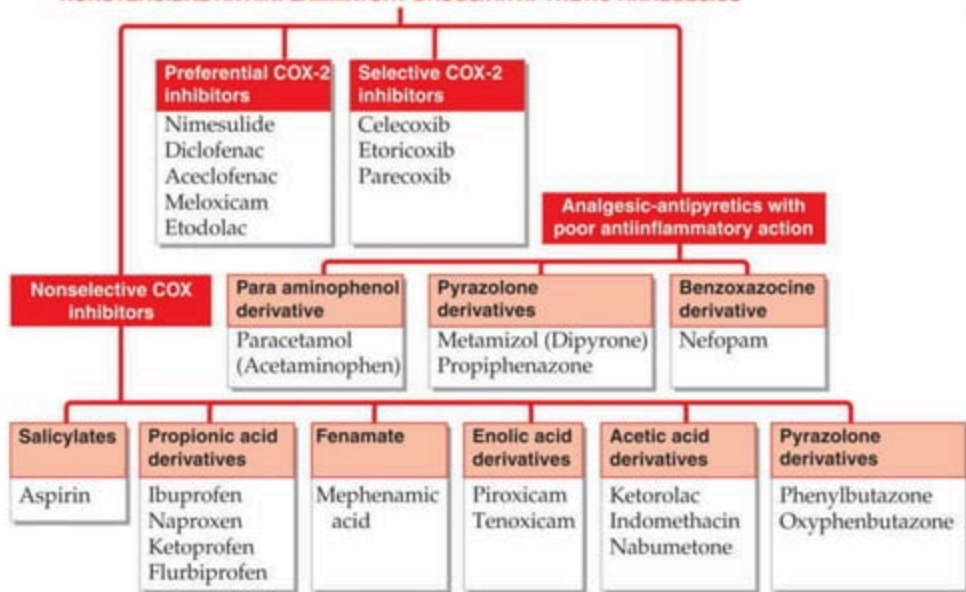
PROSTAGLANDINS (PGs)



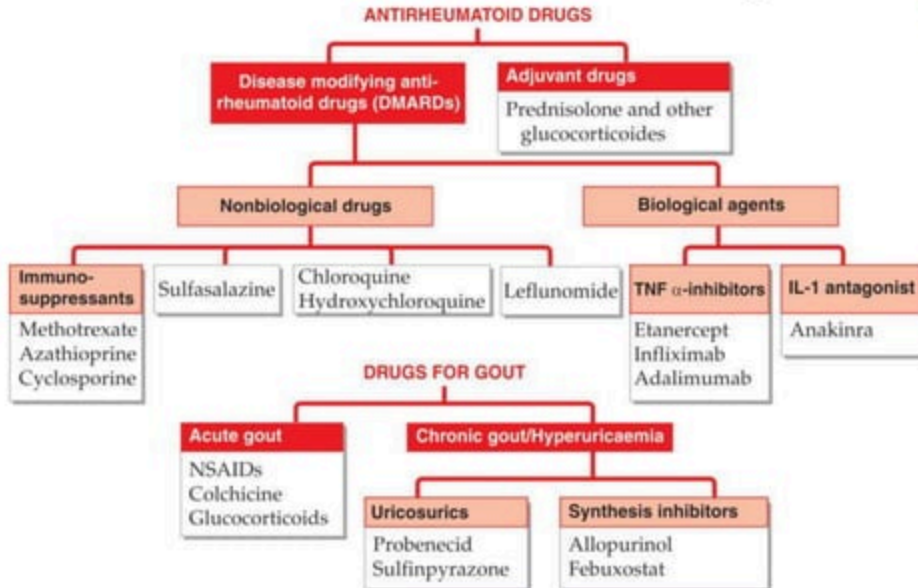
Autacoids and Related Drugs



NONSTEROIDAL ANTIINFLAMMATORY DRUGS/ANTIPYRETIC-ANALGESICS



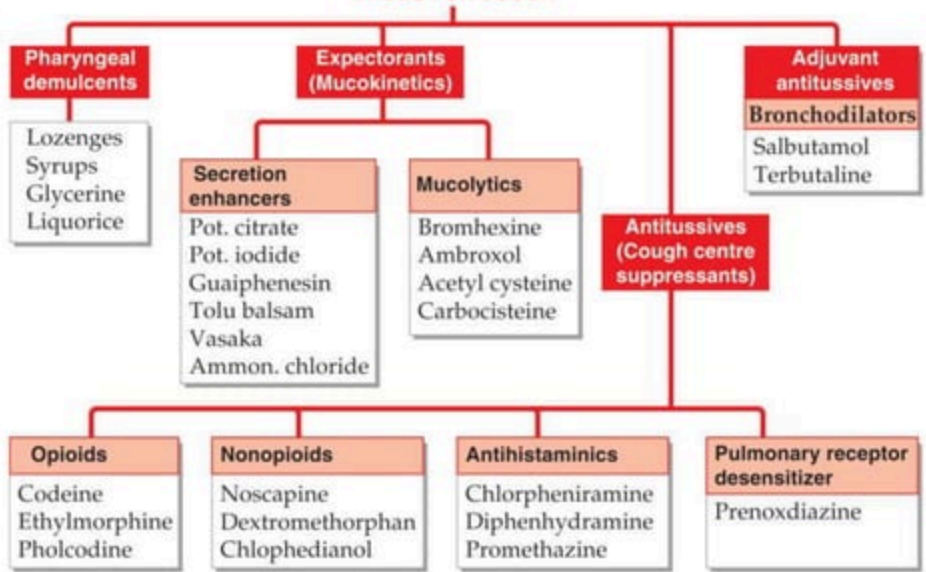
Autacoids and Related Drugs





Drugs for Respiratory Disorders

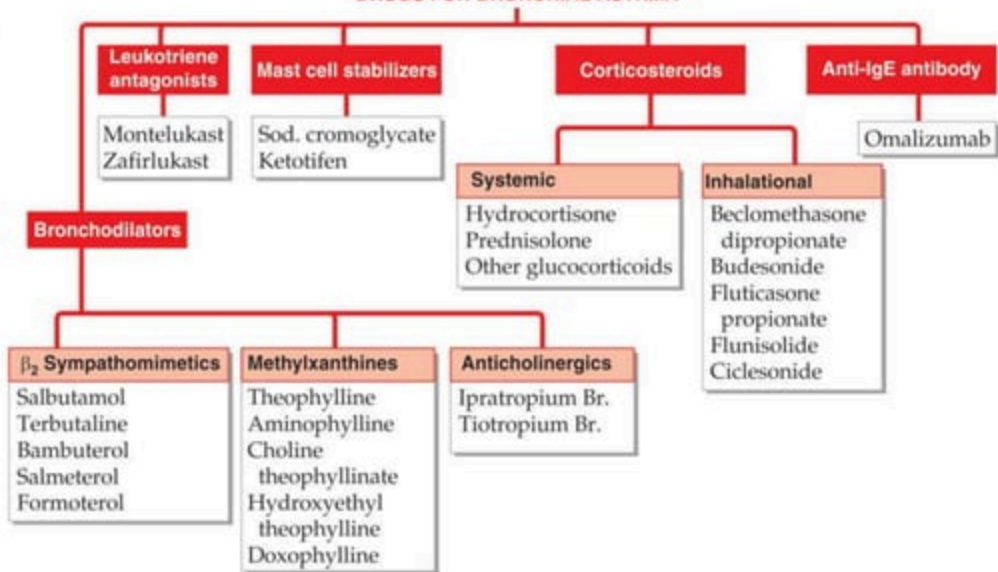
DRUGS FOR COUGH





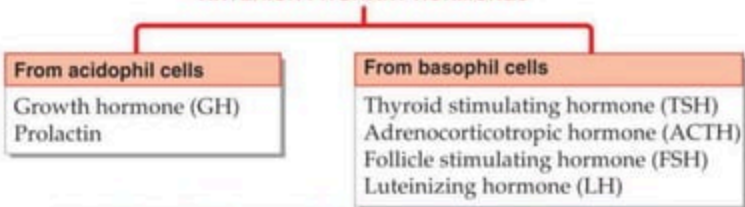
Drugs for Respiratory Disorders

DRUGS FOR BRONCHIAL ASTHMA

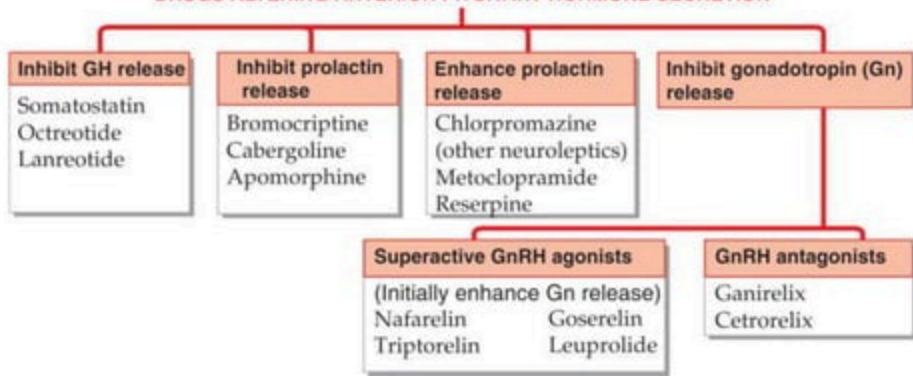


Hormones and Related Drugs

ANTERIOR PITUITARY HORMONES

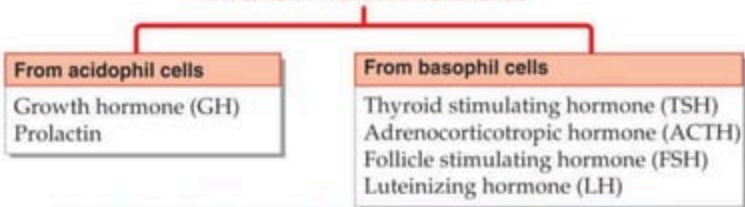


DRUGS ALTERING ANTERIOR PITUITARY HORMONE SECRETION

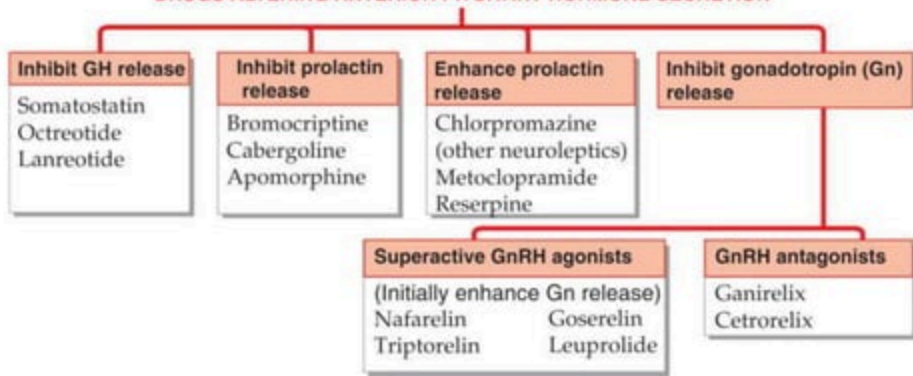


Hormones and Related Drugs

ANTERIOR PITUITARY HORMONES



DRUGS ALTERING ANTERIOR PITUITARY HORMONE SECRETION



Hormones and Related Drugs

Thyroid hormone
Thyroxine (T_4) Triiodothyronine (T_3 , Liothyronine)

THYROID INHIBITORS

Inhibit hormone synthesis
(Antithyroid drugs) Propylthiouracil Methimazole Carbimazole

Inhibit iodide trapping
(Ionic inhibitors) Thiocyanates ($-SCN$) Perchlorates ($-ClO_4$) Nitrates ($-NO_3$)

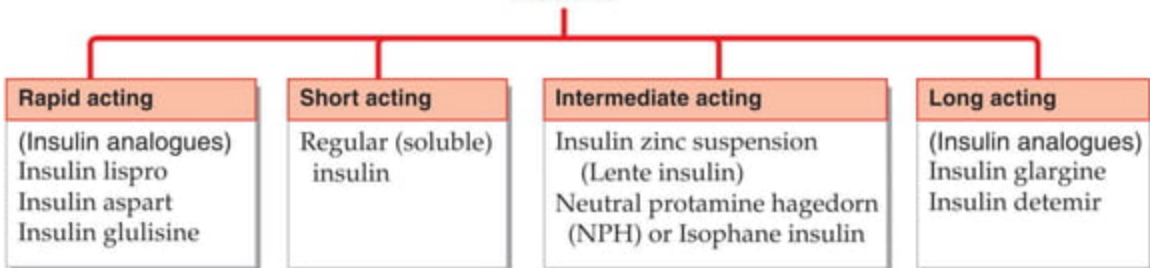
Inhibit hormone release
Iodine Iodides of Na, K Organic iodide

Destroy thyroid tissue
Radioactive iodine ^{131}I



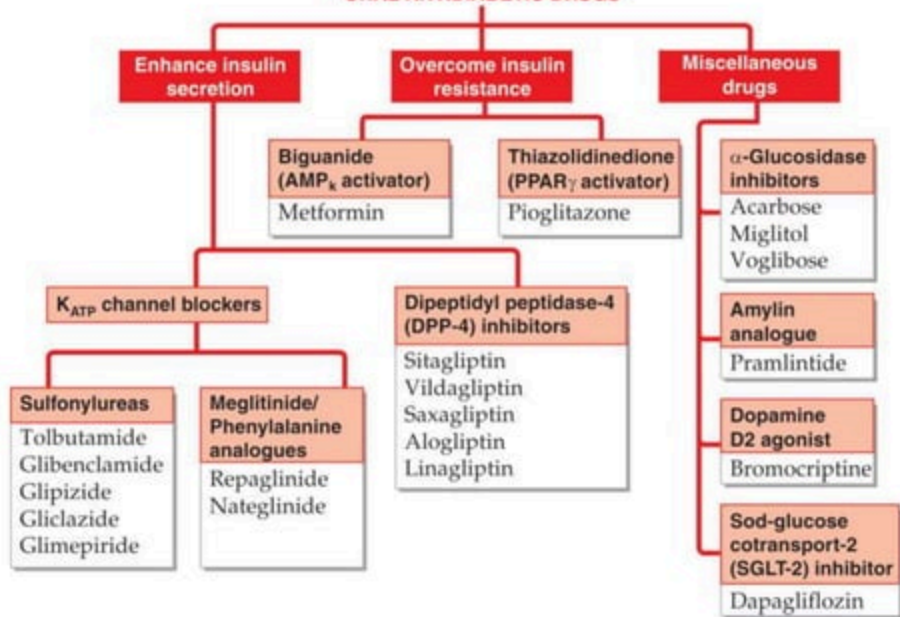
Hormones and Related Drugs

INSULINS



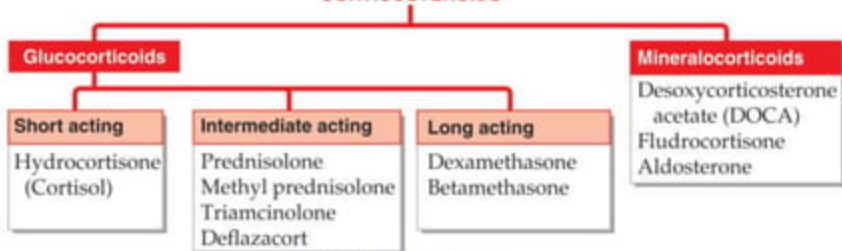
Hormones and Related Drugs

ORAL ANTIDIABETIC DRUGS

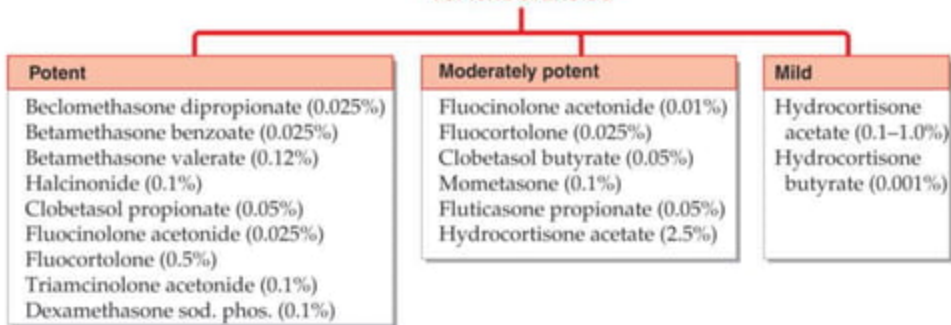


Hormones and Related Drugs

CORTICOSTEROIDS

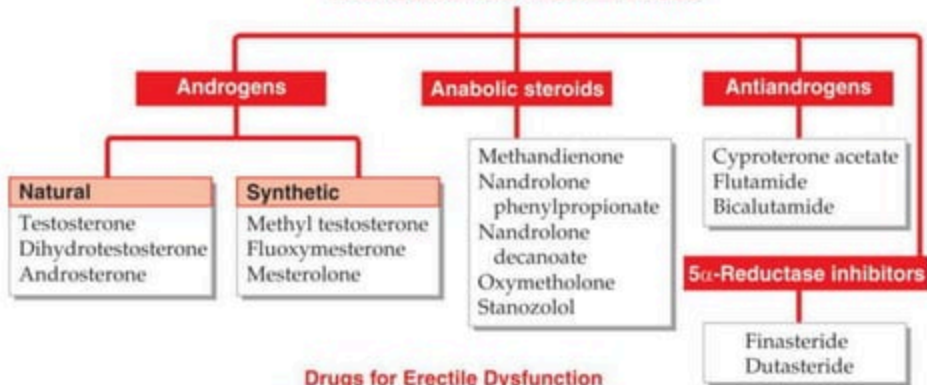


TOPICAL STEROIDS

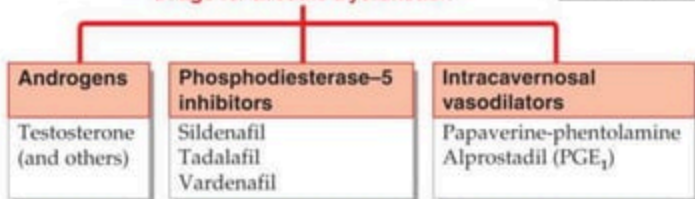


Hormones and Related Drugs

ANDROGENS AND RELATED DRUGS

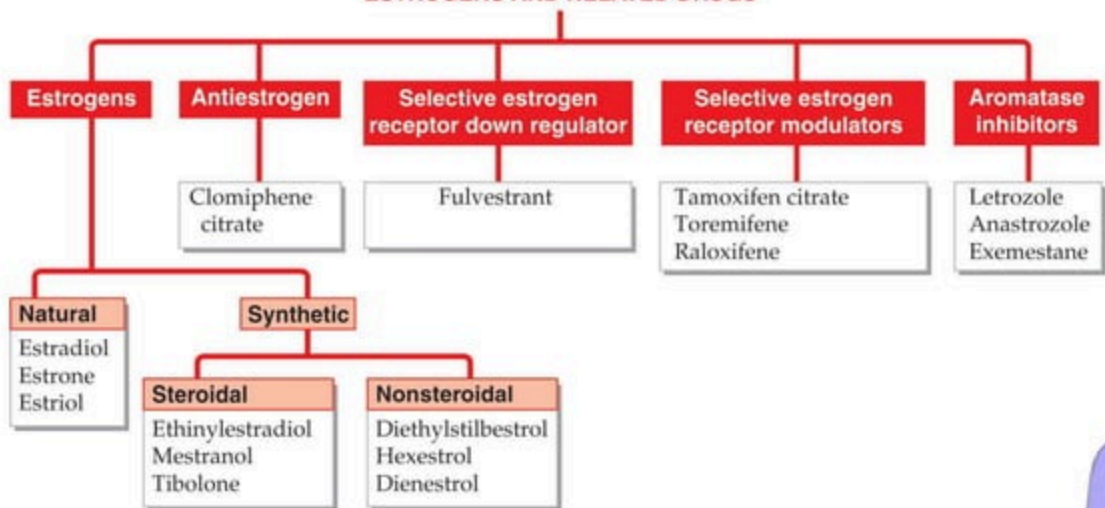


Drugs for Erectile Dysfunction

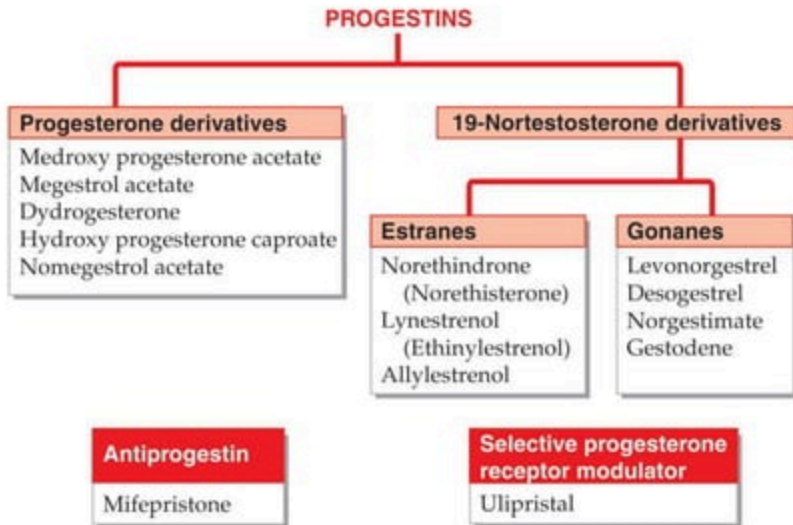


Hormones and Related Drugs

ESTROGENS AND RELATED DRUGS



Hormones and Related Drugs



Hormones and Related Drugs

HORMONAL CONTRACEPTIVES

Oral

Injectable

Combined pills

- Norgestrel (0.5 mg) + Ethinylestradiol (50 µg)
- Levonorgestrel (0.1 – 0.25 mg) + Ethinylestradiol (20 – 50 µg)
- Desogestrel (0.15 mg) + Ethinylestradiol (20 – 30 µg)

Phased pills

- Levonorgestrel (50 µg – 75 µg – 125 µg) + Ethinylestradiol (30 µg – 40 µg – 30 µg)
- Norethindrone (0.5 mg – 0.75 mg – 1.0 mg) + Ethinylestradiol (35 µg)

Postcoital pills

- Levonorgestrel (1.5 mg)
- Levonorgestrel (0.5 mg) + Ethinylestradiol (100 µg) × 2 doses

- Depot medroxyprogesterone acetate (DMPA)
- Norethindrone enanthate

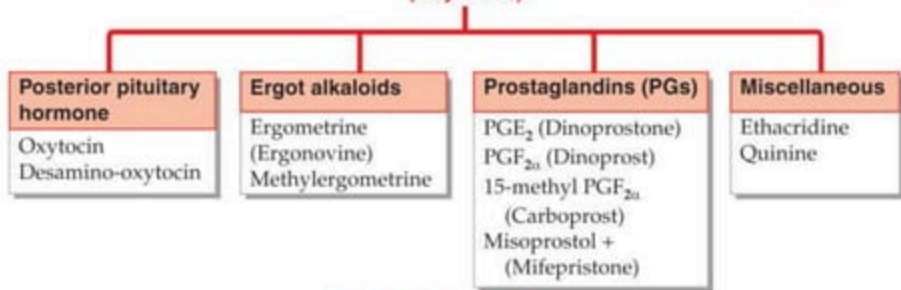
Progestin only pills (mini pills)

- Norethindrone (0.35 mg)
- Norgestrel (75 µg)

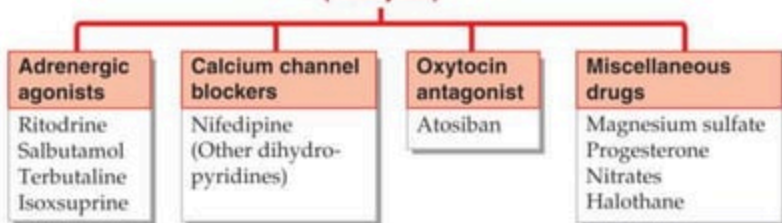


Hormones and Related Drugs

UTERINE STIMULANTS (Oxytocics)

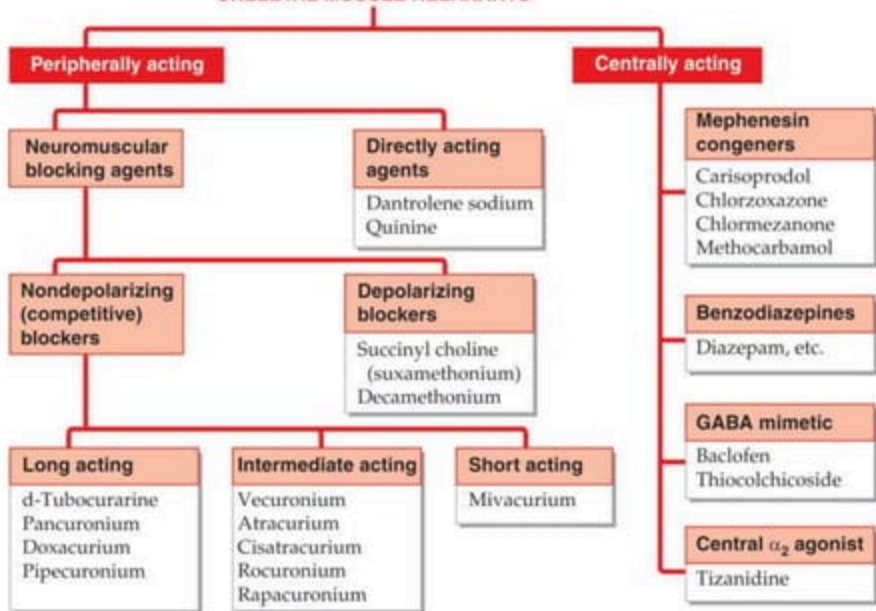


UTERINE RELAXANTS (Tocolytics)



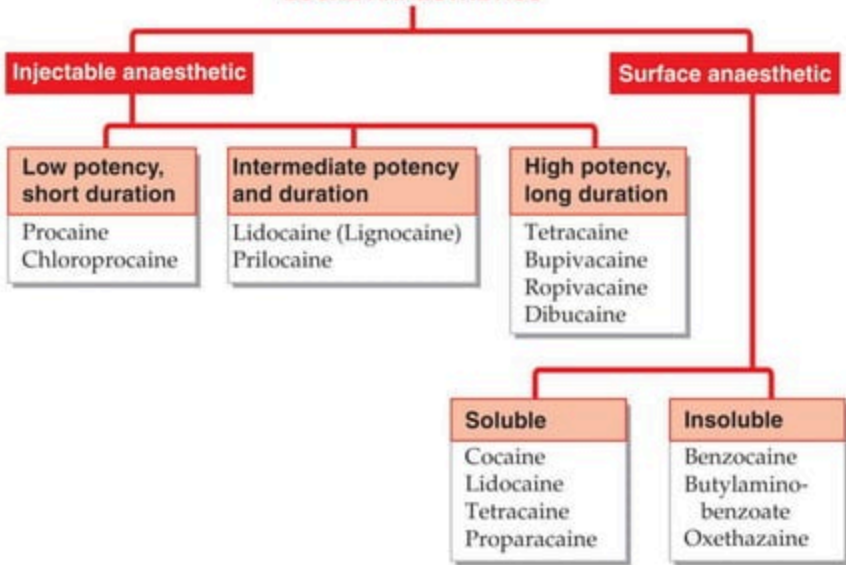
Drugs Acting on Peripheral (somatic) Nervous System

SKELETAL MUSCLE RELAXANTS

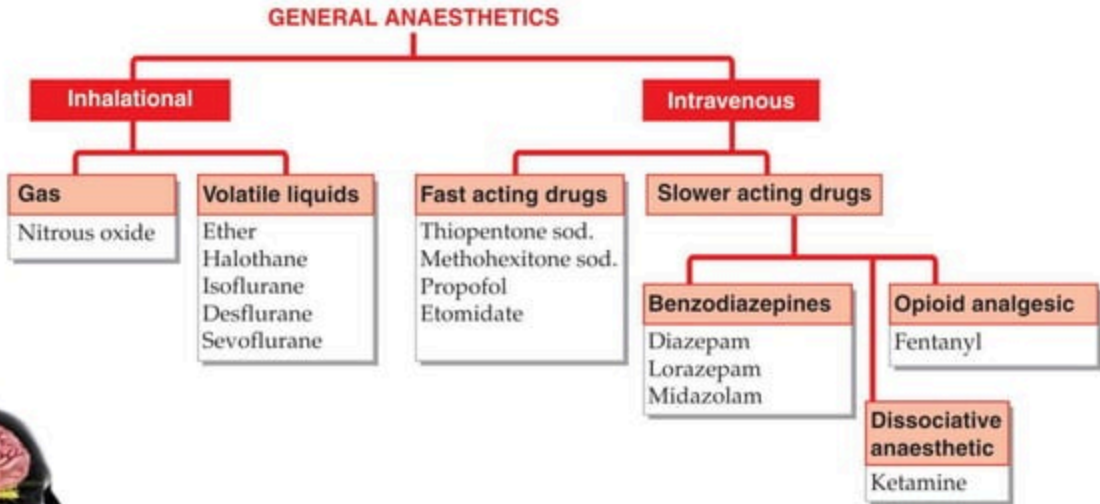


Drugs Acting on Peripheral (somatic) Nervous System

LOCAL ANAESTHETICS

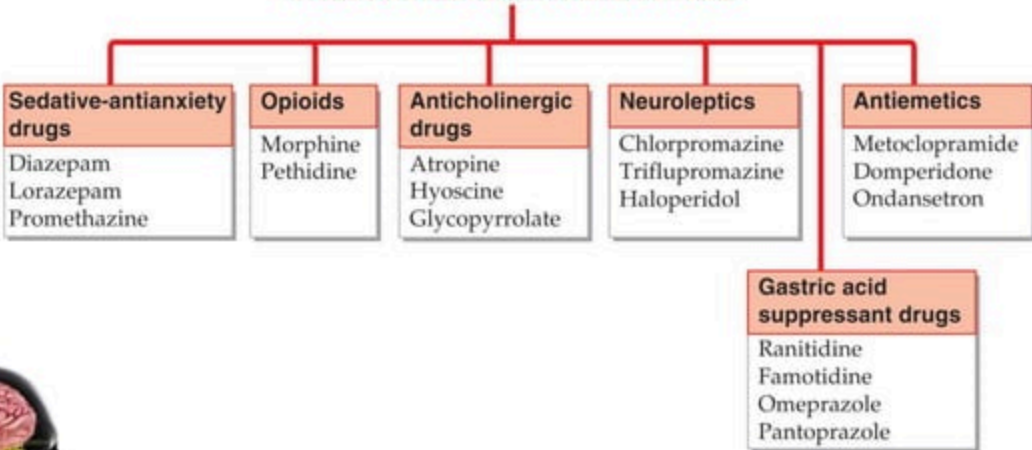


Drugs Acting on Central Nervous System



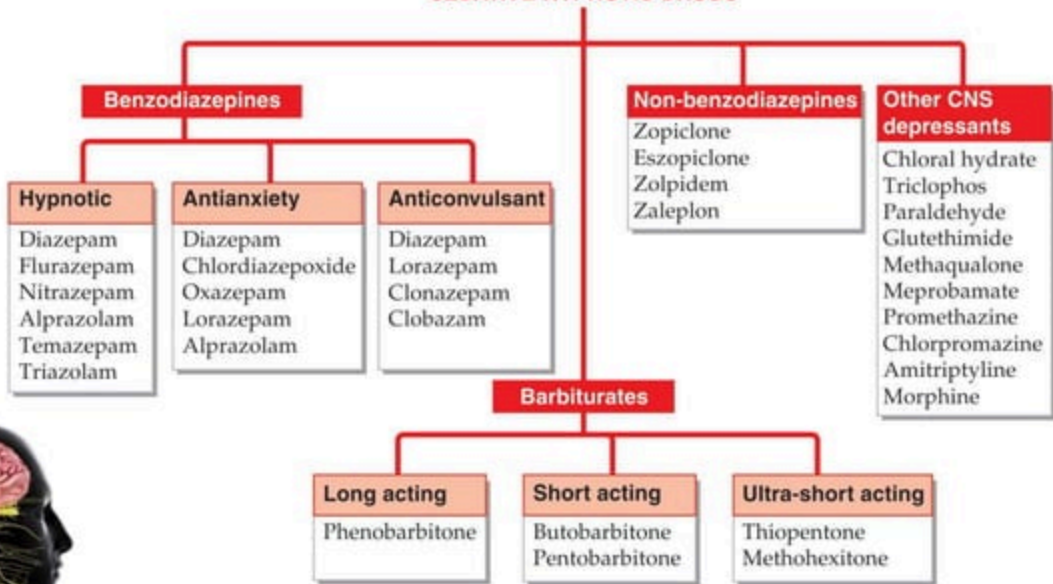
Drugs Acting on Central Nervous System

PREANAESTHETIC MEDICATION DRUGS



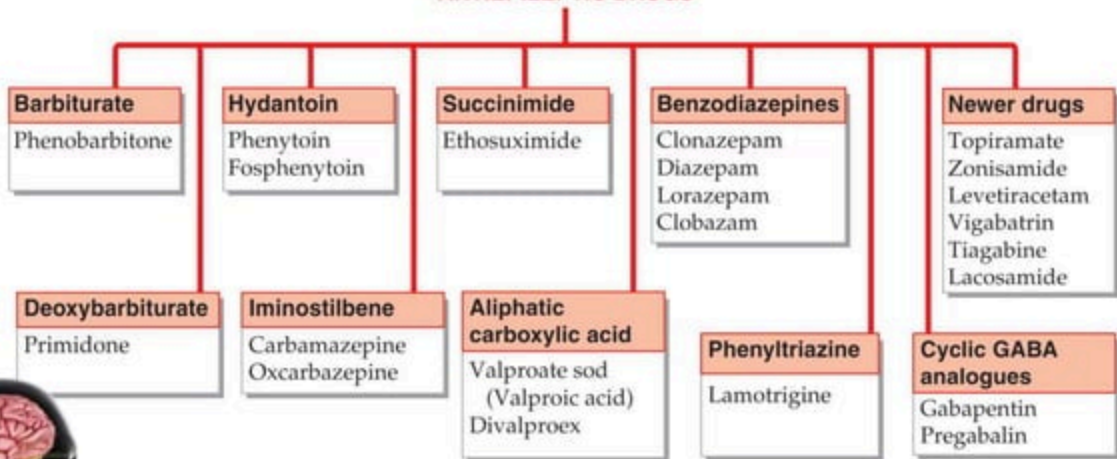
Drugs Acting on Central Nervous System

SEDATIVE-HYPNOTIC DRUGS



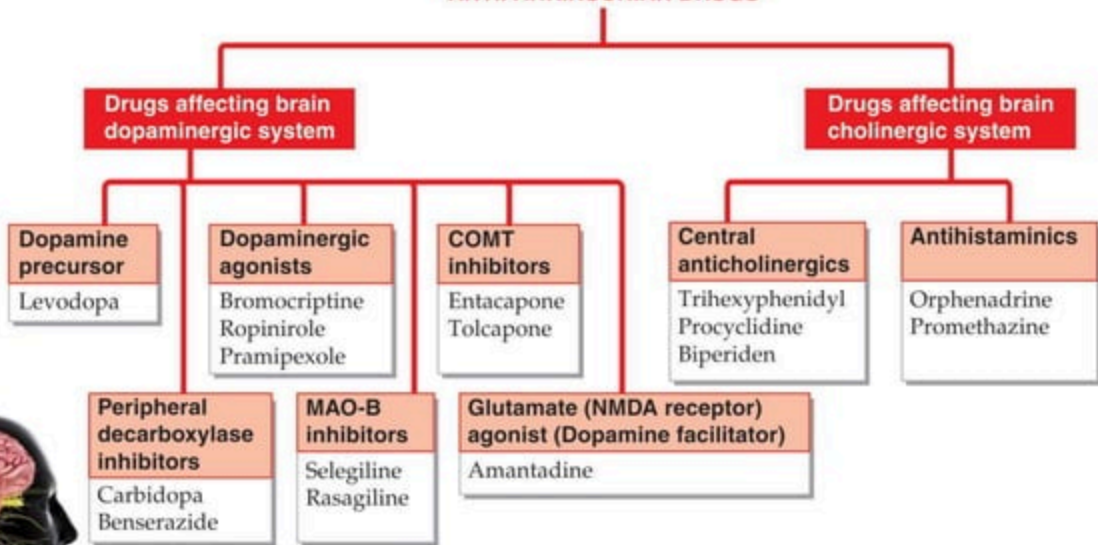
Drugs Acting on Central Nervous System

ANTIEPILEPTIC DRUGS



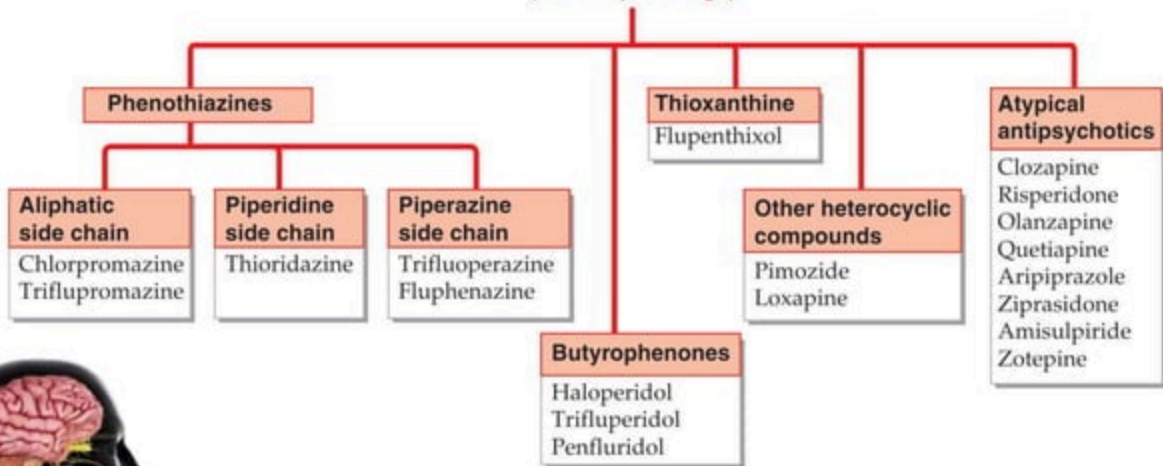
Drugs Acting on Central Nervous System

ANTIPARKINSONIAN DRUGS



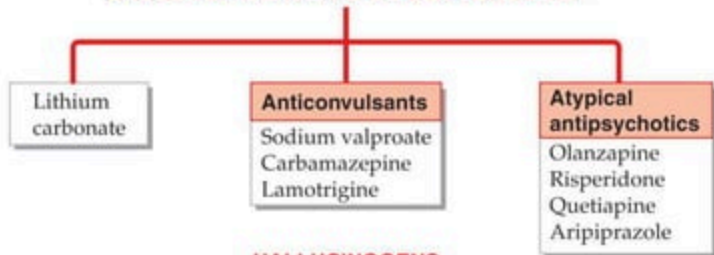
Drugs Acting on Central Nervous System

ANTIPSYCHOTIC DRUGS (Neuroleptic drugs)



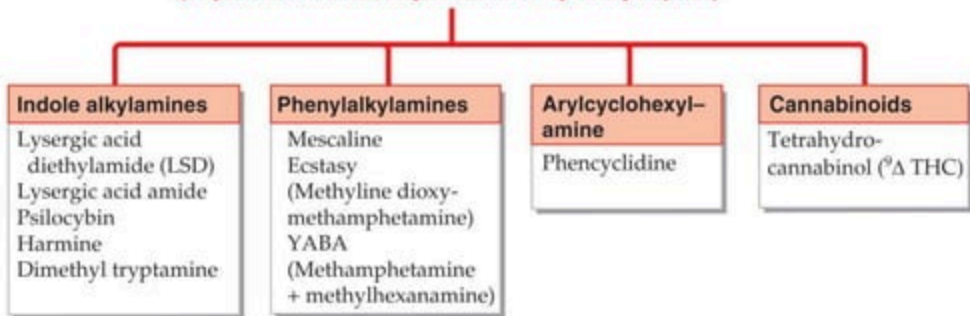
Drugs Acting on Central Nervous System

DRUGS FOR MANIA AND BIPOLAR DISORDER



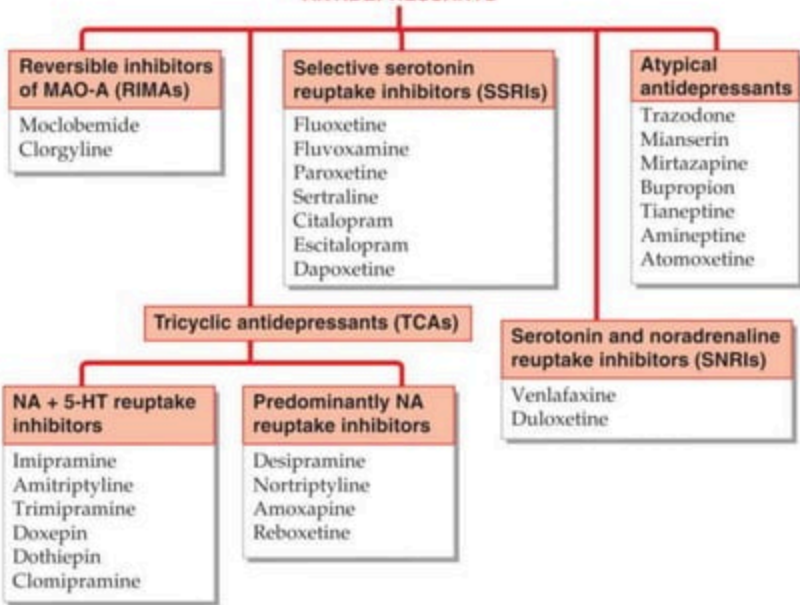
HALLUCINOGENS

(Psychotomimetics, Psychedelics, Psychodysleptics)

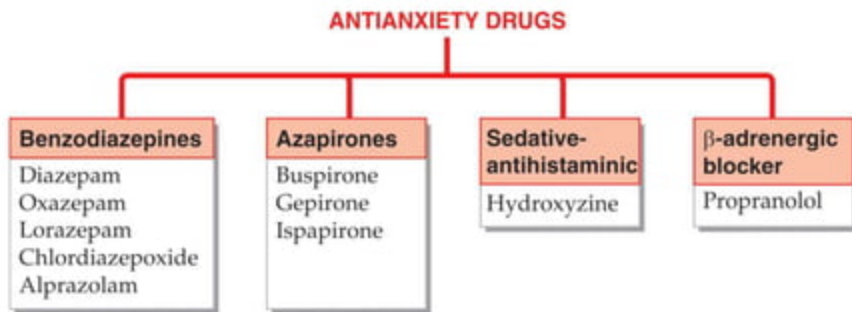


Drugs Acting on Central Nervous System

ANTIDEPRESSANTS

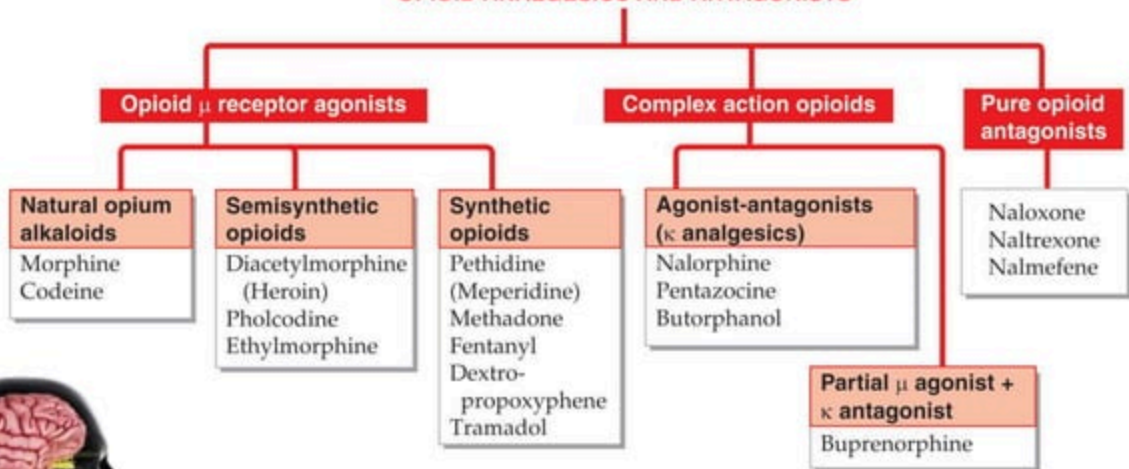


Drugs Acting on Central Nervous System



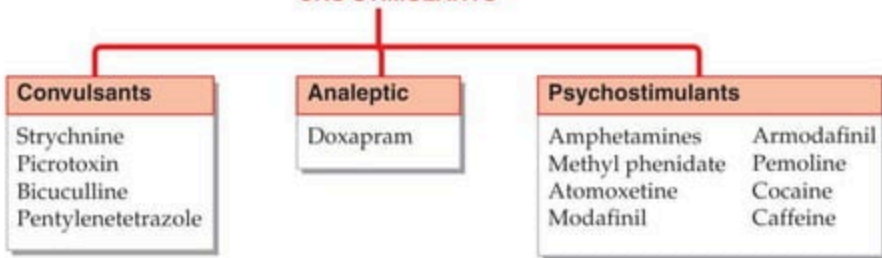
Drugs Acting on Central Nervous System

OPIOID ANALGESICS AND ANTAGONISTS

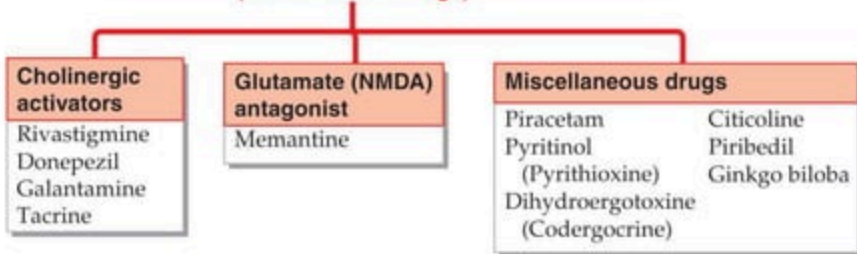


Drugs Acting on Central Nervous System

CNS STIMULANTS

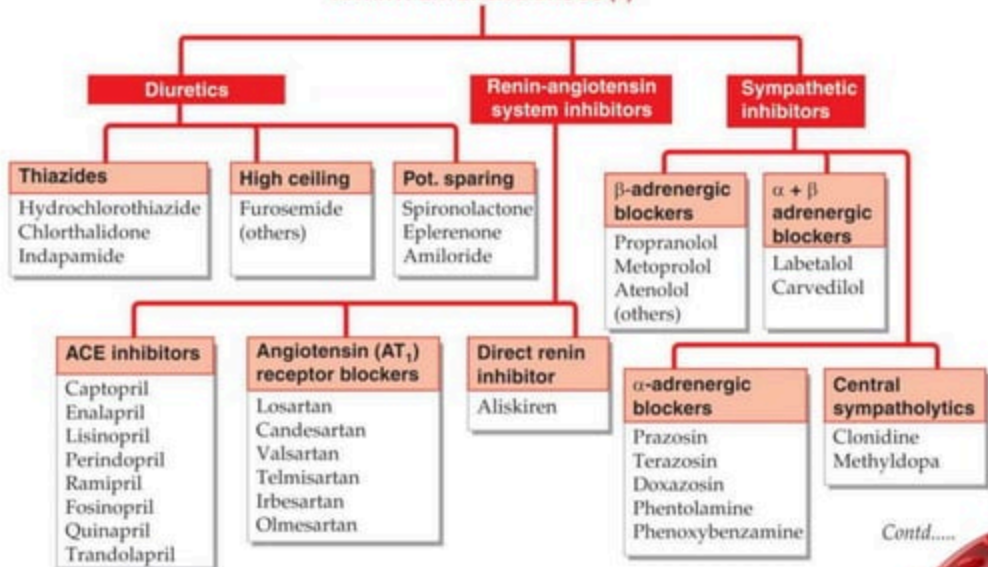


COGNITION ENHANCERS (Cerebroactive drugs)



Cardiovascular Drugs

ANTIHYPERTENSIVE DRUGS (1)

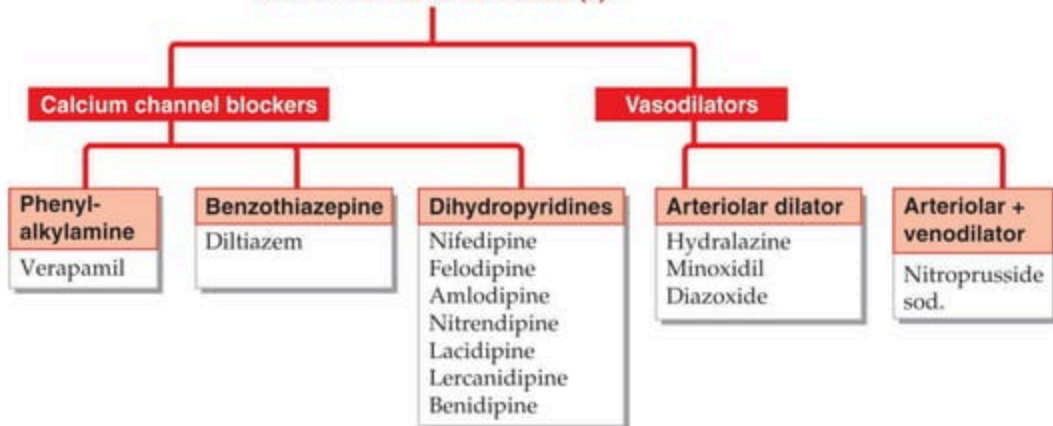


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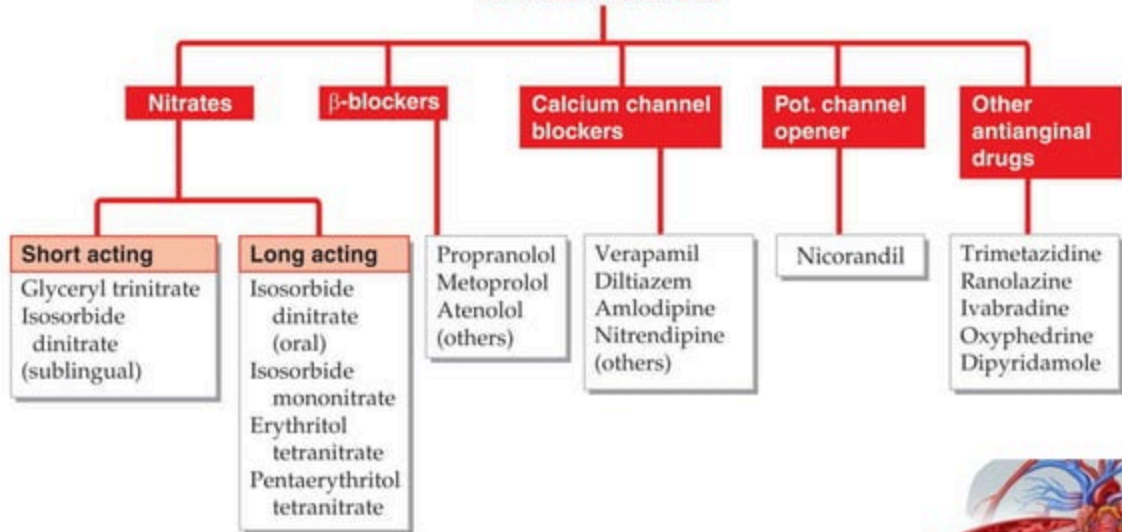
Cardiovascular Drugs

ANTIHYPERTENSIVE DRUGS (2)



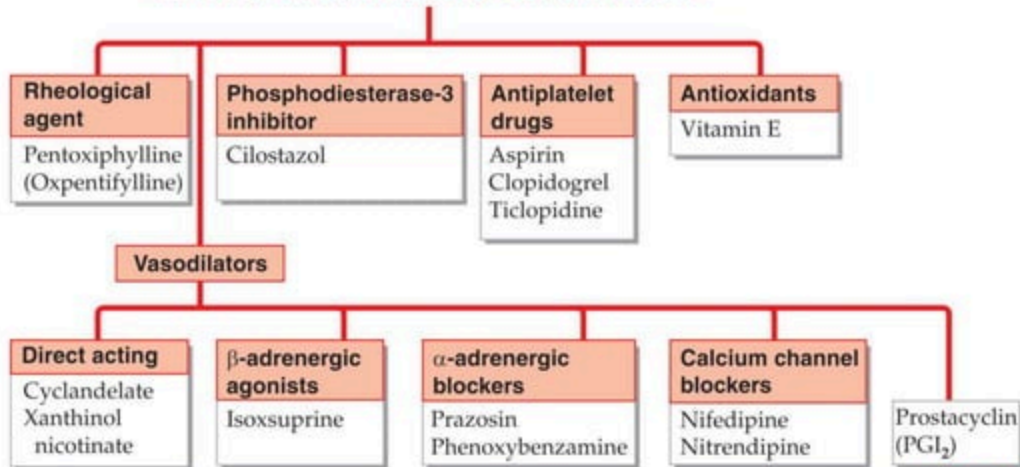
Cardiovascular Drugs

ANTIANGINAL DRUGS



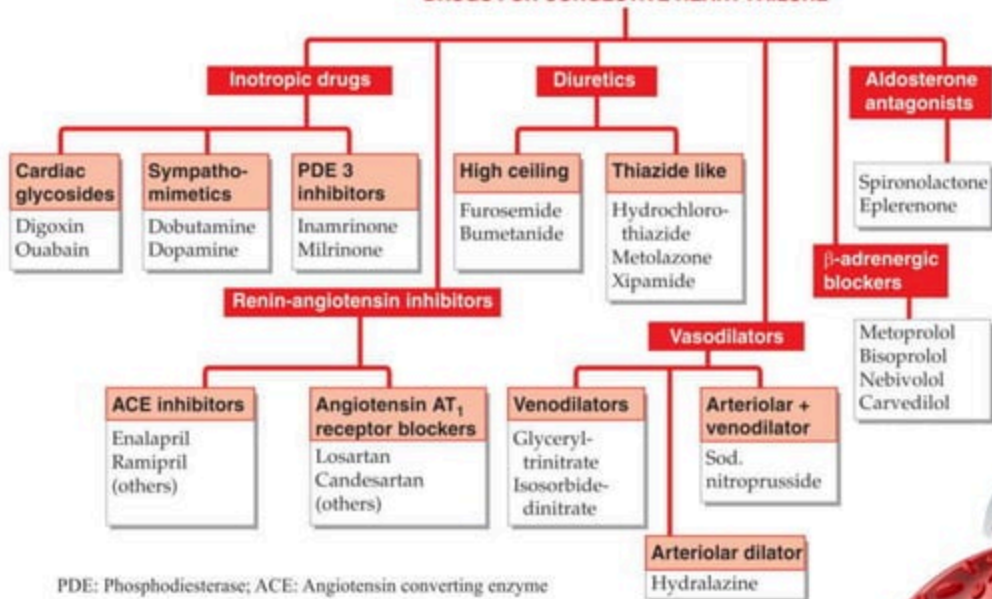
Cardiovascular Drugs

DRUGS FOR PERIPHERAL VASCULAR DISEASES



Cardiovascular Drugs

DRUGS FOR CONGESTIVE HEART FAILURE

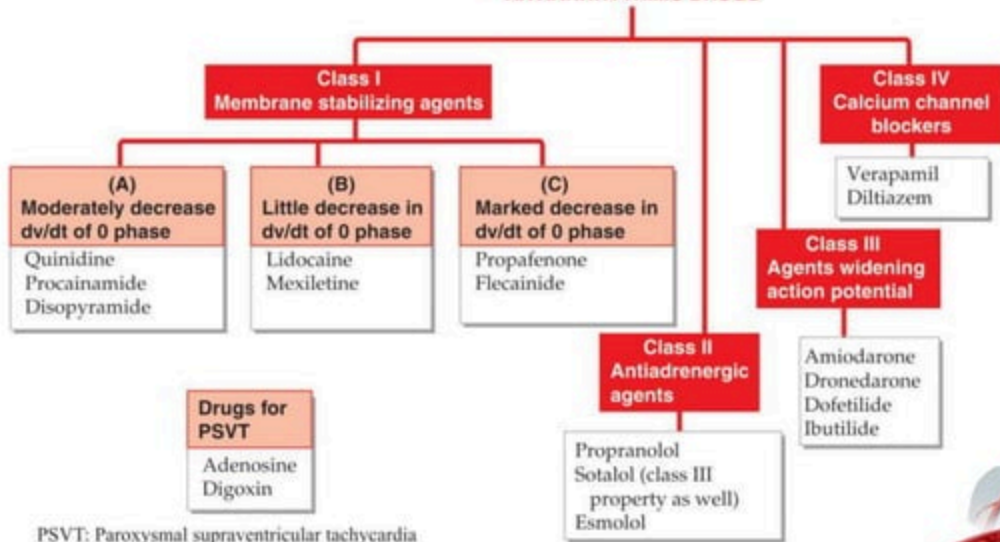


PDE: Phosphodiesterase; ACE: Angiotensin converting enzyme



Cardiovascular Drugs

ANTIARRHYTHMIC DRUGS

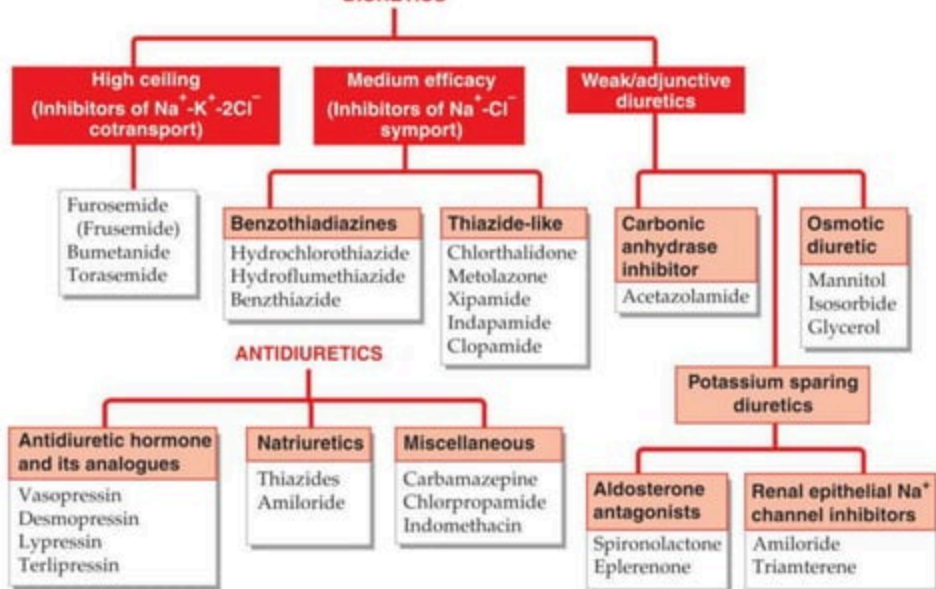


PSVT: Paroxysmal supraventricular tachycardia



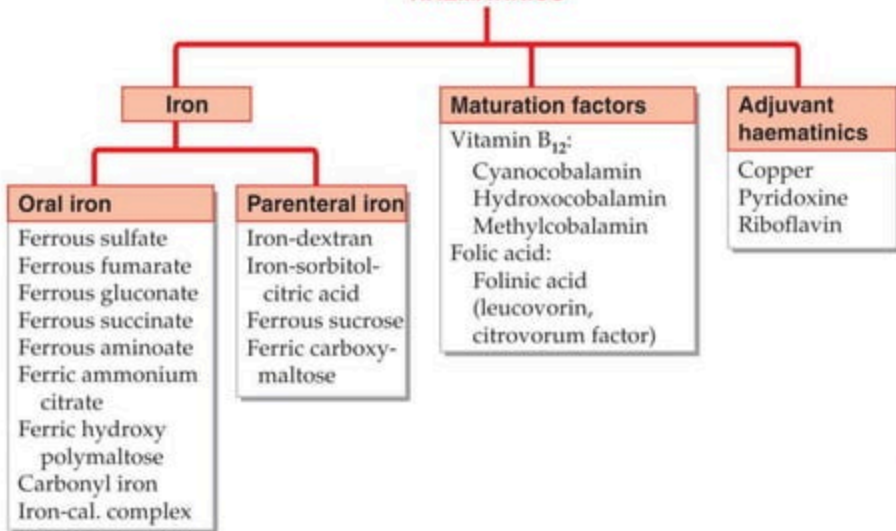
Drugs Acting on Kidney

DIURETICS



Drugs Affecting Blood

HAEMATINICS



Drugs Affecting Blood

COAGULANTS

Vitamin K

K₁: Phytonadione
(Phylloquinone)
K₃: Menadione
Acetomenaphthone
Menadione sod.
bisulfite
Menadione sod.
diphosphate

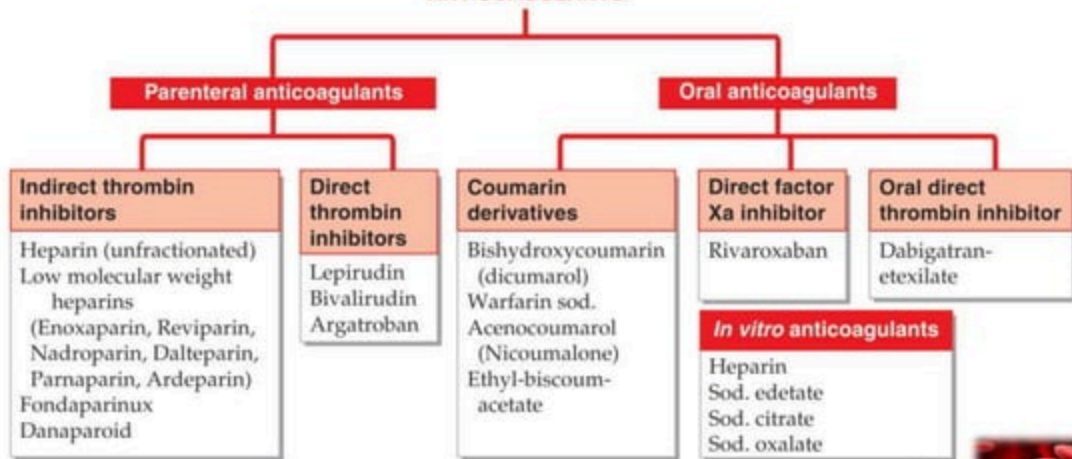
Miscellaneous

Fibrinogen (human)
Antihaemophilic factor
Desmopressin
Adrenochrome mono-
semicarbazone
Ethamsylate
Rutin



Drugs Affecting Blood

ANTICOAGULANTS



Drugs Affecting Blood

Fibrinolytics (Thrombolytics)

Streptokinase
Urokinase
Alteplase (rt-PA)
Retepase
Tenecteplase

Antifibrinolytics (Antithrombolytics)

Epsilon amino-caproic acid
(EA CA)
Tranexamic acid

ANTIPLATELET DRUGS (Antithrombotic drugs)

Thromboxane
synthesis
inhibitor

Aspirin

Platelet
cAMP
enhancer

Dipyridamole

P2Y₁₂ receptor
blockers

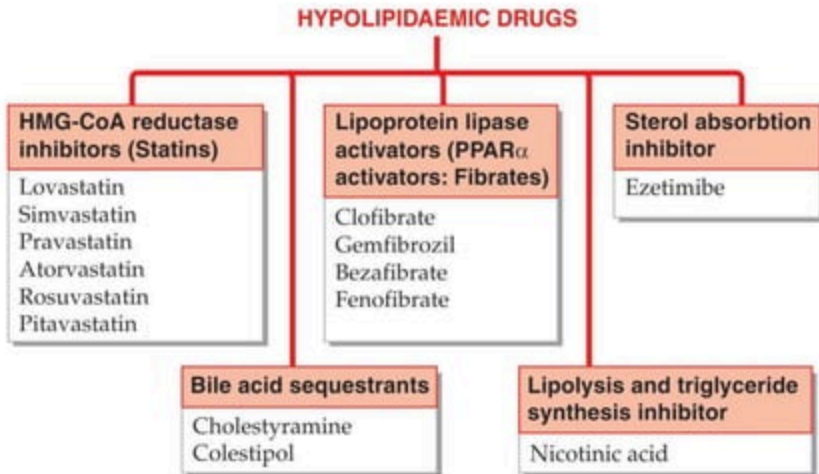
Ticlopidine
Clopidogrel
Prasugrel

GP II_b/III_a
antagonists

Abciximab
Eptifibatide
Tirofiban

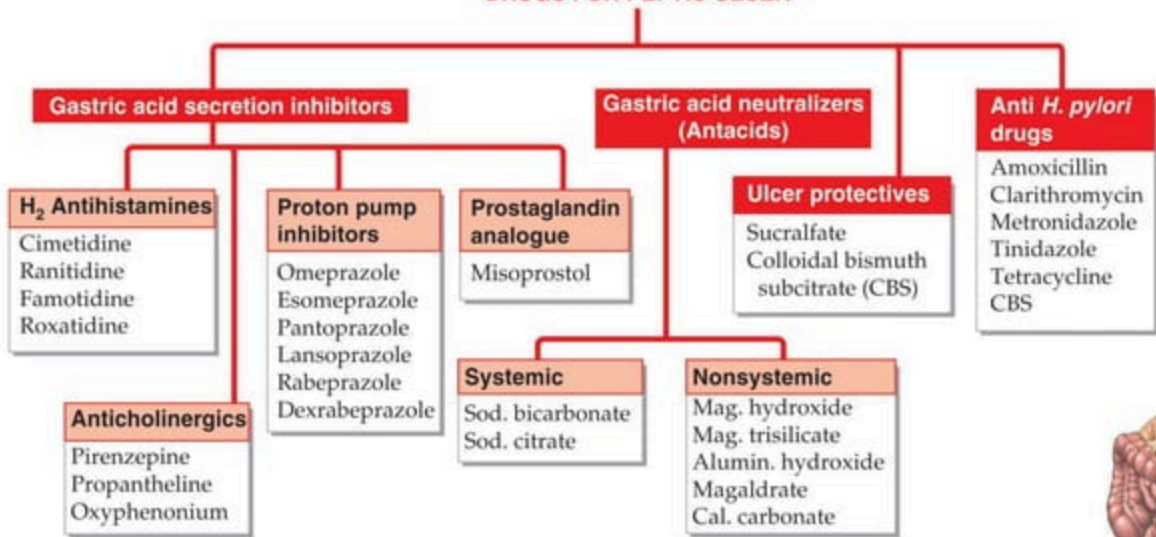


Drugs Affecting Blood



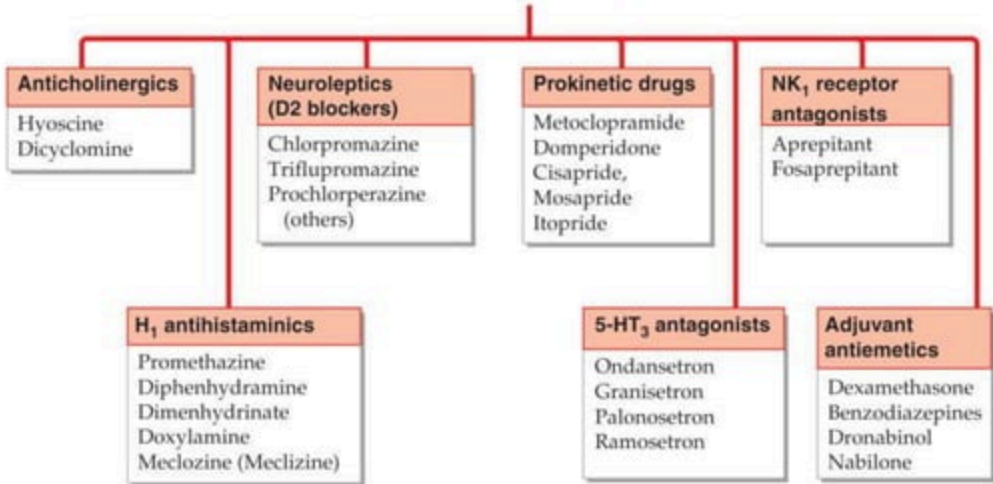
Gastrointestinal Drugs

DRUGS FOR PEPTIC ULCER



Gastrointestinal Drugs

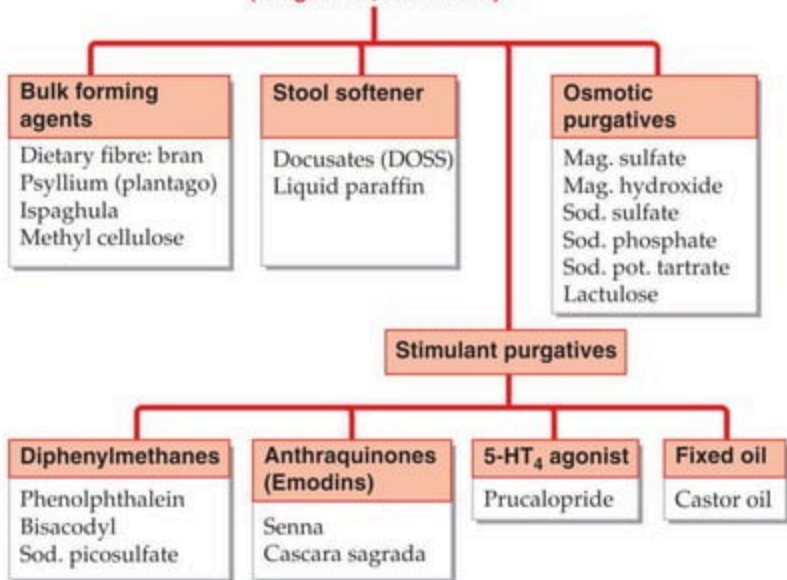
ANTIEMETICS



Gastrointestinal Drugs

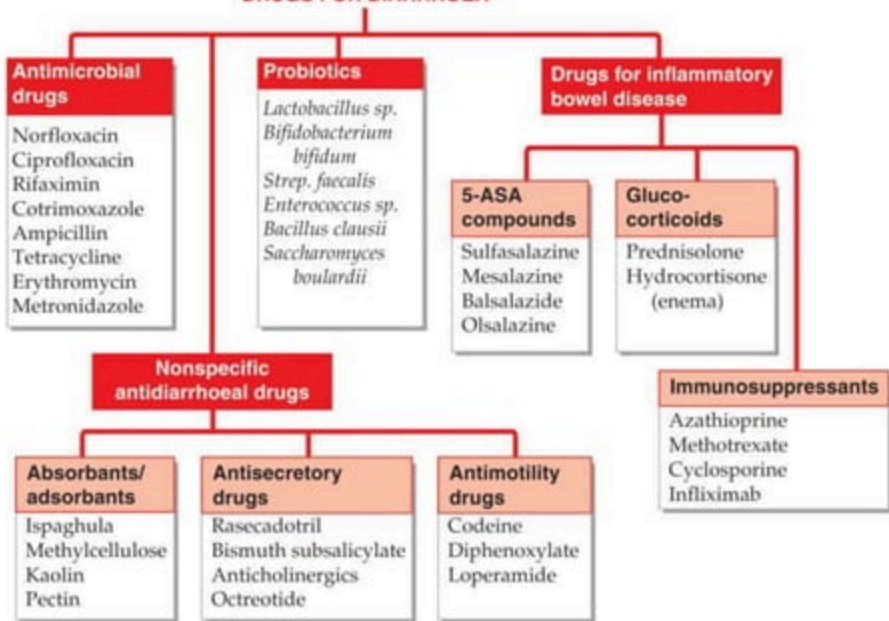
LAXATIVES

(Purgatives, Cathartics)



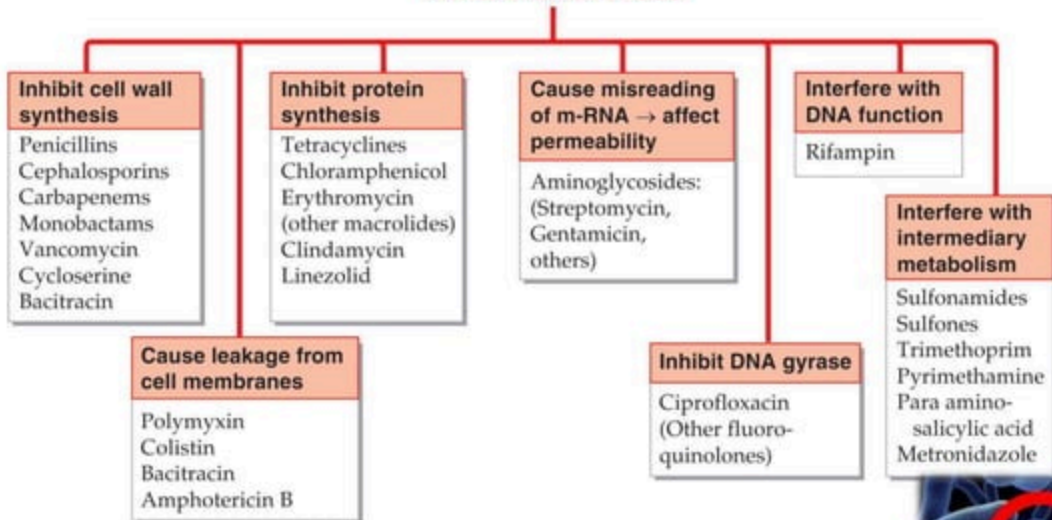
Gastrointestinal Drugs

DRUGS FOR DIARRHOEA



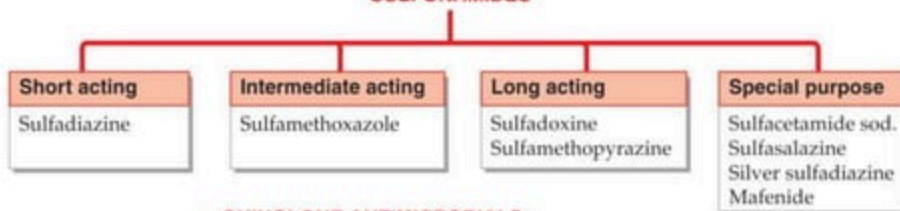
Antibacterial Drugs

ANTIBACTERIAL DRUGS

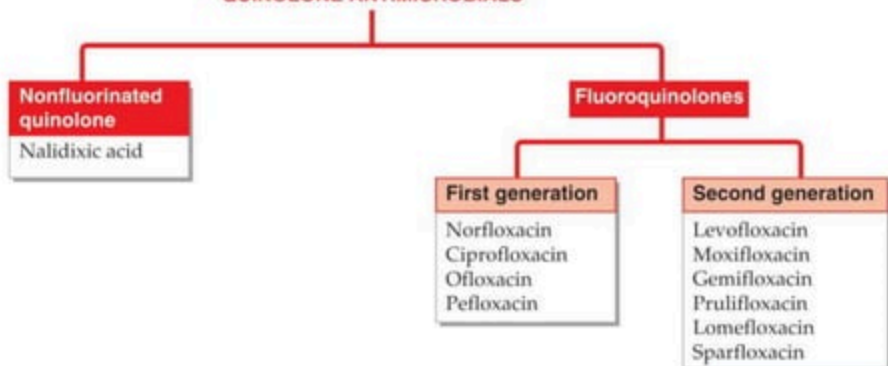


Antibacterial Drugs

SULFONAMIDES

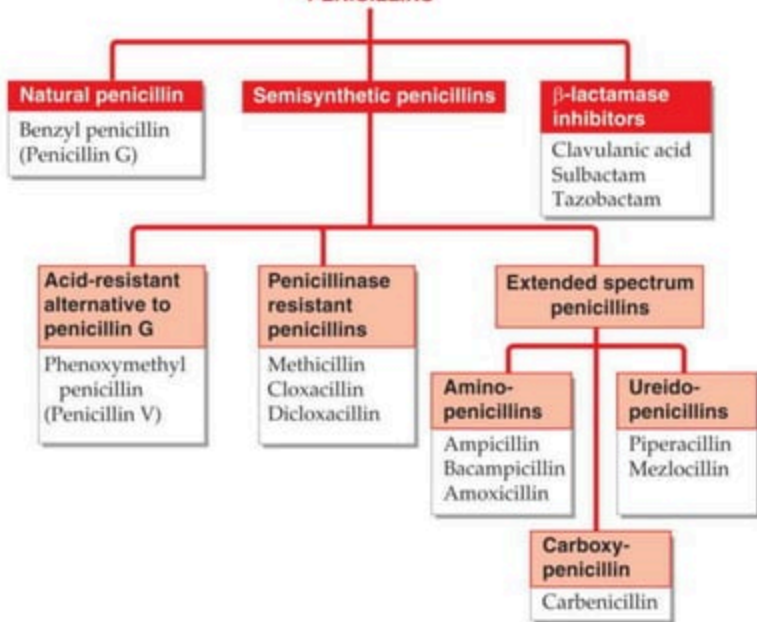


QUINOLONE ANTIMICROBIALS



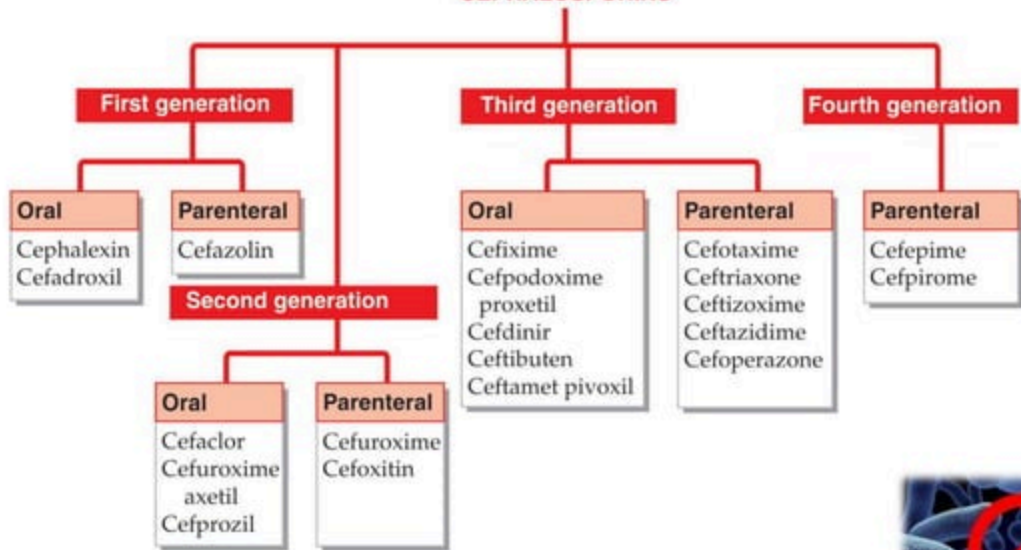
Antibacterial Drugs

PENICILLINS



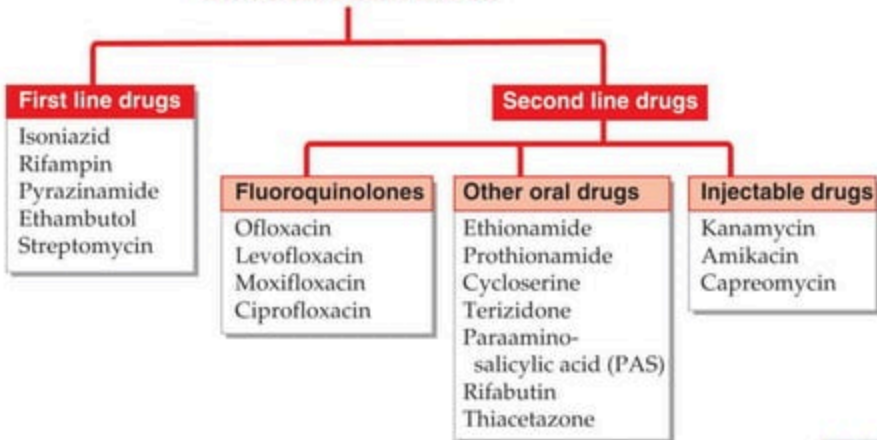
Antibacterial Drugs

CEPHALOSPORINS



Antibacterial Drugs

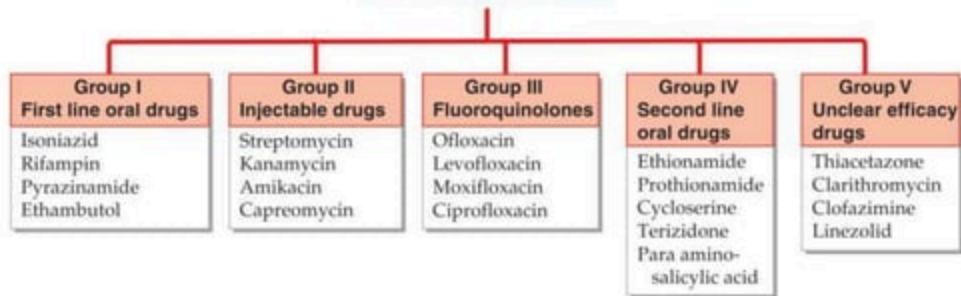
ANTITUBERCULAR DRUGS



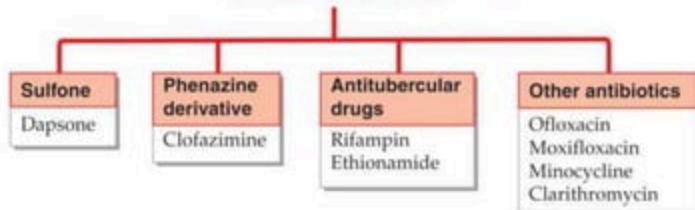
Antibacterial Drugs

ALTERNATIVE CLASSIFICATION

ANTITUBERCULAR DRUGS

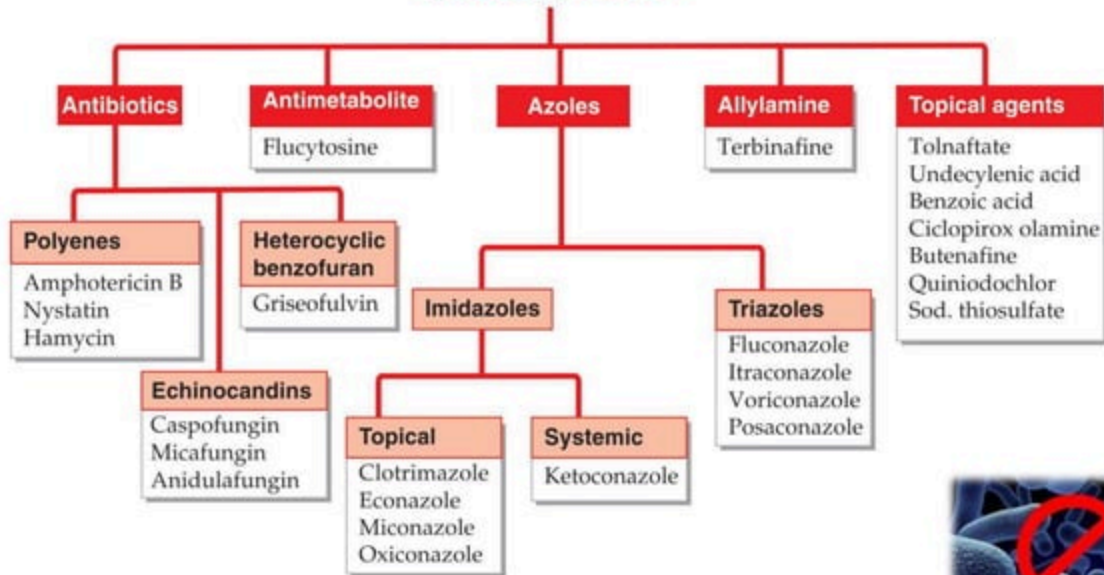


ANTILEPROTIC DRUGS

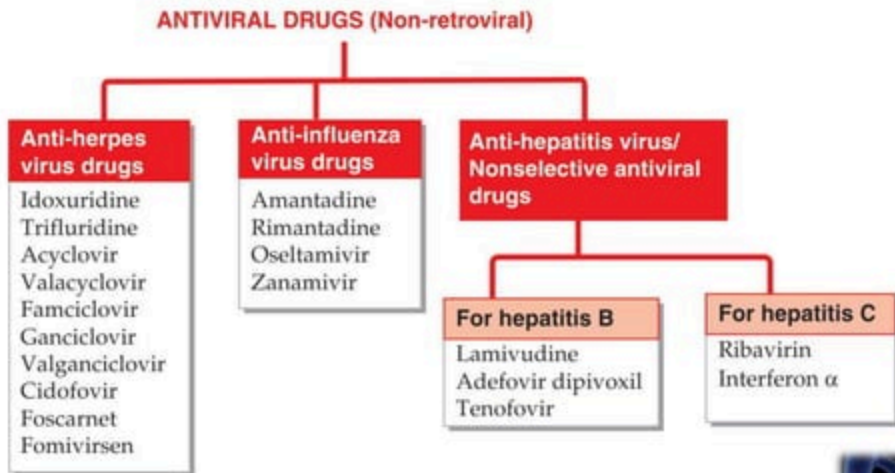


Antifungal, Antiviral, Antiprotozoal and Anthelmintic Drugs

ANTIFUNGAL DRUGS

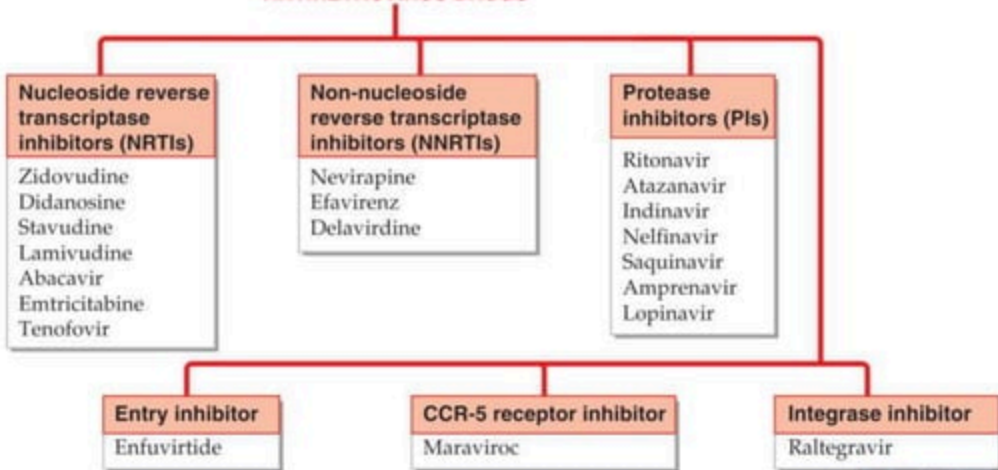


Antifungal, Antiviral, Antiprotozoal and Anthelmintic Drugs



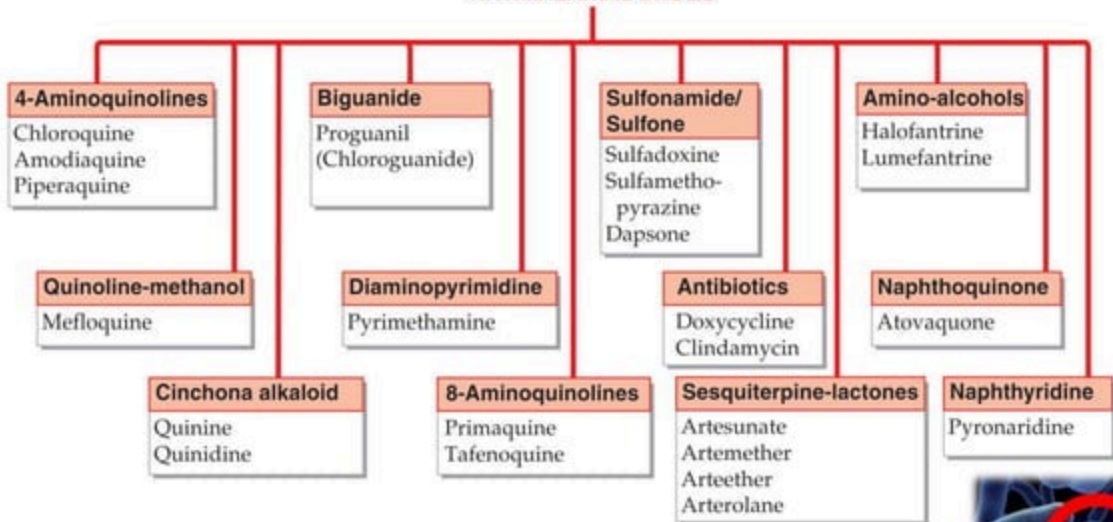
Antifungal, Antiviral, Antiprotozoal and Anthelmintic Drugs

ANTIRETROVIRUS DRUGS



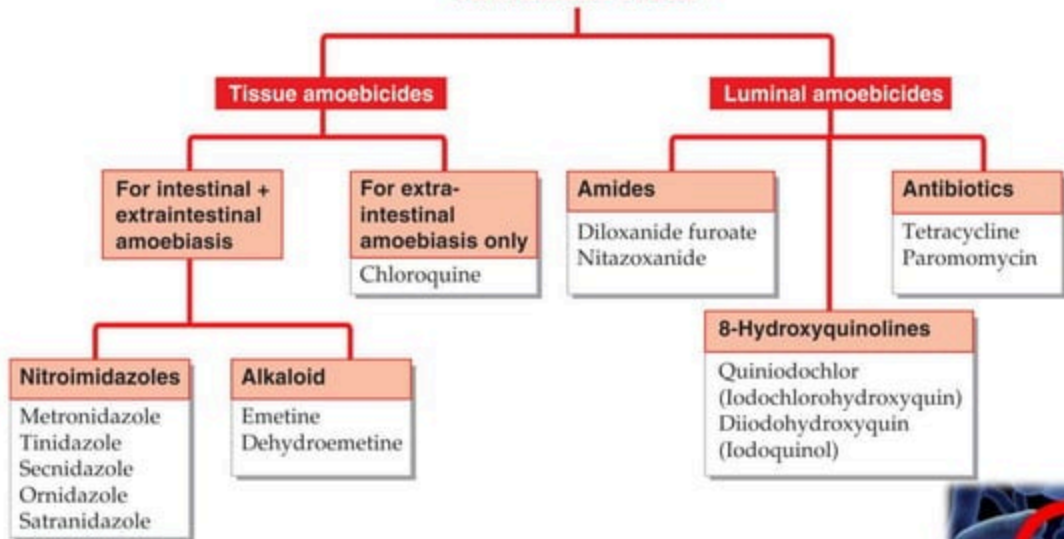
Antifungal, Antiviral, Antiprotozoal and Anthelmintic Drugs

ANTIMALARIAL DRUGS

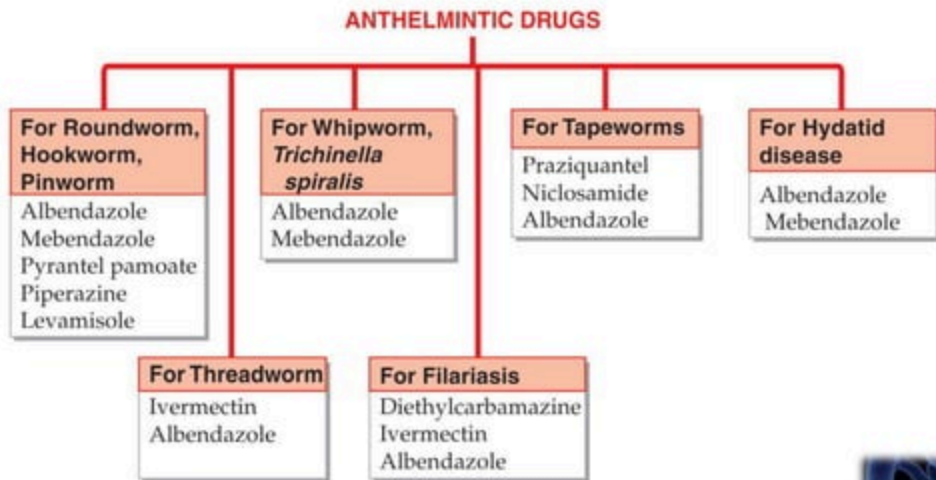


Antifungal, Antiviral, Antiprotozoal and Anthelmintic Drugs

ANTIAMOEBIIC DRUGS



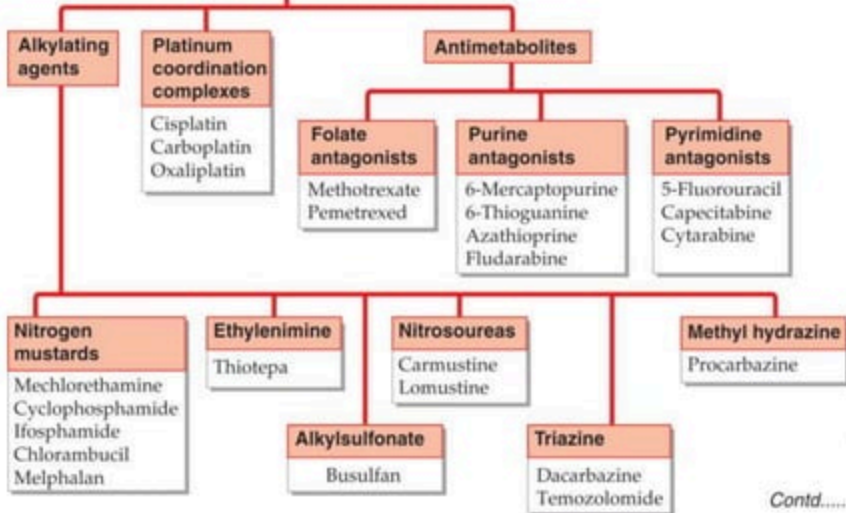
Antifungal, Antiviral, Antiprotozoal and Anthelmintic Drugs



Anticancer Drugs (Antineoplastic Drugs)

ANTICANCER DRUGS (1)

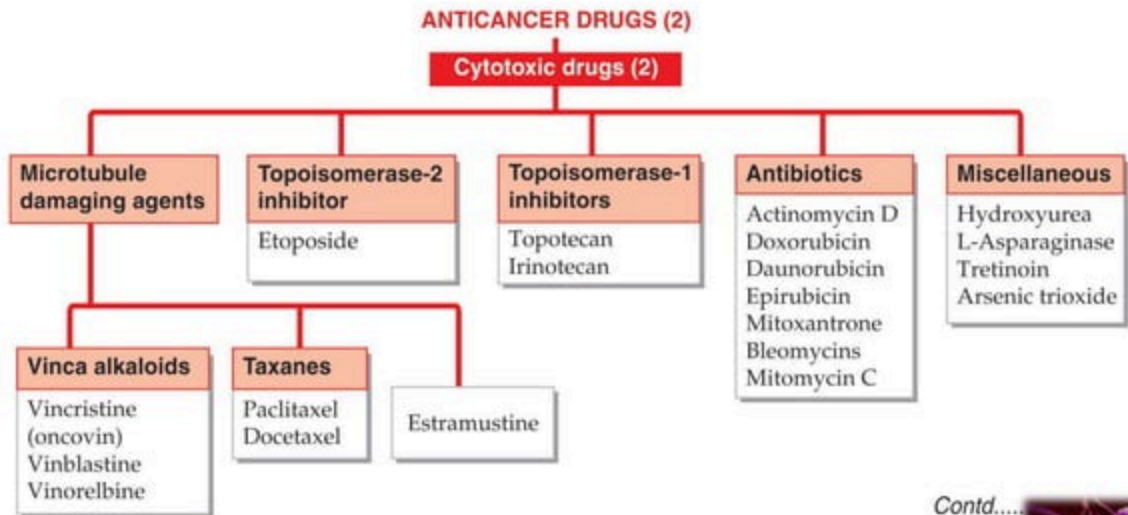
Cytotoxic drugs (1)



Contd.....



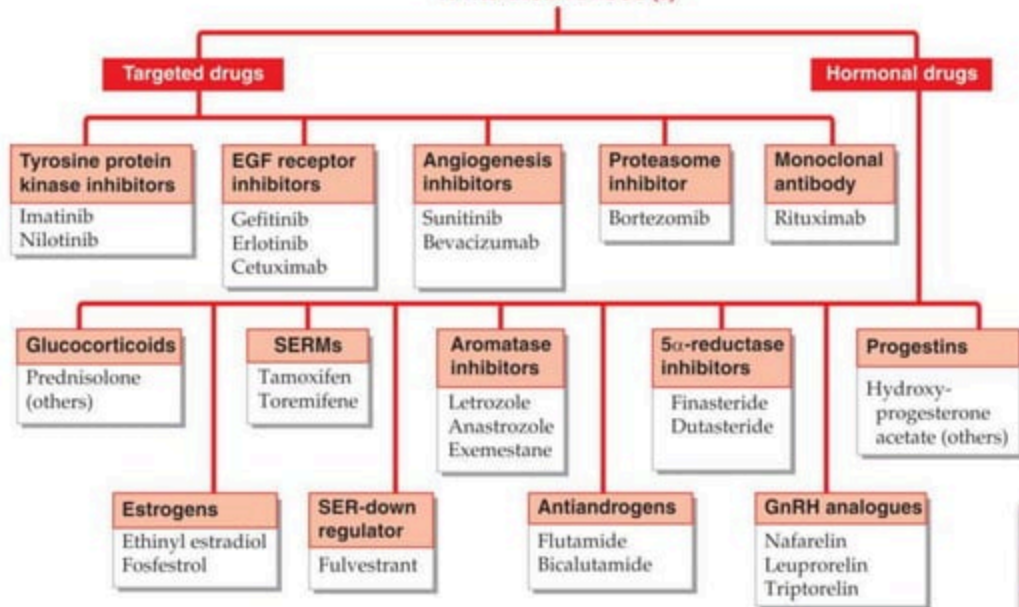
Anticancer Drugs (Antineoplastic Drugs)



Contd.....

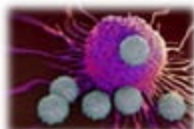
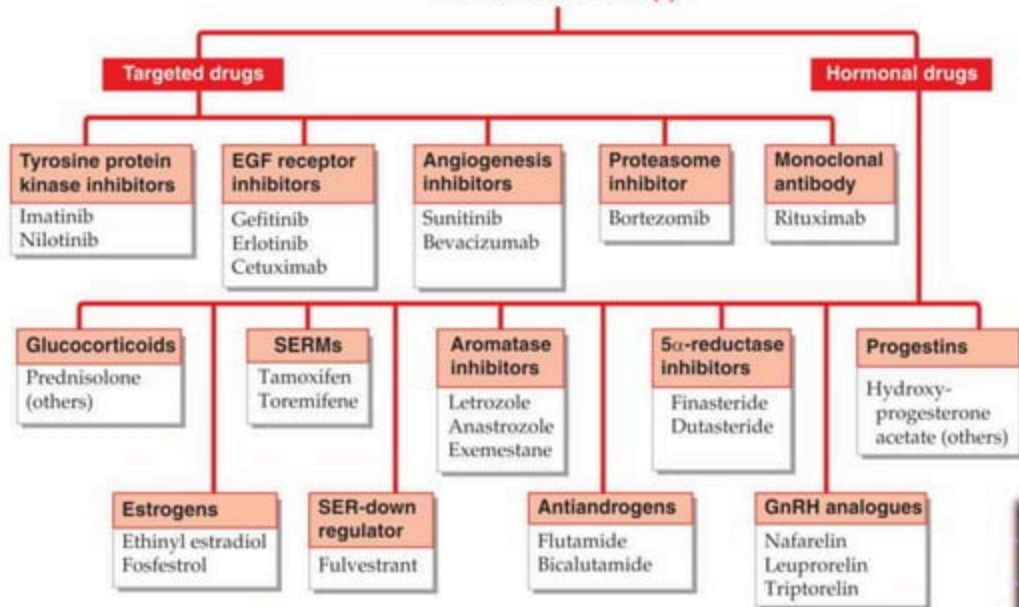
Anticancer Drugs (Antineoplastic Drugs)

ANTICANCER DRUGS (3)



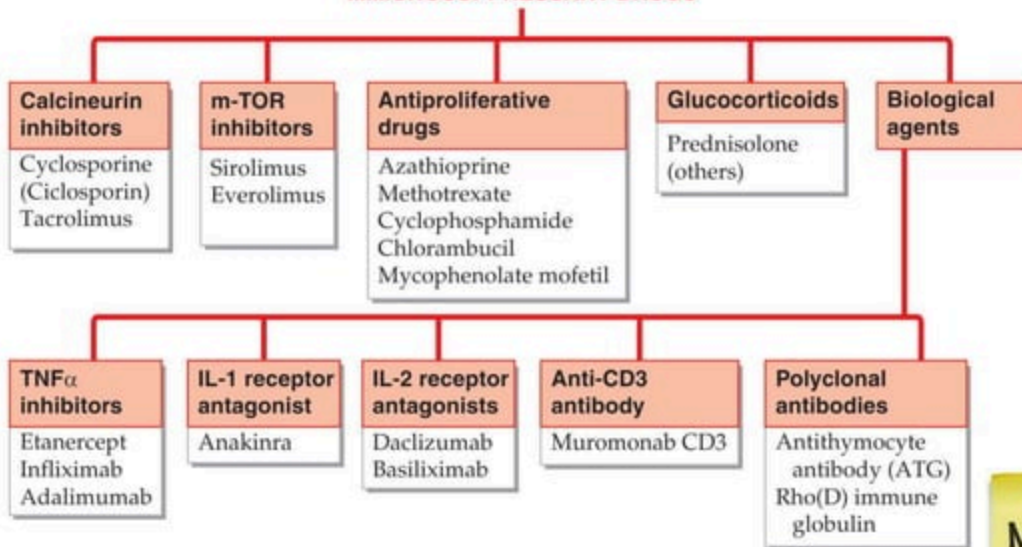
Anticancer Drugs (Antineoplastic Drugs)

ANTICANCER DRUGS (3)



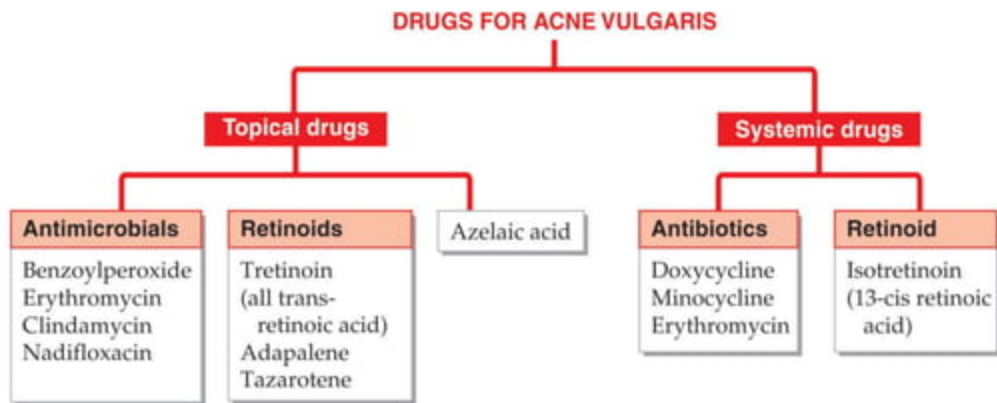
Miscellaneous Drugs

IMMUNOSUPPRESSANT DRUGS



Miscellaneous

Miscellaneous Drugs



Miscellaneous

Miscellaneous Drugs

VACCINES

Killed (inactivated) vaccines

Bacterial

Typhoid - paratyphoid (TAB)
Vi Typhoid polysaccharide
Cholera
Whooping cough (Pertussis)
Meningococcal
Haemophilus influenzae
type B
Plague

Viral

Poliomyelitis inactivated
(IPV; Salk vaccine)
Rabies (Neural tissue)
Rabies (chick embryo cell;
PCEV)
Rabies (Human diploid
cell; HDCV)
Rabies (Vero cell; PVRV)
Influenza
Hepatitis B
Hepatitis A

Combined vaccines

Double antigen: Diphtheria toxoid + tetanus toxoid (DT-DA)
Triple antigen: Diphtheria toxoid + tetanus toxoid + pertussis vaccine (DPT)
Pentavalent vaccine: DPT + Hepatitis B + *H. influenzae* type B vaccines
Measles + mumps + rubella vaccine (MMR)

Live attenuated vaccines

Bacterial

Bacillus
Calmette-
Guerin (BCG)
Typhoid Ty 21a
(oral)

Viral

Poliomyelitis oral
vaccine (OPV, Sabin)
Mumps (Live atte.)
Measles (Live atte.)
Rubella (Live atte.)
Varicella (Live atte.)

Toxoids

Tetanus (fluid/adsorbed)
Diphtheria (adsorbed)

Miscellaneous

Miscellaneous Drugs

VACCINES

Killed (inactivated) vaccines

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Typhoid - paratyphoid (TAB)
Vi Typhoid polysaccharide
Cholera
Whooping cough (Pertussis)
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Diphtheria (adsorbed)

Miscellaneous



THANK YOU