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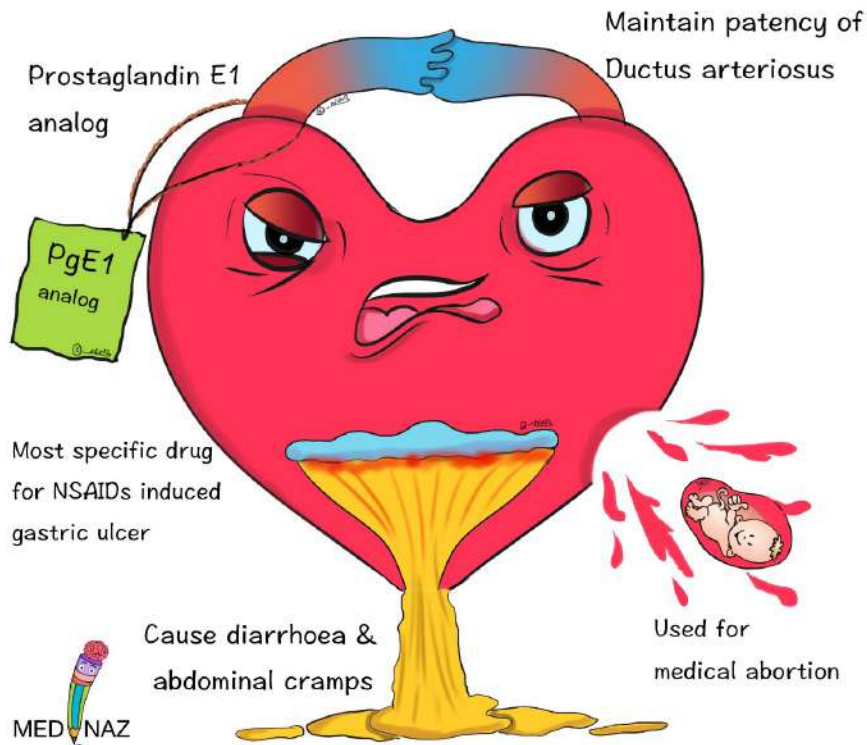
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Misoprostol

www.medinaz.com



Misoprostol Pharmacology

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Mis O Pro Sto L

Miss carriage

Contraindicated in women of childbearing potential (abortifacient)

Open PDA

Protect stomach against NSAIDs

PGE1 analog
Increase production and secretion of gastric mucous barrier,
Decrease acid production.



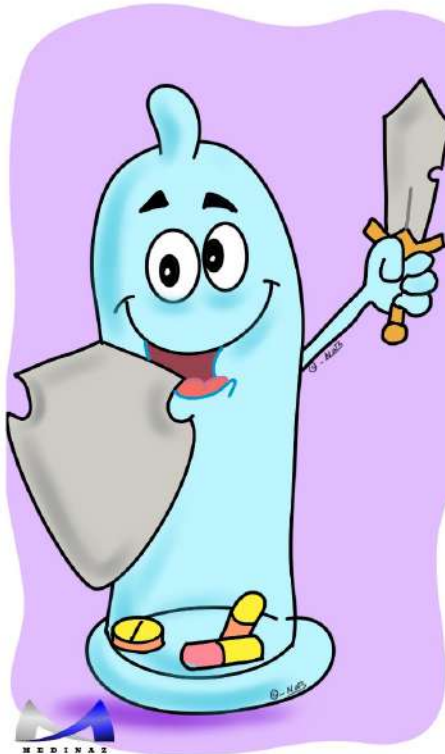
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Penicillinase resistant Penicillins

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“**CONDOM**”

- C**loxacilin
- O**xacillin
- N**afcillin
- D**icloxacillin
- O**xacillin
- M**ethicillin

naz_aratomy

Acid resistant Penicillin

www.medinaz.com



- V** = **V**- Penicillin
- O** = **O**xacillin
- D** = **D**icloxacillin
- K** = **K**(c)Loxacillin
- A** = **A**moxylin & Ampicillin

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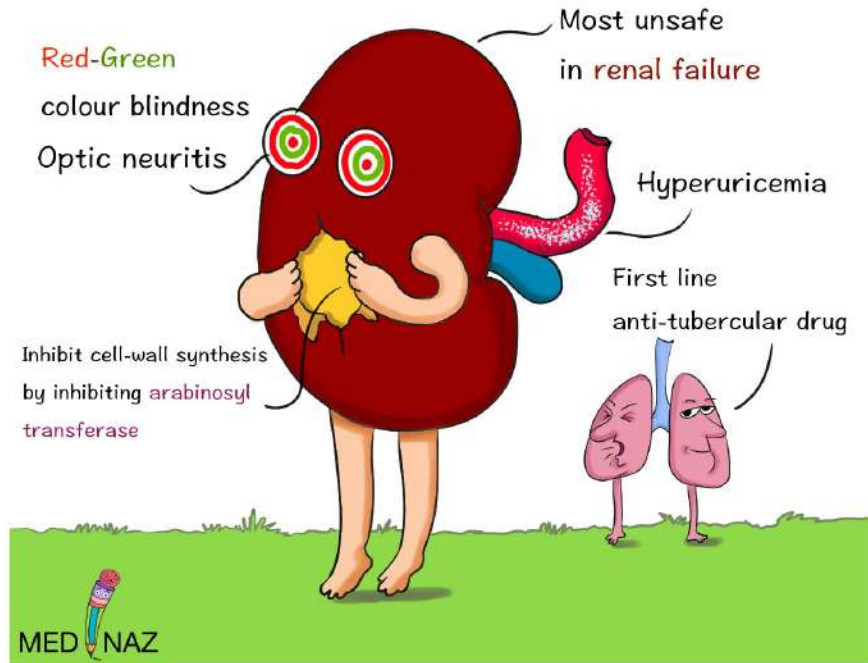
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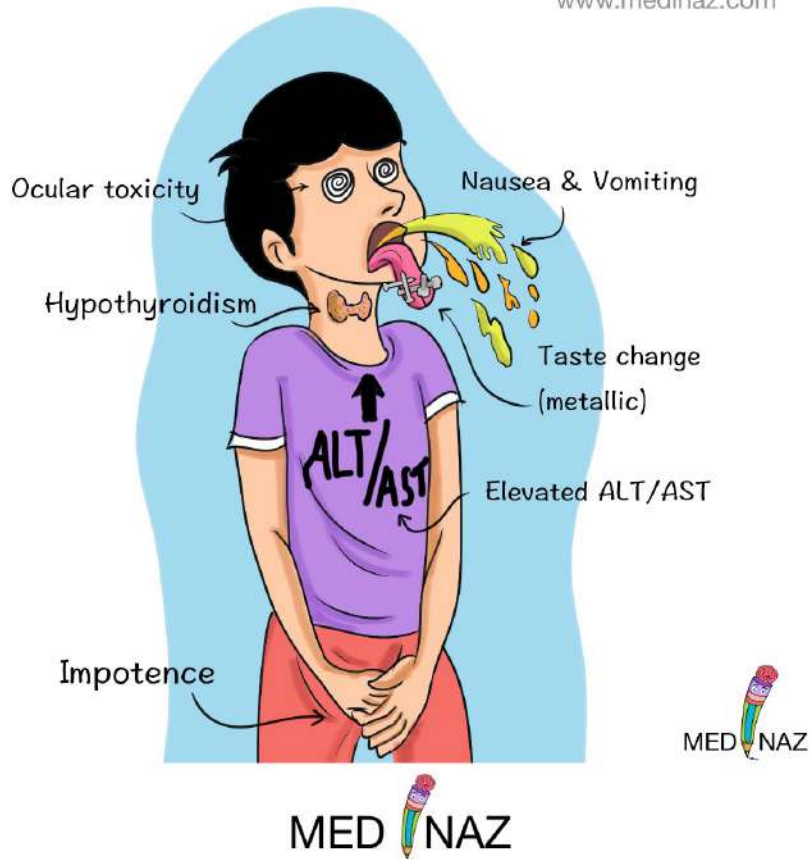
Ethambutol

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Ethionamide side-effects

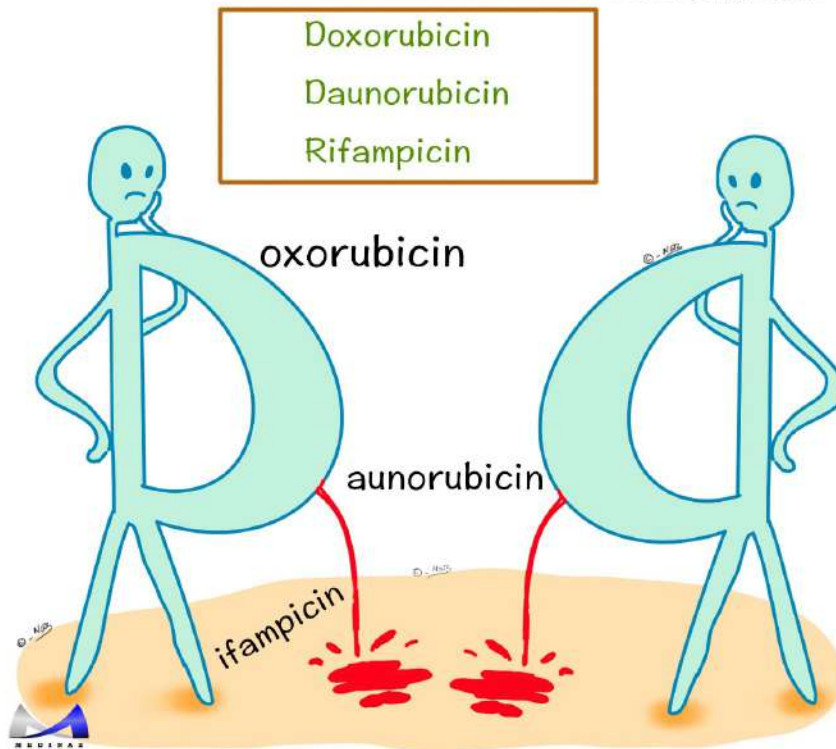
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Red discolouration of urine

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Rifampicin Important points

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- RNA polymerase inhibitor, Reddish-orange discolouration
- Interstitial nephritis
- Flu like symptoms
- Anemia
- Maximum cidal & sterilizing effect
- Platelet count decrease
- Inducer of enzyme
- Contraceptive failure
- INR deranged with warfarin
- NNRTI & PI failure

“RIFAMPICIN”



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Organisms not covered by 1st-4th gen Cephalosporins

- Organisms typically not covered by 1st–4th generation cephalosporins are **L**isteria, **A**typicals (Chlamydia, Mycoplasma), **M**RSA, and **E**nterococci (treated by **ceftaroline**).

“LAME”

Listeria

Atypicals (Chlamydia, Mycoplasma),

MRSA

Enterococci



30S inhibitors

Aminoglycosides, Tetracyclines

50S inhibitors

Chloramphenicol, Clindamycin Erythromycin
(macrolides) Linezolid

“Buy **AT 30**,
CCEL (sell) at **50**.”



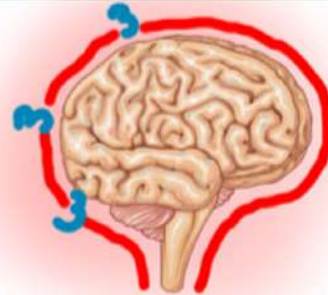


3rd & 5th generation Cephalosporins

- 3rd generation cephalosporin can cross blood-brain barrier (BBB)

BBB = 3 letters

3rd generation



- 5th generation cephalosporins are useful against MRSA
- Most nephrotoxic – Cephaloridine

CephaloRIDine = Renal Impairment



Aminoglycoside side-effects

Nephrotoxicity
Neuromuscular blockade,
Ototoxicity
Teratogen

“NOT”





Extended spectrum penicillin prevent **H** influenzae, **H** pylori, **E** coli, **L**isteria monocytogenes, **P**roteus mirabilis, **S**almonella, **S**higella, enterococci.

Mn. **HHELPSS**

Aqueous **penicillin G** is **DOC** for **neurosyphilis**

Methicillin resistance is developed due to the formation of alternative penicillin binding proteins that have less affinity for the drugs

Ampicillin is **DOC** for **Listeria meningitis**

Side effects:

Methicillin – interstitial nephritis

Oxacillin – hepatitis

Nafcillin – neutropenia

Carbenicillin high dose – bleeding

Nafcillin = Neutropenia

β -lactamase inhibitors - Include **C**lavulanic acid, **A**vibactam, **S**ulbactam, **T**azobactam.

Mn. **CAST**

Anti-pseudomonal penicillin

Anti-Pseudomonal Penicillin

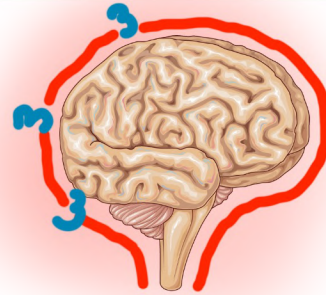
Piperacillin
Ticarcillin
Carbenicillin





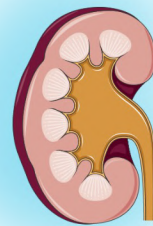
- 3rd generation cephalosporin can cross blood-brain barrier (BBB)

BBB = 3 letters
3rd generation



- 5th generation cephalosporins are useful against MRSA
- Most nephrotoxic – Cephalexin

Cephalexin = Renal Impairment

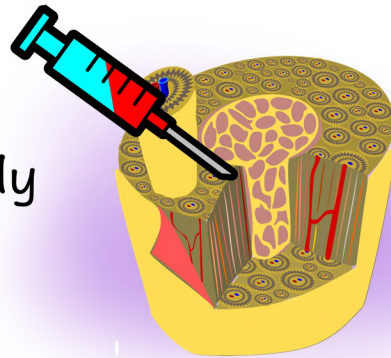


- Cefazolin is DOC for surgical prophylaxis
- Ceftazidime is DOC for melioidosis
- Ceftazidime has maximum antipseudomonal activity
- Cefoperazone is active against pseudomonas, secreted in bile, doesn't cross BBB
- Important side effects - disulfiram-like reaction, vitamin K deficiency, increase nephrotoxicity of aminoglycosides.



- Dapsone cause Hemolysis in G6PD deficient patients, methemoglobinemia
- Trimethoprim can cause Megaloblastic anemia, leukopenia, granulocytopenia, which may be avoided with coadministration of folic acid.

TMP Treats Marrow Poorly



- Antitubercular drugs - Rifampin, Isoniazid, Pyrazinamide, Ethambutol

Rifampin

Isoniazid

Pyrazinamide

Ethambutol

“RIPE”

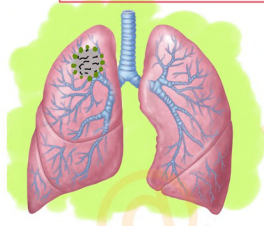




Isoniazid

- Isoniazid is a **prodrug** activated by **catalase-peroxidase**
- **Bacteriostatic** against **resting** and **bactericidal** against **rapidly dividing organisms**
- Metabolized by **Acetylation** which is **genetically controlled**
- **Kat G** gene mutation is the most common mechanism of **resistance**
- **DOC** for **prophylaxis of TB**
- Isoniazid causes **B 6 deficiency** (**peripheral neuropathy, sideroblastic anemia**) (Mn. **INH** Injures **N**eurons and **H**epatocytes)

INH Side effects



- I**nducer of Lupus
inhibitor of cytochrome P450
- N**europathy (peripheral)
- H**epatotoxicity
hemolysis in G6PD deficiency

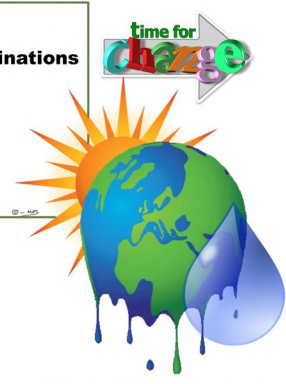
- **Peripheral neuritis** can be prevented and treated by **pyridoxine**
- Can cause **hemolysis** in **G6PD deficient** patients
- **Side effects of INH**

INH Side-effects

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“CHANGE”

- C**hange in memory
- H**epatotoxic, **H**allucinations
- A**nemia, **A**rthritis
- N**europathy
- G**ynecomastia
- E**uphoria, **E**pilepsy



Time for **change**



Anticancer drugs

ALL regimen of choice – Vincristine, Prednisolone,
Asperginase, Daunorubicin

AML – Daunorubicin/Idarubicin + Cytarabine

Anal Ca – 5FU + Mitomycin

Bladder Ca – Cisplatin + Gemcitabine

Brain tumor – Temozolomide

Carcinoid tumors – Octreotide

Carcinomatous meningitis – Methotrexate (Intrathecal)

Cervical cancer – Methotrexate

CML – Imatinib

GIST - Imatinib

Hypereosinophilic syndrome - Imatinib

Dermatofibrosarcoma protuberans – Imatinib

Hairy cell leukemia – Cladribine

Hepatocellular carcinoma – Sorafenib

Kaposi sarcoma – Daunorubicin or Doxorubicin

BRAF negative malignant melanoma – PD-1 inhibitors
(Pembrolizumab/Nivolumab)

BRAF positive malignant melanoma – BRAF inhibitors
(Vemurafenib/Dabrafenib)

Mesothelioma – Pemetrexed

Paget's disease – Zoledronic acid

Pancreatic cancer – Gemcitabine

Waldenstrom macroglobulinemia – Rituximab



Anesthesia

Anesthetic agent of choice

Cerebral protection – Thiopental sodium

Raised ICT - Thiopental sodium

Status epilepticus - Thiopental sodium

Epilepsy - Thiopental sodium

Hyperthyroidism - Thiopental sodium

LSCS induction - Thiopental sodium

Electroconvulsive therapy – Methohexital

Day care surgery - Propofol

Total intravenous anesthesia – Propofol

Sedation in ICU – Propofol

Patients susceptible to malignant hyperthermia
– Propofol

Bronchial asthma induction agent - Ketamine

Status asthmaticus – Ketamine

Shock (hypovolemic, haemorrhagic, septic) – Ketamine

DIC – Ketamine

Cyanotic congenital heart diseases with right to left
shunt – Ketamine

Hypothyroidism – Ketamine

Old patients – Etomidate

Cardiovascular disorders (aneurysm, cardiomyopathy,
CHF, CAD, aortic stenosis) – Etomidate

Altered hemodynamic states – Etomidate