



CONTENTS

CHAPTER 1 GENERAL PHARMACOLOGY

- Enzyme Inducers – 1
- Enzyme Inhibitors - 1
- Inhibitors of Cytochrome P 450 – 2
- PgP Inhibitors – 2
- Drugs whose absorption is increased by fatty food – 3
- Acidic drugs – 3
- Phase I reactions – 4
- Phase II reactions – 4
- Dialysis is not effective on that drugs – 5
- Drugs metabolized by Acetylation – 5
- Hit & Run drugs – 6
- Therapeutic index formula - 6
- Drugs Showing Zero Order Kinetics – 6.1

CHAPTER 2 AUTONOMIC NERVOUS SYSTEM

- Beta 1 & 2 receptors – 8
- Adrenoceptors: vasomotor function of alpha vs. beta – 8
- Beta Agonists Side effects - 9
- Beta blockers with intrinsic sympathetic activity - 9
- Easy way to Remember Muscarinic receptors - 10
- Atropine Side-effects - 10
- MAOI Side-effects – 11
- Neostigmine Vs Physostigmine – 11
- OPIOID μ receptor effects – 12
- Beta-1 Selective Blockers - 12
- Anticholinergic effects - 13
- SSRI's Side-effects - 13



CHAPTER 3 CARDIOVASCULAR SYSTEM

- Drugs used for the t/t of Hypertension in Pregnancy - 15
- Drugs for Bradycardia and Hypotension – 15
- Amiodarone unique illustration – 16
- Amiodarone side effects – 16
- Antiarrhythmic Class 1A - 17
- Antiarrhythmic Class 1B - 17
- Antiarrhythmic Class IC – 18
- Antiarrhythmic drugs Class III - 18
- Antiarrhythmic drugs Class III – 19
- Beta 2 Agonists – 19
- Beta blocker members – 20
- Beta blockers main contraindications – 20
- Cardio-selective Beta-blockers - 21
- Dilated cardiomyopathy - 21
- Contraindications of Digitalis - 22
- Hyperglycemia causing Drugs - 22
- Management of PSVT - 23
- Drugs causing Torsades de pointes - 23
- Drugs cause Torsades de pointes 2nd - 24
- Adverse Effects of Beta Blockers - 24
- Immediate treatment of Myocardial Infarction – 25
- Immediate treatment of Myocardial Infarction explanation - 25
- Ventricular Tachycardia treatment - 26
- Supraventricular Tachycardia T/t - 26

CHAPTER 4 KIDNEY

- ACE inhibitor side effects - 28
- Loop Diuretics Side effects - 28
- Osmotic Diuretics - 29
- Potassium sparing Diuretics – 29
- Diuretics - 30



CHAPTER 5 CENTRAL NERVOUS SYSTEM

- Uses of Anti-depressants – 32
- Migraine Prophylaxis Drugs - 32
- Use of Antipsychotics - 33
- Short Acting Benzodiazepines – 33
- Benzodiazepine withdrawal symptoms - 34
- Benzodiazepines undergo Extra-hepatic metabolism – 34
- Carbamazepine side-effects - 35
- Clozapine Side-effects – 35
- Drugs used in Bipolar disorder – 36
- Drugs used in Trigeminal neuralgia - 36
- Drugs used for Myoclonic Seizures - 37
- Opioids Effects – 37
- Phenytoin unique illustration - 38
- Phenytoin side effects - 38
- Morphine side effects – 39
- SSRI'S - 39

CHAPTER 6 ANAESTHESIA

- Contraindications of Spinal & Epidural anesthesia – 41
- Factors decreasing MAC – 41
- Contraindications to use of LA with Epinephrine – 42
- Contraindications to use of LA with Epinephrine 2 nd – 42
- Halothane properties – 43
- Methoxyflurane properties – 43
- Indicator of difficult Laryngoscopy / Intubation – 44
- Morphine effect on pupil – 44
- Nasal intubation indications – 45
- Cocaine effect on blood vessel – 45
- Positive End-Expiratory Pressure (PEEP) uses – 46
- Positive End-Expiratory Pressure adverse effects – 46
- Xenon properties – 47
- Inhalation Anesthetics - 47
- Lidocaine Toxicity - 48



CHAPTER 7 HEMATOLOGY

- Contraindications to Fibrinolysis - 50
- Heparin side-effects and contraindications - 50
- Megaloblastic Anemia causing Drugs - 51
- PGI₂ Vs THA₂ 51
- Parenteral anti-coagulants - 52
- Thrombolytic Agents – 52

CHAPTER 8 NSAIDS

- Aspirin Side-effects – 54
- NSAIDs Classification – 54
- NSAIDs Contraindication - 55
- NSAIDs beneficial effects of inhibition of prostaglandin synthesis - 55

CHAPTER 9 GASTROINTESTINAL TRACT

- Aluminum hydroxide vs Magnesium hydroxide – 57
- Hepatic Necrosis Causing Drugs – 57
- HMG-CoA reductase inhibitors – 58
- Misoprostol vs Indomethacin – 58
- Misoprostol unique illustration – 59
- Misoprostol pharmacology – 59
- Serotonin syndrome - 60

CHAPTER 10 Autacoids and Immunomodulators

- Anti-TNF drugs – 62
- Antihistaminic given only by topical route – 62
- Antihistaminic given only by topical route 2 nd – 63
- Uses of H₁ Blockers (1 st generation) Based on Anti-cholinergic properties – 63
- HMG-CoA reductase inhibitors (statins): side effects, contraindications, indications – 64
- Thalidomide uses – 64
- Thalidomide unique illustration – 65
- Thalidomide side-effects – 65



CHAPTER 11 ANTIMICROBIAL AGENTS

- Penicillinase resistant Penicillins - 67
- Acid resistant Penicillins – 67
- Anti-Pseudomonal Penicillin – 68
- Cefoperazone – 68
- Cephalosporin Generations - 69
- Amphotericin B Toxicities – 69
- Vancomycin not recommended - 70
- Quinolones side effects – 70
- Doxycycline is DOC for - 71
- Tetracycline Adverse Effects - 71
- Chloroquine Uses – 72
- Cilastatin & Imepenem – 72
- Ethambutol unique illustration – 73
- Ethionamide side-effects – 73
- Imipenem picture – 74
- INH Side effects – 75
- INH Side effects 2 nd - 75
- Metronidazole clinical uses - 76
- Antimicrobial drugs contraindicated in pregnancy – 76
- NNRTI - 77
- Ribavirin Indications – 77
- Red discoloration of urine – 78
- Rifampicin important points – 78
- Macrolides DOC for - 79
- Anti-retroviral drugs (fusion inhibitors) – 79
- Topical antifungals – 80
- Tuberculosis treatment - 80

CHAPTER 12 CHEMOTHERAPEUTIC AGENTS

- ALL regimen of choice – 82
- Anticancer drugs cause cardiotoxicity – 82
- Anticancer drugs cause Mucositis – 83
- Anticancer drugs cause neuropathy – 83



- Anticancer drugs cause Radiation Recall Syndrome – 84
- Anticancer drugs cause Raynaud's disease – 84
- Chemotoxicities – 85
- Cyclosporine Side-effects – 86
- Disease modifying Anti-Rheumatoid drugs – 86
- Doxorubicin & Doxorubicin – 87
- EGFR Antagonists – 87
- Etoposide – 88
- Hodgkin's disease regimen of choice – 88
- Hydroxyurea uses – 89
- L-Asparaginase side-effects – 89
- Methotrexate use – 91
- Non-Hodgkin's lymphoma treatment of choice for High/Intermediate grade – 91
- Rituximab Uses - 92
- Therapeutic use of Interferons – 92

CHAPTER 13 ENDOCRINE SYSTEM

- Antihistaminic given only by topical route – 94
- Drugs used in erectile dysfunction – 94
- Side-effects of iodides – 95
- Side-effects of steroids – 95

CHAPTER 14 MISCELLANEOUS

- Drugs causing Stevens-Johnson Syndrome - 97
- Advantages of calcium hydroxide - 97
- Drugs used in Rehabilitation of Alcoholism - 98
- Antigout drugs - 98
- Copper Poisoning Treatment - 99
- Cutaneous Flushing causing Drugs - 99
- Treatment of Acute Chronic gout - 100
- Drugs Causing Hyperuricemia - 100
- Iron Overload Treatment - 101
- Mercury Poisoning Treatment - 101
- Narcotics Side-effects - 102
- Drugs used for Overactive bladder - 102
- Gynecomastia causing drugs - 103
- Signs of Organophosphate Poisoning - 103
- Uterine Relaxants (Tocolytics) - 104



CHAPTER 15 ANTIBIOTICS EXTRA MNEMONICS

Organisms not covered by 1 st – 4th generation cephalosporin – 106

30S & 50S inhibitors – 106

3 rd and 5 th generation cephalosporins – 107

Aminoglycosides side effects – 107

Tetracycline uses – 108

Azithromycin DOC for – 108

Clindamycin vs Metronidazole - 109

Biofilm mechanism of resistance to Antibiotics – 109

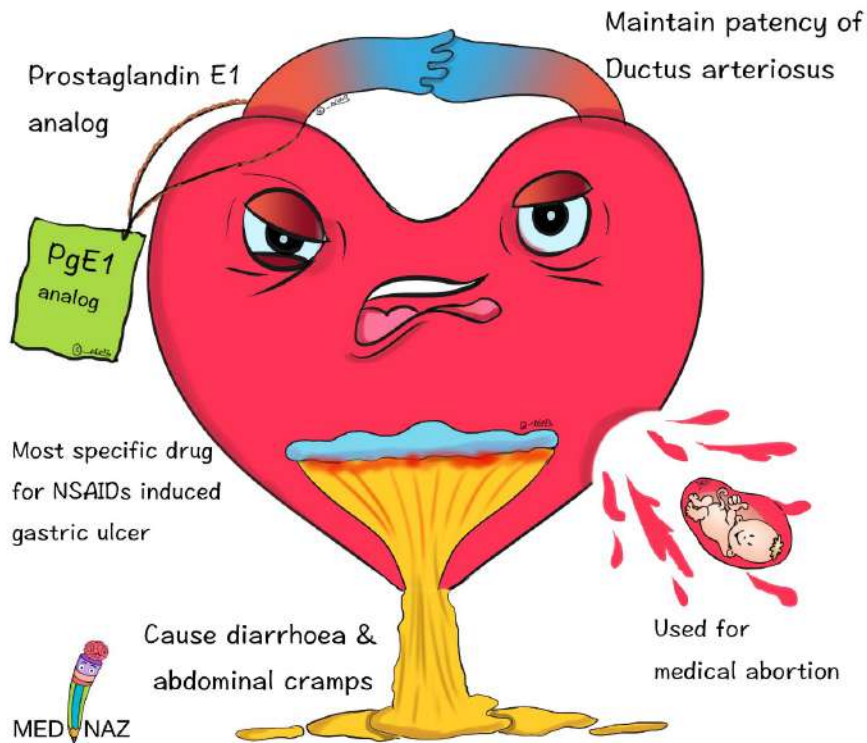
Auditory toxicity causing drugs - 110

Second line anti tubercular drugs - 110



Misoprostol

www.medinaz.com



Misoprostol Pharmacology

www.medinaz.com

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.



MED NAZ

MED NAZ



Penicillinase resistant Penicillins

www.medinaz.com



“**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

MED NAZ

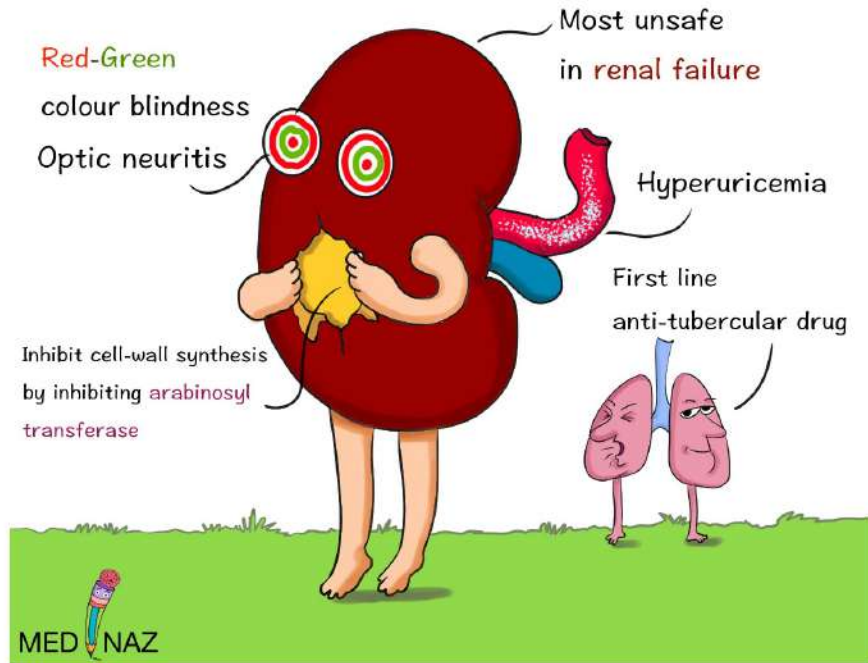
naz_aratomy

MED NAZ



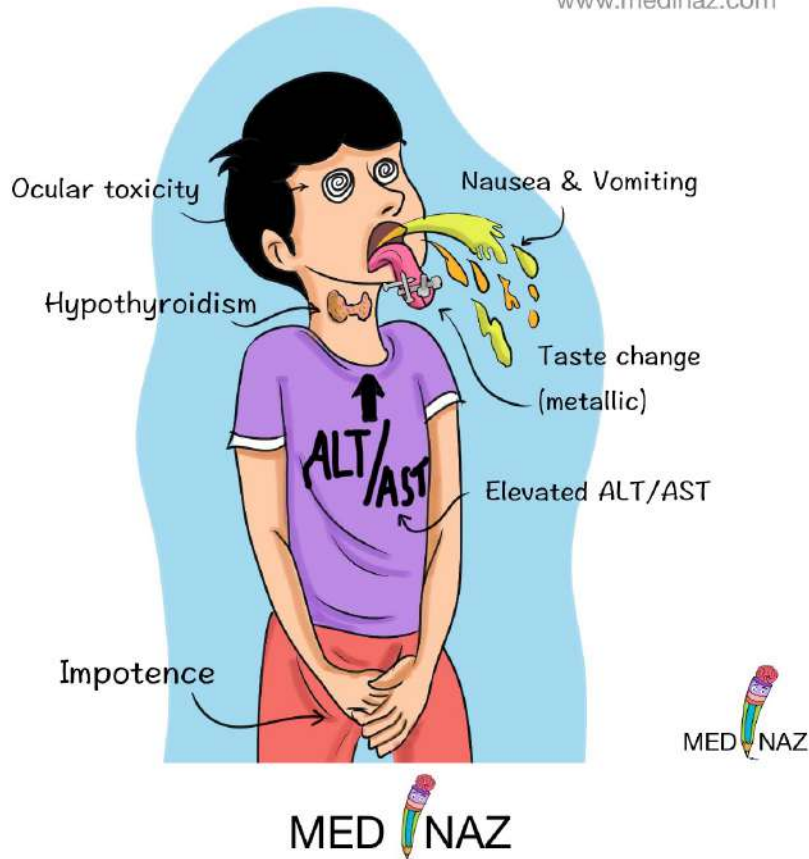
Ethambutol

www.medinaz.com



Ethionamide side-effects

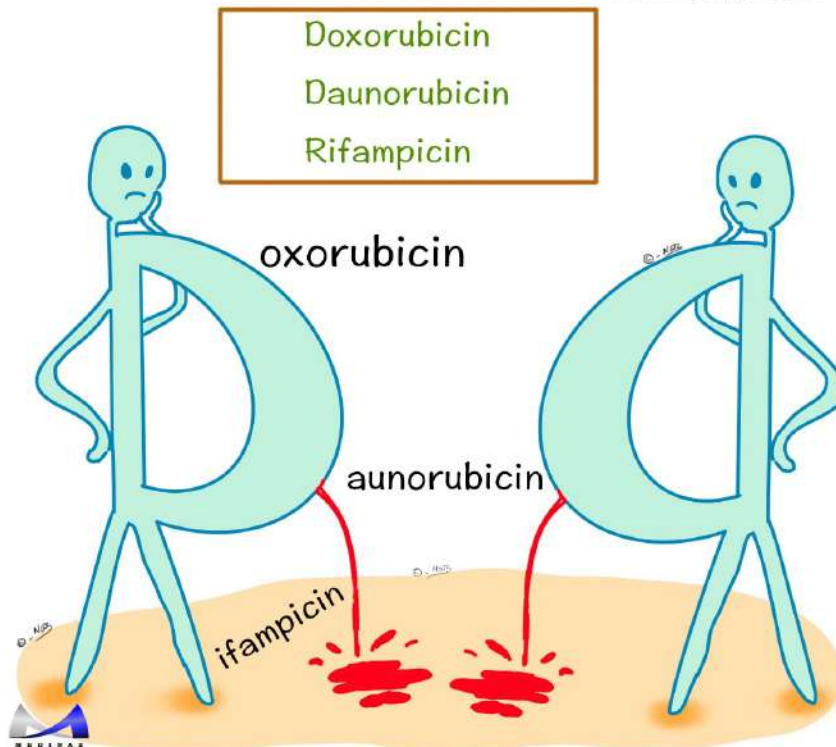
www.medinaz.com





Red discolouration of urine

www.medinaz.com



Rifampicin Important points

www.medinaz.com

- 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”



MED NAZ



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**.”



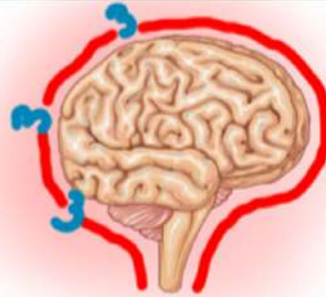


3rd & 5th generation Cephalosporins

- 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

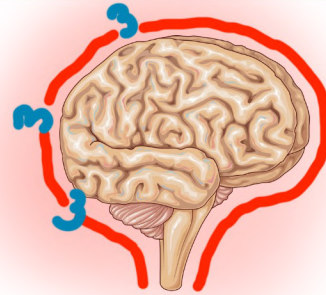
Piperacillin
Ticarcillin
Carbenicillin





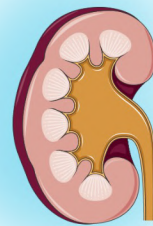
- 3rd generation cephalosporin can cross blood-brain barrier (BBB)

BBB = 3 letters
3rd generation



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

Cephalexin = Renal Impairment

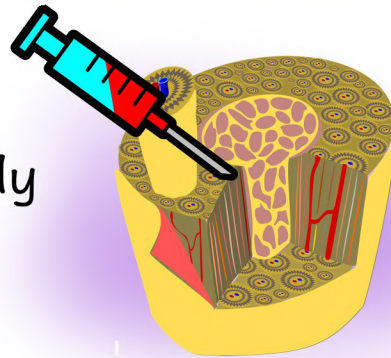


- Cefazolin is DOC for surgical prophylaxis
- Ceftazidime is DOC for melioidosis
- Ceftazidime has maximum antipseudomonal activity
- Cefoperazone is active against pseudomonas, secreted in bile, doesn't cross BBB
- Important side effects - disulfiram-like reaction, vitamin K deficiency, increase nephrotoxicity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

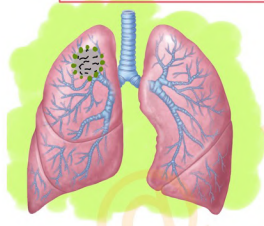




Isoniazid

- 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

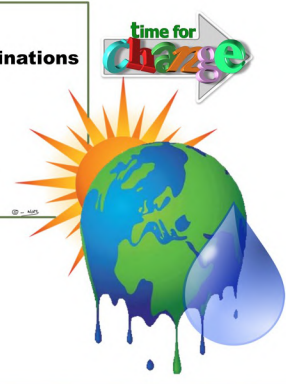
- **Peripheral neuritis** can be prevented and treated by **pyridoxine**
- Can cause **hemolysis** in **G6PD deficient** patients
- **Side effects of INH**

INH Side-effects

www.medinaz.com

“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



CONTENTS

CHAPTER 1 CELL INJURY

Apoptosis - 1

Extrinsic pathway of apoptosis - 1

Apoptotic genes - 2

Coagulative necrosis - 2

Dystrophic calcification - 3

Tumors having dystrophic calcification - 3

Metaplasia - 4

Hyperplasia vs Hypertrophy vs Anaplasia vs Metaplasia - 4

CHAPTER 2 INFLAMMATION

Acute ischemia signs - 6

Acute phase reactants - 6

Alpha-feroprotein associated with - 7

Common conditions associated with granuloma formation - 7

Eosinophilia causes - 8

How to identify deep wound infection - 8

How to identify superficial wound infection - 9

PgI 2 Vs THA 2 - 9

Selectin vs Integrins - 10

Stable tissue regeneration - 10

Wound healing causes of delay - 11

Wound healing components required - 11



CONTENTS

CHAPTER 3 HEMATOPATHOLOGY

- Eosinophilia causes - 13
- Condition associated with Basophilic Stippling - 13
- Causes of high ESR - 14
- Acute Intermittent Porphyria - 15
- Bernard Soulier disease - 15
- Fetal erythropoiesis - 16
- Folate deficiency causes - 16
- First detection of Haemoglobin - 17
- High reticulocyte count is seen in - 17
- Leukemia signs and symptoms - 18
- Kawasaki disease features - 18
- Leukocyte extravasation unique picture - 19
- Low reticulocyte count is seen in - 19
- Lymphocyte vs Neutrophil - 20
- Macrocytic anemia causes - 20
- Megaloblastic anemia causing drugs - 21
- PT vs APPT - 21
- Thrombocytopenia causes - 22
- Microcytic anemia - 22
- Sickle cell anemia 1 - 23
- Sickle cell anemia 2 - 23
- Target cells are seen in - 24
- Sideroblastic anemia causes - 24
- Total iron binding capacity (TIBC) - 25
- Thrombotic Thrombocytopenic Purpura (TTP) - 25
- WBC count - 26



CONTENTS

CHAPTER 4 GENETICS

- Autosomal Dominant diseases - 28
- Autosomal recessive diseases - 28
- X-linked recessive diseases - 29
- Chromosome 15 diseases - 29
- Anderson and Cori disease - 30
- Angelman syndrome features - 30
- Angelman syndrome unique illustration - 31
- Z DNA vs B DNA - 31
- Glycogen storage diseases - 32
- Hunter syndrome - 32
- Lysosomal storage disease - 33
- Mitochondrial inheritance diseases - 33
- Metabolic disorders other than autosomal recessive inheritance - 34
- Niemann pick disease - 34
- Tay-sachs disease - 35
- Tay-sachs disease unique picture - 35
- Down syndrome features - 36

CHAPTER 5 NEOPLASIA

- Bone metastasis primary organs - 38
- BRCA-1 gene association with other malignancies - 38
- Liver metastasis primary organs - 39
- Lymphatic spread of sarcoma - 39
- Breast cancer risk assessment - 40
- Cancer metastasis - 40



CONTENTS

CHAPTER 6 CARDIOVASCULAR SYSTEM

Coronary artery disease risk factors -	42
Causes of new onset atrial fibrillation -	43
Acute MI treatment -	43
Aneurysm types -	43
Anti-arrhythmics for AV nodes -	44
Aortic dissection risk factors -	44
Aortic regurgitation causes 1 -	45
Aortic regurgitation causes 2 -	45
Aortic stenosis characteristics -	46
Atherosclerosis risk factors -	46
Beck's triad (cardiac tamponade) -	47
Myxoma vs Rhabdomyoma -	48
Dilated cardiomyopathy etiologies -	48
Heart failure causes -	49
Kawasaki disease unique picture -	49
Bacterial endocarditis unique picture -	50
Bacterial endocarditis -	50
Kawasaki disease features -	51
Lab results suggesting endocarditis -	51
MI complications -	52
Patau syndrome -	52
Patau syndrome unique picture -	53
Patau syndrome trisomy -	54
Pericarditis causes -	54
R-L & L-R shunts -	55



CONTENTS

CHAPTER 6 CARDIOVASCULAR SYSTEM

- Raised JVP differential - 55
- Restrictive/infiltrative cardiomyopathy - 56
- Rheumatic fever - 56
- Right to left shunts - 57
- Immediate treatment of myocardial infarction - 57
- Right to left shunt - 58
- Angina precipitating factors - 58
- Secondary hypertension causes - 59
- Syncope CVS causes - 59
- Syncope vascular causes - 60
- Tetralogy of fallot unique picture - 60
- Tetralogy of fallot - 61
- Turner syndrome - 61
- Valve movement - 62
- Vasculitis causing granuloma - 62

CHAPTER 7 LIVER PATHOLOGY

- Charcot's triad - 64
- Chronic liver failure signs - 64
- Cirrhosis differential common and rare - 65
- Conditions where Mallory hyaline bodies are seen in - 65
- Decompensating chronic liver failure d/d - 66
- Elevated bilirubin common causes - 66
- Gilbert, criggler najjar, dubin Johnson, rotor syndromes - 67
- Hepatic encephalopathy - 67
- Risk factors of cholangiocarcinoma - 68



CONTENTS

CHAPTER 8 RENAL PATHOLOGY

- Acute renal failure detection - 70
- Alport syndrome unique picture - 70
- IgA nephropathy (berger disease) - 71
- Chronic renal failure presentations - 71
- Hematuria urethral causes - 72
- Kidney enlargement causes - 72
- Nephrotic syndrome - 73
- Nephrotic syndrome features - 73
- Papillary necrosis causes - 74
- Polycystic kidney disease - 74

CHAPTER 9 LUNG PATHOLOGY

- Pneumonia complications - 76
- ARDS causes - 76
- Bronchial obstruction consequences - 77
- Dyspnoea 6 P's - 77
- Emphysema vs Chronic bronchitis - 78
- Epiglottitis - 78
- Interstitial lung disease causes - 79
- Kartagener syndrome - 79
- Lung cancer complications - 80
- Acute pneumonia causes - 80
- Pulmonary embolism risk factors - 81
- Pulmonary fibrosis d/d - 81
- Respiratory distress syndrome in infants - 82
- Sputum findings in asthma - 82
- Tension pneumothorax signs and symptoms - 83
- Wheezing causes - 83



CONTENTS

CHAPTER 10 GASTROINTESTINAL PATHOLOGY

- Abdominal pain causes during pregnancy - 85
- Causes of abdominal swelling - 85
- Ascites causes - 86
- Dysphagia causes - 86
- Gastric carcinoma risk factors - 87
- GI bleeding causes - 87
- Insulin dependent glucose uptake - 88
- Leptin vs Ghrelin - 88
- Acute pancreatitis causes - 89
- Pancreatitis ranson criteria admission time - 89
- Pancreatitis ranson criteria initial 48 hours - 90
- Peptic ulcer associated causative factors - 90
- Peptic ulcer - 91
- Pyloric stenosis unique picture - 91
- Pyloric stenosis - 92
- Causes of vomiting - 92
- Somatostatin vs Somatomedin - 93
- Gastric ulcer vs Duodenal ulcer - 93
- Ulcerative colitis - 94
- Zenker's diverticulum - 94

CHAPTER 11 GENITAL SYSTEM AND BREAST

- Endometrial cancer risk factors - 96
- Genital cysts - 96
- Polycystic ovarian disease (PCOD) - 97



CONTENTS

CHAPTER 12 CNS PATHOLOGY

- Horner's syndrome - 99
- Argyll Robertson pupil - 99
- Autism - 100
- Balint's syndrome - 100
- Bell's palsy symptoms - 101
- Signs of cerebellar damage - 101
- Cerebellopontine angle tumors - 102
- Chorea common causes - 102
- Decrease level of consciousness metabolic causes - 103
- Dandy walker malformation - 103
- Horner syndrome unique picture - 104
- Meniere's disease - 104
- Parkinson's disease - 105
- Normal pressure hydrocephalus - 105
- Seizure causes - 106
- Subarachnoid haemorrhage causes - 106
- Syncope CNS causes - 107
- Syncope CVS causes - 107
- Syncope vascular causes - 108

CHAPTER 13 MUSCULOSKELETAL SYSTEM

- Carpal tunnel syndrome - 110
- Becker muscular dystrophy - 110
- Congenital myopathy features - 111
- Duchenne muscular dystrophy - 111



CONTENTS

- Ectopia lentis - 112
- Genu valgum vs Genu varum - 112
- Marfan syndrome features - 113
- Osteogenesis imperfecta - 113
- Osteogenesis imperfecta unique picture - 114
- Osteonecrosis causes - 114
- Paget's disease - 115
- Reactive arthritis causative agents - 115
- Reactive arthritis - 116
- Scoliosis vs Kyphosis - 116
- Rheumatoid arthritis unique picture - 117

CHAPTER 14 ENDOCRINOLOGY

- Acromegaly symptoms - 119
- Addison's disease vs Cushing syndrome - 119
- Addison's disease causes - 120
- Adrenal crisis management - 120
- Adrenal insufficiency causes - 121
- Cretinism vs Myxoedema - 122
- Cushing syndrome - 122
- Diabetes mellitus unique picture - 123
- Diabetes complications - 123
- Follicular carcinoma - 124
- Glucagonoma signs & symptoms - 124
- Grave's disease - 125
- Hirsutism & Virilism - 125
- Hormones decrease in stress - 126
- Hormones with intracellular receptors - 126
- Hyperthyroidism signs & symptoms - 127
- Insulinoma rule of 10's - 127



CONTENTS

- Medullary carcinoma of thyroid - 128
- MEN 1 syndrome - 128
- Osteoporosis causes - 129
- Pancreatic hormones - 129
- Papillary thyroid tumor - 130
- Pheochromocytoma - 130
- Pheochromocytoma 10% rule - 131
- Psammoma bodies - 131
- Rickets clinical features - 132
- Carcinoid syndrome - 132
- Thyroid carcinoma histologic types - 133
- Thyroid neoplasms - 133

CHAPTER 15

MISCELLANEOUS

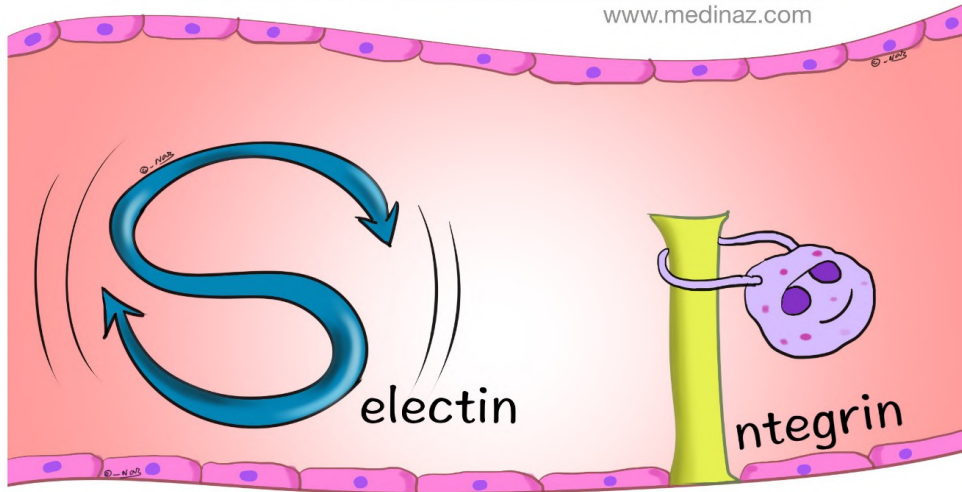
- Anion gap causes - 135
- Midgut carcinoid tumors - 135
- Epidermoid vs Sebaceous cyst - 136
- Rhabdomyoma vs Sq.cell carcinoma - 136
- Lung carcinoma most common - 137
- Lymph nodes of head & neck - 137
- Metabolic acidosis causes - 138
- Non gap acidosis causes - 138
- Pierre robin syndrome - 139
- Multiple myeloma - 139

Selectins Vs Integrins

Selectins are responsible for Rolling

Integrins are required for Adhesion

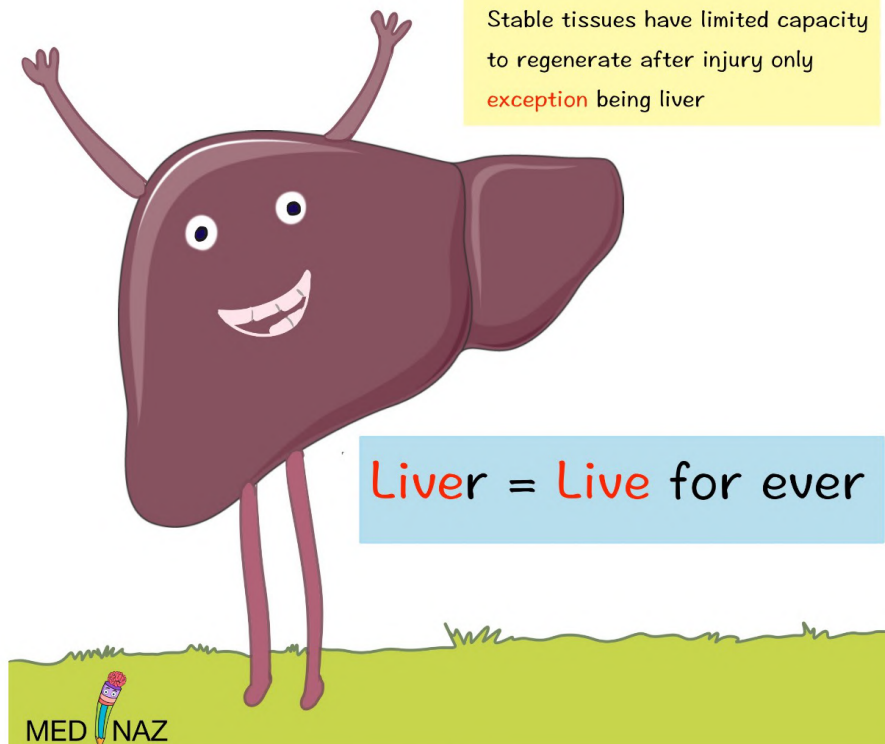
www.medinaz.com



Stable tissue Regeneration

www.medinaz.com

Stable tissues have limited capacity to regenerate after injury only
exception being liver



MED NAZ

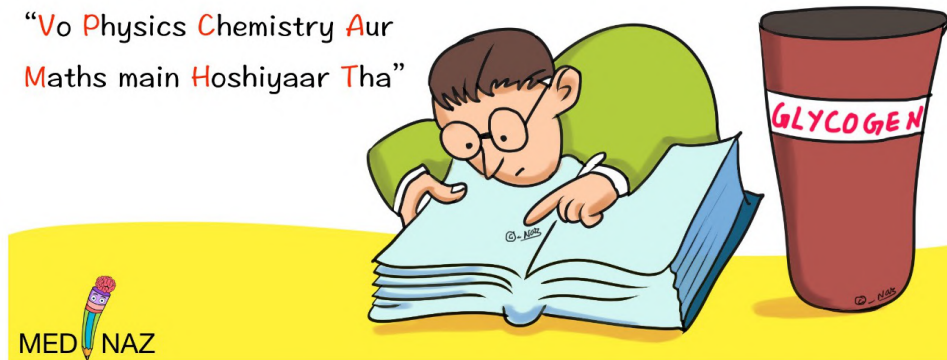
MED NAZ

Glycogen Storage Diseases

www.medinaz.com

- Type I (Von Gierke disease)
- Type II (Pompe's disease, acid maltase deficiency)
- Type III (Cori's disease)
- Type IV (Andersen's disease)
- Type V (McArdle's disease)
- Type VI (Hers' disease)
- Type VII (Tarui's disease)

“Vo Physics Chemistry Aur
Maths main Hoshiyaar Tha”



Hunter Syndrome

www.medinaz.com

“Hunter has an aXe / X”
(X-linked recessive)



MED NAZ

Insulin-independent glucose uptake

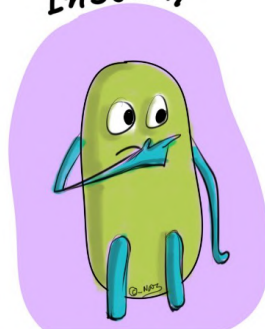
www.medinaz.com

- B**rain
- R**BCs
- I**ntestine
- C**ornea
- K**idney
- L**iver
- I**slet (β) cells
- P**lacenta
- S**permatocytes

“BRICK LIPS”



Insulin



Leptin vs Ghrelin

www.medinaz.com

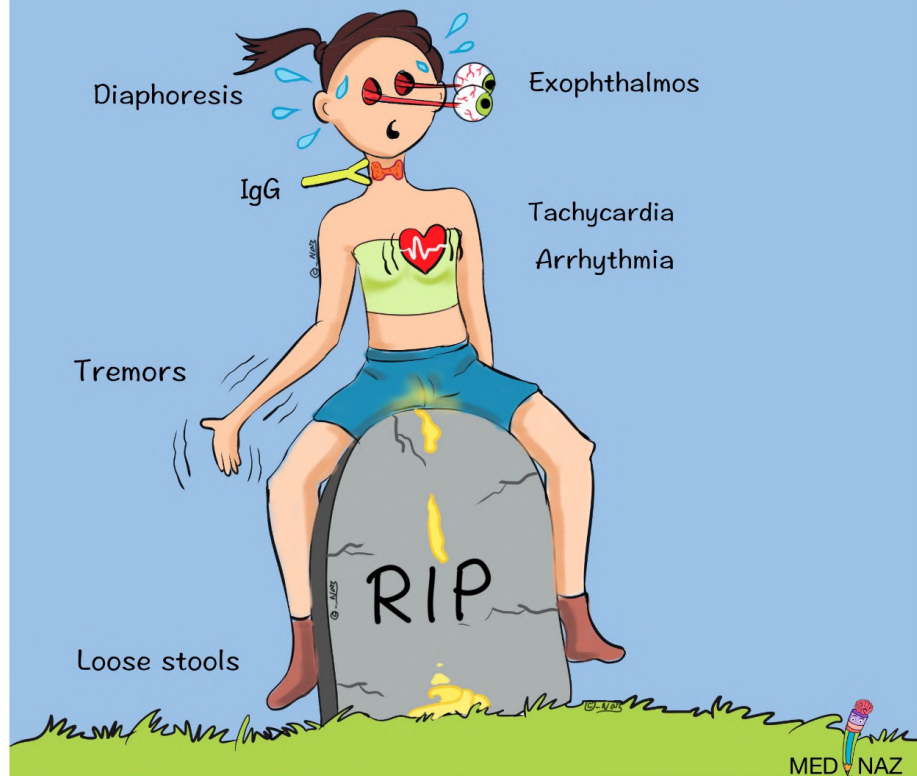
Leptin keeps you thin

Ghrelin makes you hungry and grow (grow)



GRAVES' DISEASE

www.medinaz.com



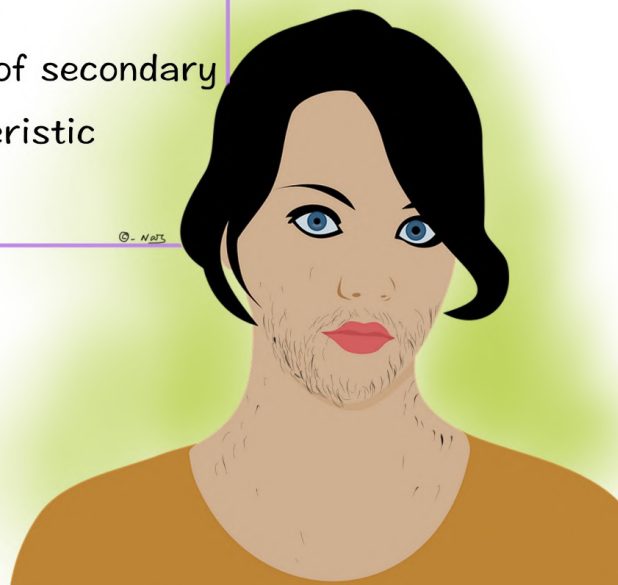
www.medinaz.com

Hirsutism


Hair on body like a male

Virilism

Voice & rest of secondary sexual characteristic like a male



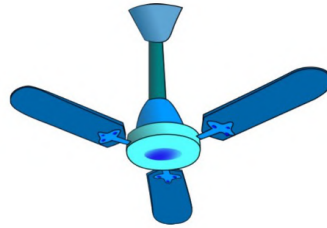
Ectopia Lentis

www.medinaz.com 

mar**FAN** syndrome

FAN is up
Superior dislocation

© - MEDS



homocystin**URIA**

URINE goes down
Inferior dislocation


© - MEDS



weill-**MARCH**esani syndrome

we will **MARCH** forward
Anterior dislocation

© - MEDS

 naz_artonomy



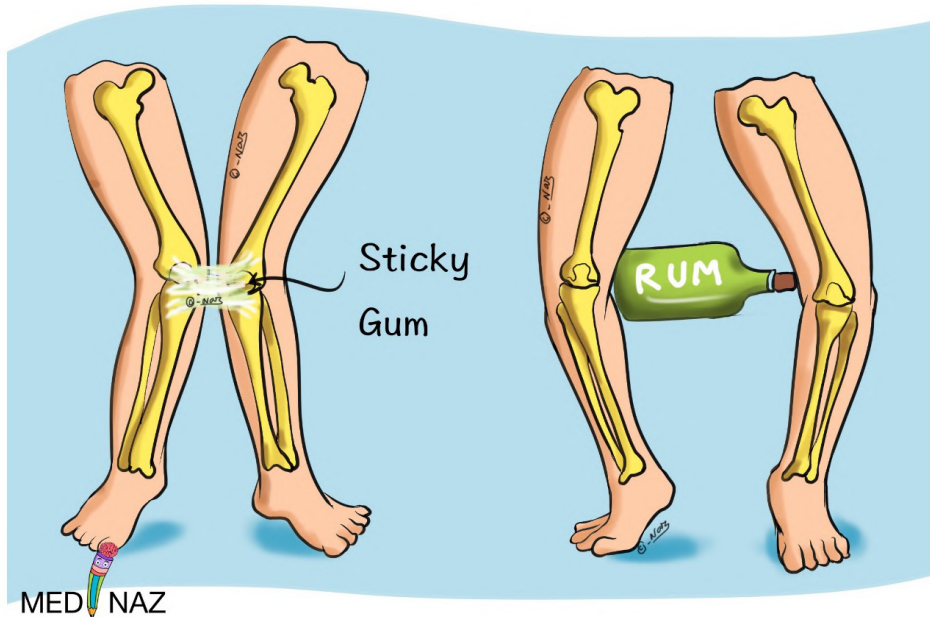
GENU VAL**GUM** vs GENU VAR**UM**

www.medinaz.com

“**GUM**” makes your knees
stick together

“**RUM**” makes your knees
spread apart

© - MEDS





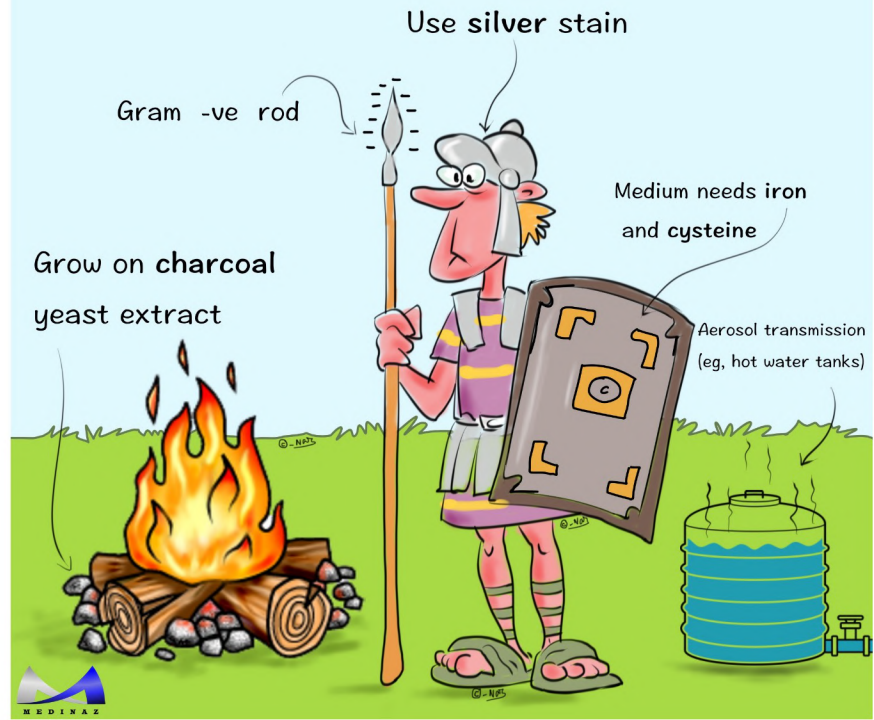
Contents

- **BACTERIOLOGY**
- **VIROLOGY**
- **MYCOLOGY**
- **PARASITOLOGY**
- **IMMUNOLOGY**
- **MISCELLANEOUS**



Legionella pneumophila

www.medinaz.com



Leptospirosis is associated with..

www.medinaz.com

Rat

Rainfall



Rice field



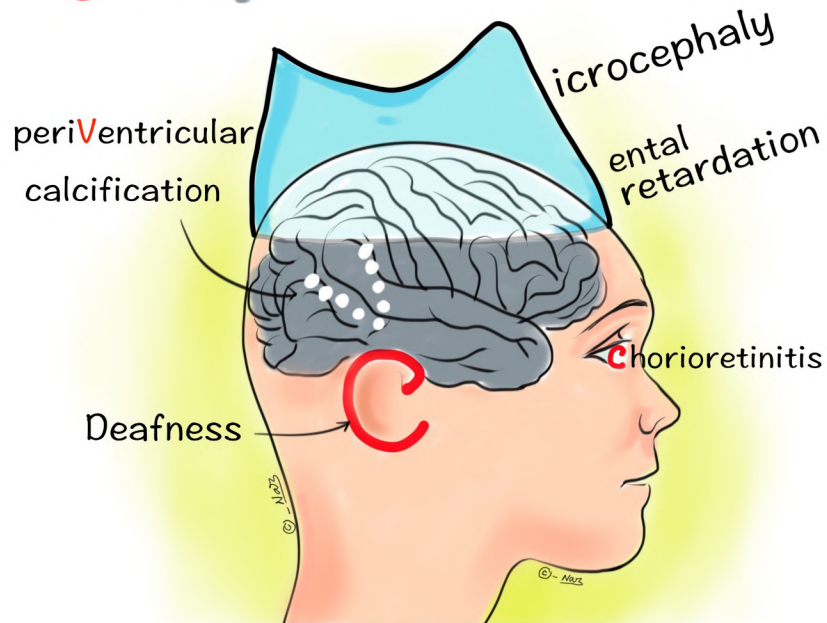
www.medinaz.com



Cytomegalovirus infection in Newborn

www.medinaz.com

C M  = CMV



EBV = Heterophile **positive**

CMV = Heterophile **negative**

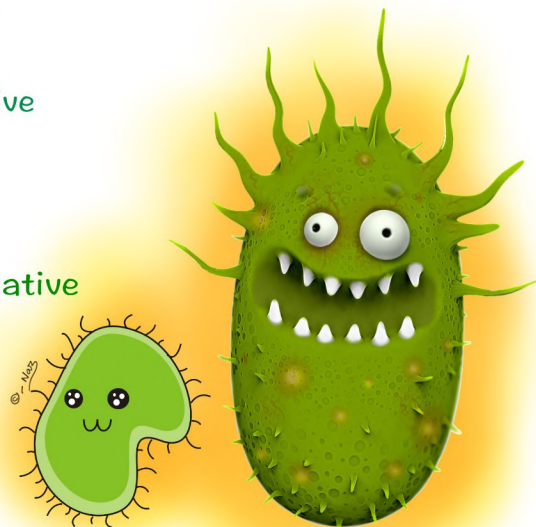
www.medinaz.com

EBV

positive

CMV

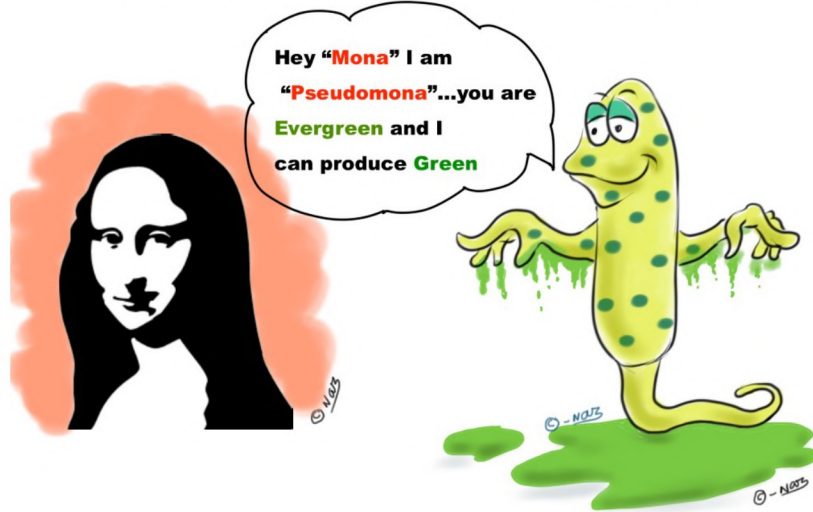
negative



www.medinaz.com



Pseudomona



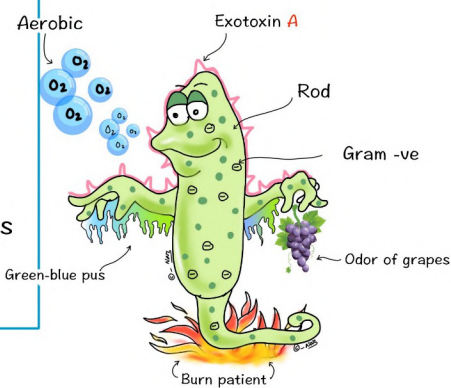
Pseudomona aeruginosa
can produce Green pus

Pseudomonas aeruginosa

www.medinaz.com

- Aerobic
- Exotoxin A
- Rod / Resistance
- UTIs, burns, injuries
- Green-blue pus
- Iron-containing lesions
- Negative gram
- Odor of grapes
- Slime layer in CF patients
- Adherin pili

“AERUGINOSA”



www.medinaz.com



Gardnerella vaginalis

www.medinaz.com

Clue cells



I don't have a **clue** why
I smell **fish** in the **vagina garden**

fishy smell
vaginal discharge
Gardnerella vaginalis



Falciparum malaria complications

"CHAPLIN"

Cerebral malaria / Coma
Hypoglycemia
Anaemia
Pulmonary edema
Lactic acidosis
Infections
Necrosis of renal tubules



www.medinaz.com



CONTENTS

Innate immunity unique picture -	2
Acute Phase Reactant proteins -	2
Adaptive immunity unique picture -	3
Herd immunity against vaccination -	3
MHC molecule expression -	4
MHC I vs MHC II molecules -	4
MHC I vs MHC II molecular structure -	5
B8 associated diseases -	5
B27 associated diseases -	6
HLA DR2 associated diseases -	6
HLA DR3 associated diseases -	7
T & B cell types -	7
Subset of Helper T cells -	8
NK cell activation -	8
Immunoglobulin types -	9
IgG is highest for -	9
IgM is highest for -	10
Histamine features -	10
Complement system part 1 -	11
Complement system part 2 -	11
Interleukin 1 features -	12
Interleukin 6 features -	12
Interleukin 4 features -	13
Interleukin 5 features -	13
Interleukin 8 features -	14
Hypersensitivity types -	14
Type II hypersensitivity -	15
Type III hypersensitivity -	15
Type IV hypersensitivity -	16



SLE features 1	- 16
SLE features 2	- 17
SLE features 3	- 17
SLE criteria	- 18
Grave's disease unique picture	- 18
Guillain Barre syndrome	- 19
Crohn's disease	- 19
Edrophonium	- 20
Myasthenia gravis associated with	- 20
Myasthenia gravis associated with	- 21
Sjogren's syndrome diagnosis	- 21
CREST syndrome	- 22
Burton agammaglobulinemia	- 23
Selective IgA deficiency	- 23
Common variable immunodeficiency	- 24
DiGeorge syndrome	- 24
Hyper IgE syndrome (Job syndrome)	- 25
Ataxia - telangiectasia	- 25
Wiskott-Aldrich syndrome	- 26
Chediak-Higashi syndrome	- 26
Tuberous sclerosis unique picture	- 27
Tuberous sclerosis features	- 27
Killed vaccine	- 28
Live attenuated vaccine	- 28
B cell markers	- 29
Interleukins	- 29

B27 associated diseases

Psoriatic arthritis
Ankylosing spondylitis
IBD-associated arthritis
Reactive arthritis

“**PAIR** of **B**oobs”



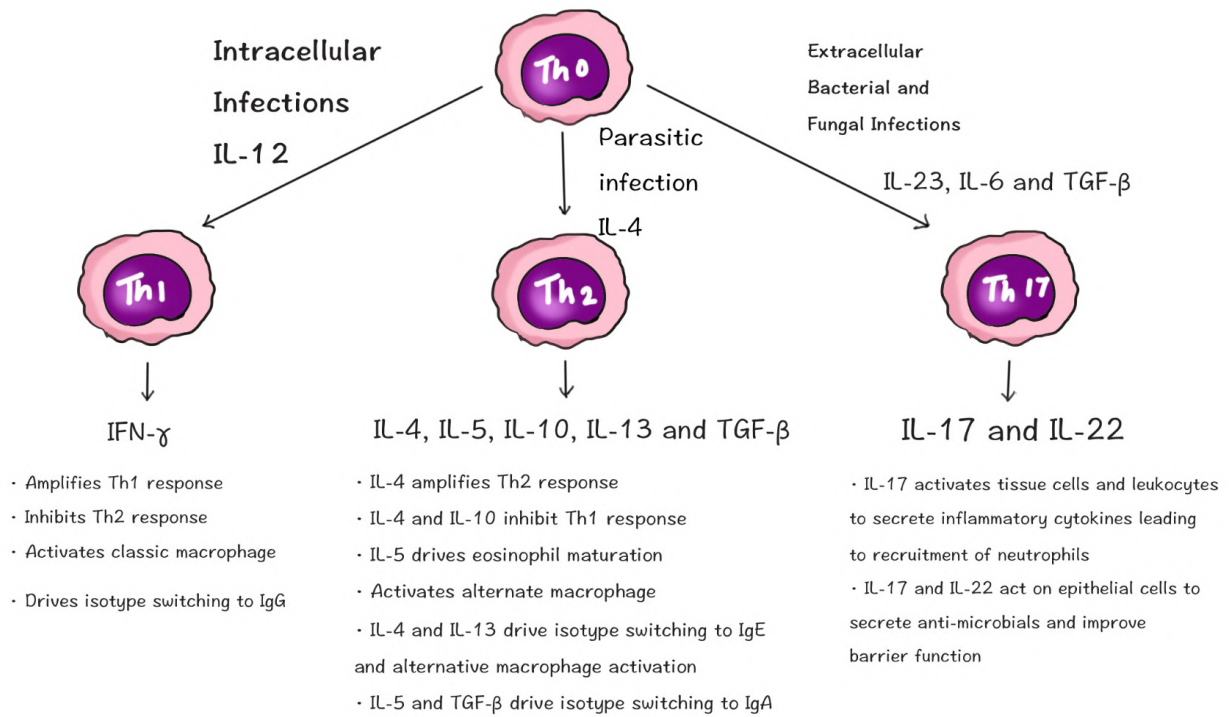
HLA DR2

“**H**ey this **DR** is going
2 be **Good MS**”

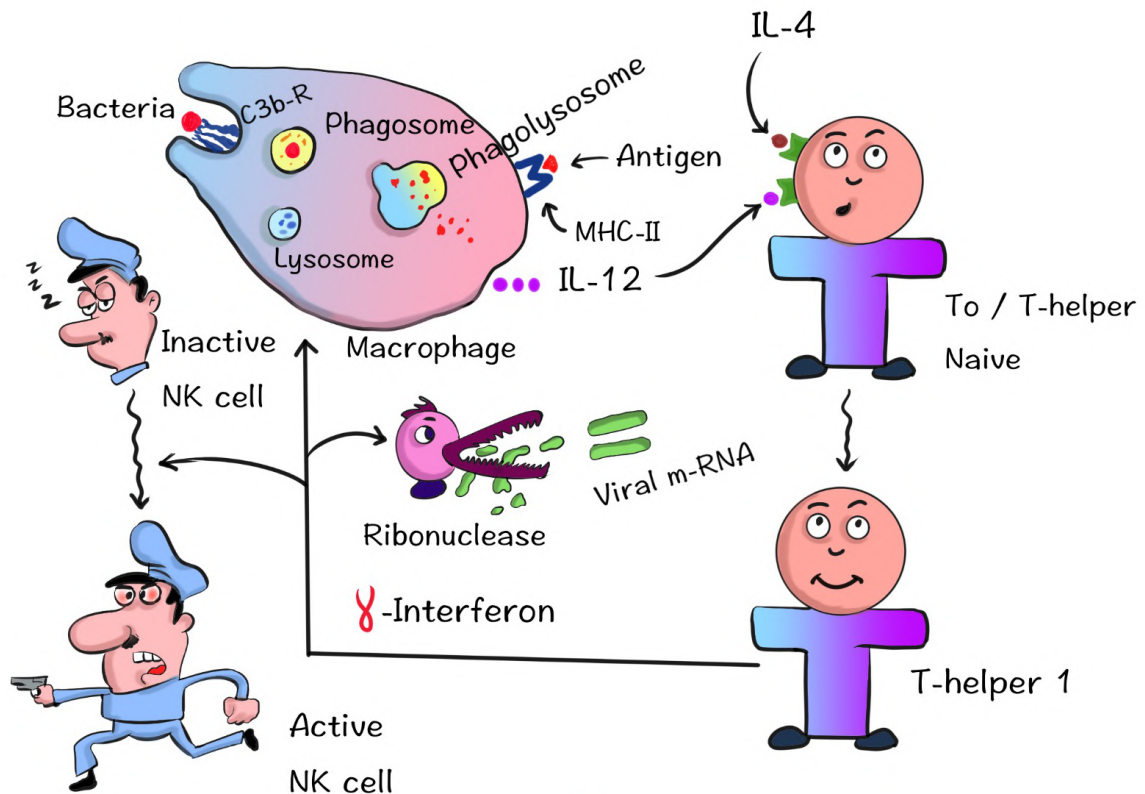
Hay fever
Goodpasture syndrome
Multiple **S**clerosis
SLE



Subsets of Helper T Cells

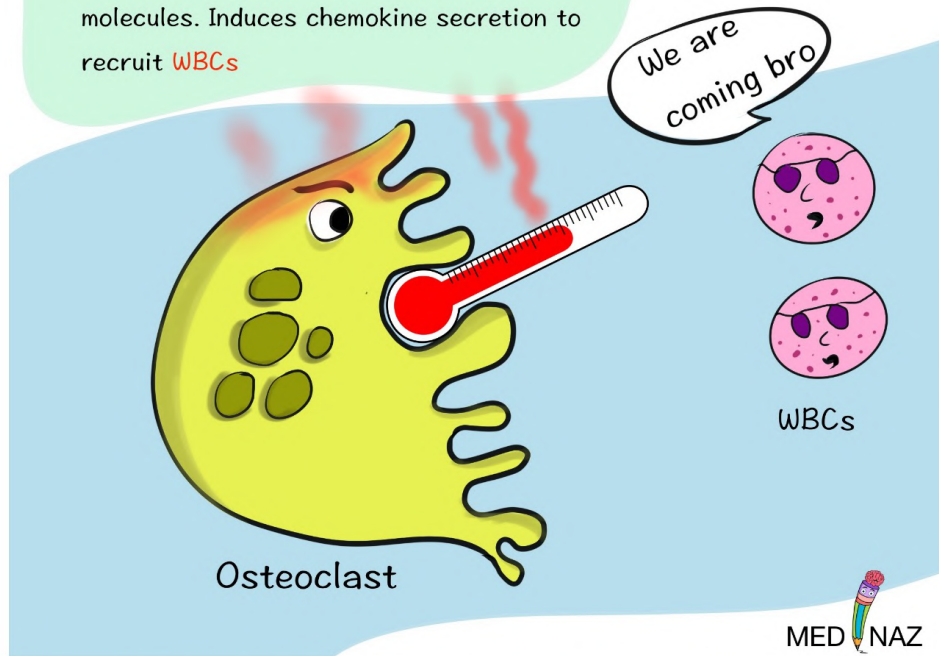


NK cell activation



IL-1

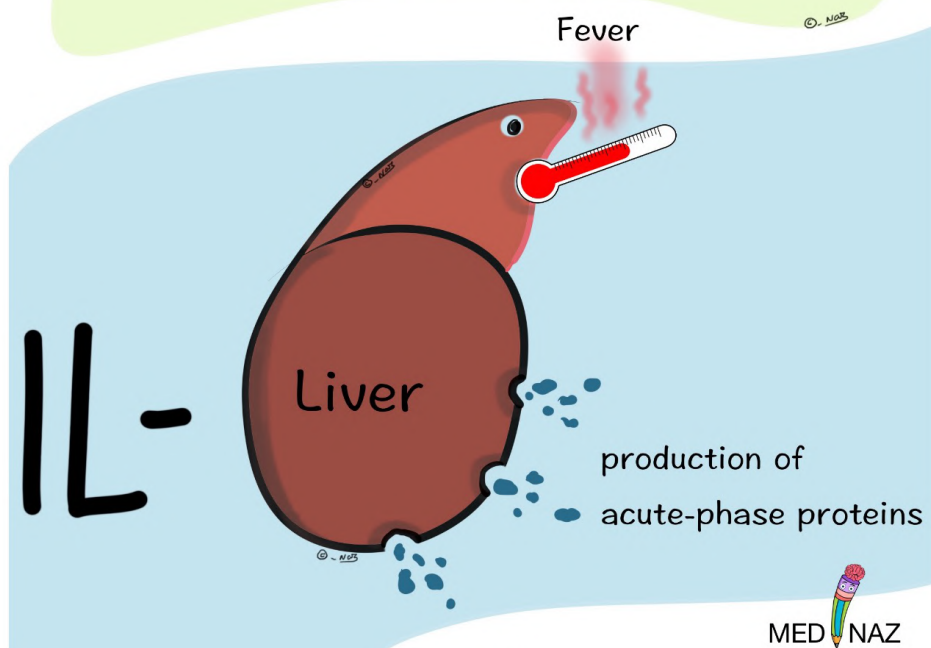
- ↳ Also known as **osteoclast-activating factor**
- ↳ Causes **fever**, acute inflammation
- ↳ Activates endothelium to express adhesion molecules. Induces chemokine secretion to recruit **WBCs**



Interleukin - 6

www.medinaaz.com

- Causes **fever** and stimulates production of **acute-phase proteins**
- Can mediate fever and sepsis



MED NAZ

Common variable immunodeficiency

www.mednaz.com

Both sexes equally affected

♀ = ♂

Non-Hodgkin's lymphoma

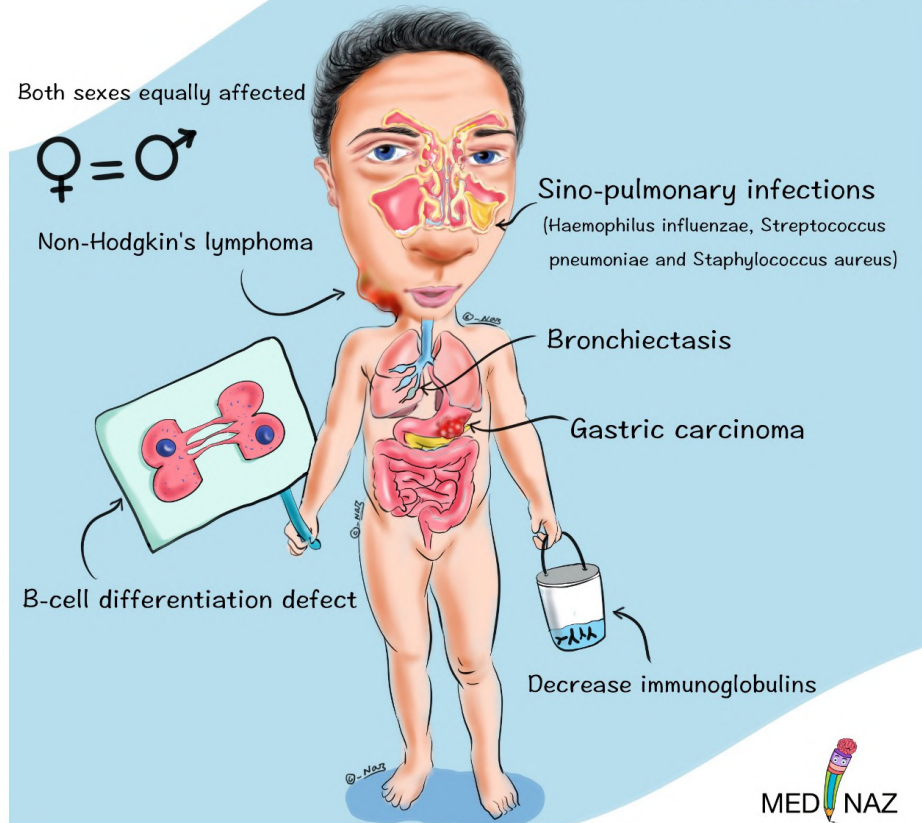
Sino-pulmonary infections
(Haemophilus influenzae, Streptococcus pneumoniae and Staphylococcus aureus)

Bronchiectasis

Gastric carcinoma

B-cell differentiation defect

Decrease immunoglobulins



DiGeorge syndrome



22



Cardiac abnormalities

Abnormal Facies

Thymic Aplasia

Cleft Palate

Hypocalcemia

22q11 deletion

