

# VISUAL MNEMONICS MEDICINE

**500+** Drug of Choice

**200+** mnemonics  
FDA approved drugs

**2019**



**Dr. Nazmul Alam**

www.medinaz.com

2<sup>nd</sup> Edition

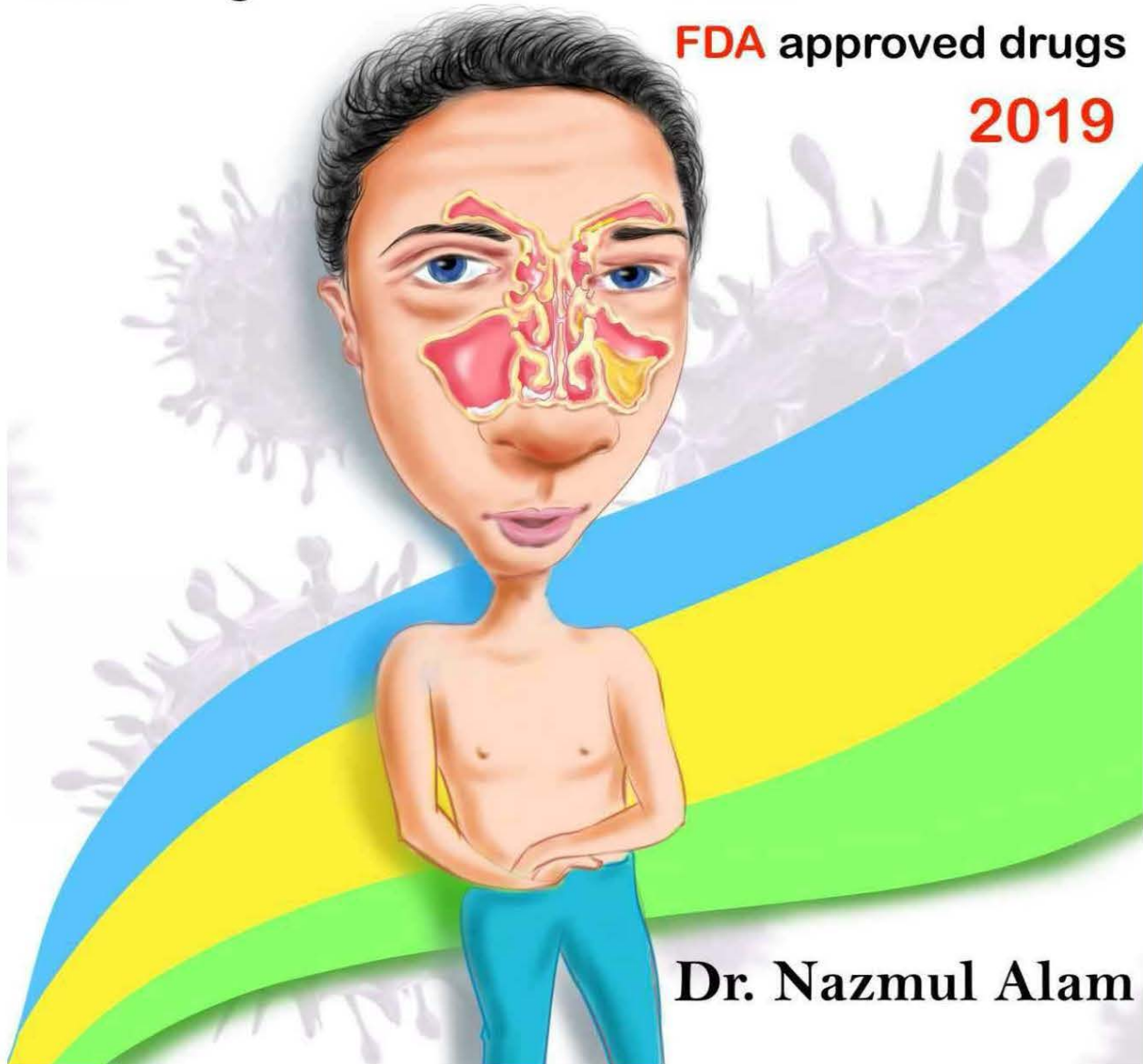
# VISUAL MNEMONICS MEDICINE

500+ Drug of Choice

200+ mnemonics

FDA approved drugs

2019



Dr. Nazmul Alam



Copyright © 2019 by Nazmul Alam. All rights reserved. No part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of the publisher.

#### TERMS OF USE

This is a copyrighted work and Medinaz and its licensors reserve all rights in and to the work. Use of this work is subject to these terms. Except as permitted under the Copyright Act of 1976 and the right to store and retrieve one copy of the work, you may not decompile, disassemble, reverse engineer, reproduce, modify, create derivative works based upon, transmit, distribute, disseminate, sell, publish or sublicense the work or any part of it without Medinaz's prior consent. You may use the work for your own noncommercial and personal use; any other use of the work is strictly prohibited. Your right to use the work may be terminated if you fail to comply with these terms.



Visit our website for more interesting books  
[www.medinaz.com](http://www.medinaz.com)

<p>www.medinaz.com 2nd Edition</p> <p><b>VISUAL MNEMONICS MEDICINE</b></p> <p>500+ Drug of Choice 200+ mnemonics FDA approved drugs 2019</p> <p>Dr. Nazmul Alam</p>	<p>www.medinaz.com FIRST EDITION</p> <p><b>VISUAL MNEMONICS Microbiology</b></p> <p>100+ slides</p> <p>Dr. Nazmul Alam</p>	<p>www.medinaz.com FIRST EDITION</p> <p><b>VISUAL MNEMONICS ANATOMY</b></p> <p>100+ Slides</p> <p>Dr. Nazmul Alam</p>
<p>www.medinaz.com FIRST EDITION</p> <p><b>VISUAL MNEMONICS CARDIOLOGY</b></p>	<p>www.medinaz.com First Edition</p> <p><b>DRUG OF CHOICE</b></p> <p>References and updates from Goodman Gilman's 13th, Katzung &amp; Trevor's 13th, Harrison's 19th, CMOI 2018 &amp; Standard journals</p>	<p>www.medinaz.com FIRST EDITION</p> <p><b>VISUAL MNEMONICS Pharmacology</b></p> <p>100+ slides</p> <p>Dr. Nazmul Alam</p>
<p>Mup Mup Mup Mup</p> <p>100+ Mnemonics Drug of choice New drugs highlight</p> <p>Dr. Nazmul Alam</p>	<p>for USMLE NEET FMGE NBDE</p> <p>By Medinaz</p> <p>500+</p>	
<p>www.MEDINAZ.COM FIRST EDITION</p> <p><b>HIGH YIELD VISUAL IMMUNOLOGY</b></p> <p>FOR USMLE, NBDE, FMGE, NEET</p> <p>500+ High-yield points 50+ Illustrations &amp; Mnemonics</p> <p>References and updates from Goodman Gilman's 13th, Katzung &amp; Trevor's 13th, Harrison's 19th, CMOI 2018 &amp; Standard journals</p> <p>DR. HAZMUL ALAM DR. HIRSEL MONDAL</p>	<p>www.MEDINAZ.COM FIRST EDITION</p> <p><b>HIGH-YIELD ANTIBIOTICS</b></p> <p>for USMLE, NBDE, FMGE, NEET</p> <p>500+ High-yield points 50+ Illustrations &amp; Mnemonics</p> <p>References and updates from Goodman Gilman's 13th, Katzung &amp; Trevor's 13th, Harrison's 19th, CMOI 2018 &amp; Standard journals</p> <p>DR. HAZMUL ALAM DR. HIRSEL MONDAL</p>	<p>www.MEDINAZ.COM FIRST EDITION</p> <p><b>IMMUNOLOGY Questions &amp; Answers</b></p> <p>FOR USMLE, NBDE, FMGE, NEET</p> <p>&lt;200+ Practice Questions &amp; Answers &lt;100 Conceptual MCQs with detailed explanation</p>





# REVIEWS

**S** susanth09  
Me  
Today, 10:27 AM

Thank you, Got it. Really appreciate your help Doctor. Your work is commendable. Helps to keep abreast of what one has learned. Thank you and stay blessed.

Show more

Adrish Biswas  
To: Nazmul Alam  
Today at 9:02 PM

Hey , I have been following you for some time now and I must say I am a big fan of your work . Just bought the Pharmacology and Microbiology Mnemonic Combo and it's amazing . Looking forward to more interesting stuff from you! Thanks a bunch!

Top Reviews

**P** Pawan Pilonia  
★★★★★ **Redefining Imagination of a Medico. Worth it.**  
6 March 2019

When those bugs eat your brain and you close that bulky textbook. There you Need Mnemonics to Visualise and remember stuffs.  
Great piece of work with awesome illustrations. Thanks a Lot Dr Nazmul 🙌

Helpful | Comment | Report abuse

**J** Jennifer  
★★★★★ **Very good**  
6 March 2019

Thank you for such an awesome book. Learning micro with the help of this book, is just like a cake walk. Worth it 🙌

Helpful | Comment | Report abuse

**Sohail Zaman** Today at 8:32 PM  
To: NAZMUL ALAM  
Re: link



Wow Mr Nazmul Alam for ur such an amazing Book of immunology.... special thing about ur content is that u organize them so well that nobody did it before....and through beautifull diagrams and mnemonics make the topic very easy and make the memory sharp....God bless ur brother for providing such a conceptual and Most easyiest book... I would recommend it to everyone and specially to those who want some extra achievements in his/her medical carrier..... Once again Thanks for ur efforts....Lots of love from Pakistan♥♥♥👍👍👍

[See More from NAZMUL ALAM](#)

**S** susanth09  
Me  
Today, 10:27 AM

Thank you, Got it. Really appreciate your help Doctor. Your work is commendable. Helps to keep abreast of what one has learned. Thank you and stay blessed.

Show more

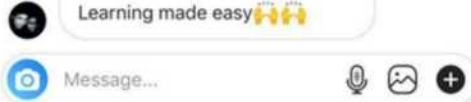




# REVIEWS

Sir immunology books are tooo goodddd 😊😊  
Thank you so much

Sir aab tak 9 books bane hai na  
Great work sir  
Learning made easy 🙌🙌🙌



Sir just now I got it

It's awesome...

3:04 PM

Thank you very much for the appreciation 🙌

Definitely it's useful for us to study in smart way and easily to remember thanx u so much sir...

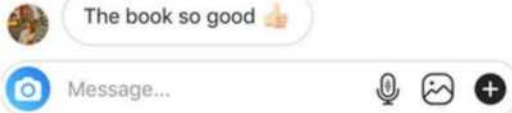
For ur excellent work 🙌



already get it

Thank you so muchhh

The book so good 🙌



I got email, sorry for bothering and thank you for your great work. ❤️

Hey.. just noticed your message. Sorry for the late response. Thank you very much for the appreciation and support. Have a great day. 🙌



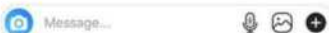
Thank you..I just my 2nd attempt to purchase successfully..the books are just awesome..I had interest in buying the books after u uploaded those screen shots of few pages from the books..In that I found a sentence saying IL-1 aks osteoclast activating factor..asap I thought that this is some high yield book and I have to go for it..so in future please do upload few screen shots from ur further books ...a big Congo to ur efforts

Thank you for the payment. Please check your email

Thx for all the PDFs. They are awesome!!



Typing...





## INDEX

- Cardiovascular system
- Endocrine system
- Gastroenterology
- Haematology
- Infectious diseases
- Integumentary system
- Liver and Biliary system
- Musculoskeletal system
- Nervous system
- Psychiatry
- Renal system
- Reproductive system
- Respiratory system
- Drug of choice
- FDA approved drugs 2019



# **Cardiovascular System**





## Acute MI treatment

www.medinaz.com

Glycerol trinitrate

Oxygen

Aspirin

Cyclomorph

“GOA Calling”



## Anti-arrythmics for AV nodes

www.medinaz.com

Beta blockers

Adenosine

Digoxin

Verapamil

“BAD Ventricle”  
needs treatment





## Coronary artery disease risk factors



Eating too much **Fatty SOFT**  
**HAM** can cause coronary artery disease

**F**atty (HyperLipidemia)

**S**moking

**O**besity

**F**amily history

**T**ype 1 & 2 diabetes

**H**ypertension

**A**ge

**M**ale

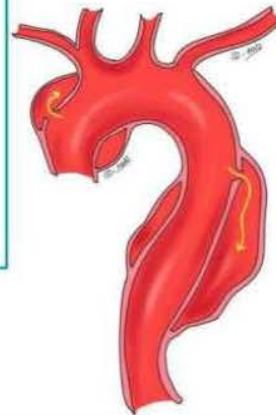
## Aortic Dissection risk factors

[www.medinaz.com](http://www.medinaz.com)

“**A,B,C**”

### Aortic dissection

**A**therosclerosis, Ageing,  
Aortic aneurysm  
**B**lood pressure high,  
Baby (pregnancy)  
**C**onnective tissue disorders  
(Marfan's, Ehlers-danlos),  
Cystic medial necrosis





## Beck's triad (Cardiac tamponade)

www.medinaz.com

- Distant heart sound
- Distended jugular veins
- Decreased arterial pressure

3D's



## Heart Failure Causes

- Hypertension
- Embolism
- Anemia
- Rheumatic heart disease
- Thyrotoxicosis
- Myocardial infarction
- Arrhythmia
- Diet and lifestyle
- Infection
- Endocarditis

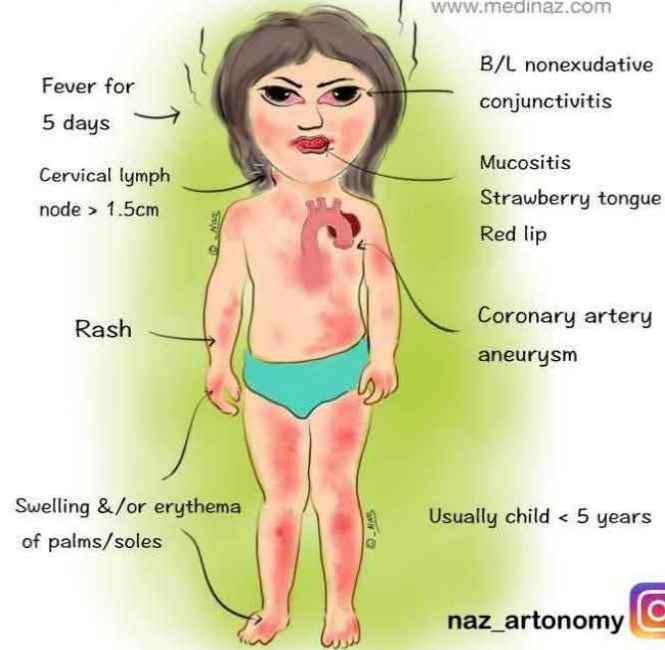
"HEART MAY DIE"





# Kawasaki Disease

www.medinaz.com

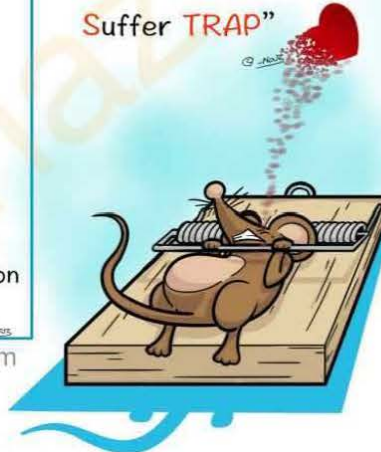


# MI Complications

- Arrhythmias
- Congestive heart failure
- Pericarditis
- Shock cardiogenic
- Thromboembolism
- Rupture
- Aneurysm cardiac
- Post myocardial infarction syndrome

www.medinaz.com

“All Cardiac Patients Suffer TRAP”



Instagram handle: naz\_aratomy

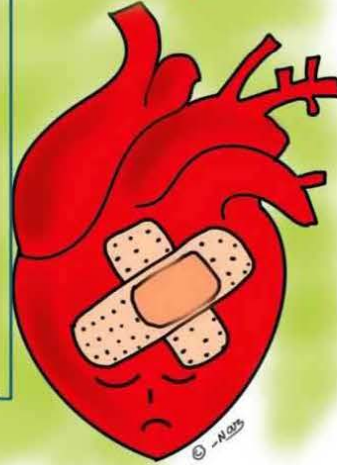


## Pericarditis Causes

www.medinaz.com

- Collagen vascular disease
- Aortic dissection
- Radiation
- Drugs
- Infections
- Acute renal failure
- Cardiac (MI)
- Rheumatic fever
- Injury
- Neoplasms
- Dressler syndrome

“CARDIAC RIND”



## Raised JVP differential

www.medinaz.com

- Pericardial effusion
- Quantity of fluid raised (fluid over load)
- Right heart failure
- Superior vena caval obstruction
- Tricuspid stenosis
- Tricuspid regurgitation
- Tamponade (cardiac)

“PQRST”





MEDINAZ

## Right to Left Shunt



- T**etralogy of fallot
- T**ricuspid atresia
- T**runcus arteriosus
- T**ransposition of great vessels

## Angina precipitating factors



- E**xertion
- E**ating
- E**motional distress
- E**xtrême temperature



## Immediate treatment of Myocardial Infarction



**M**

→ Morphine

**O**

→ Oxygen

**N**

→ Nitroglycerine

**A**

→ Acetylsalicylic acid



## Secondary Hypertension Causes

[www.medinaz.com](http://www.medinaz.com)

“Pathological Aorta Causes  
Secondary Hypertension”



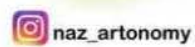
**P**heochromocytoma

**A**ortic coarctation

**C**ushing syndrome

**S**tenosis of renal arteries

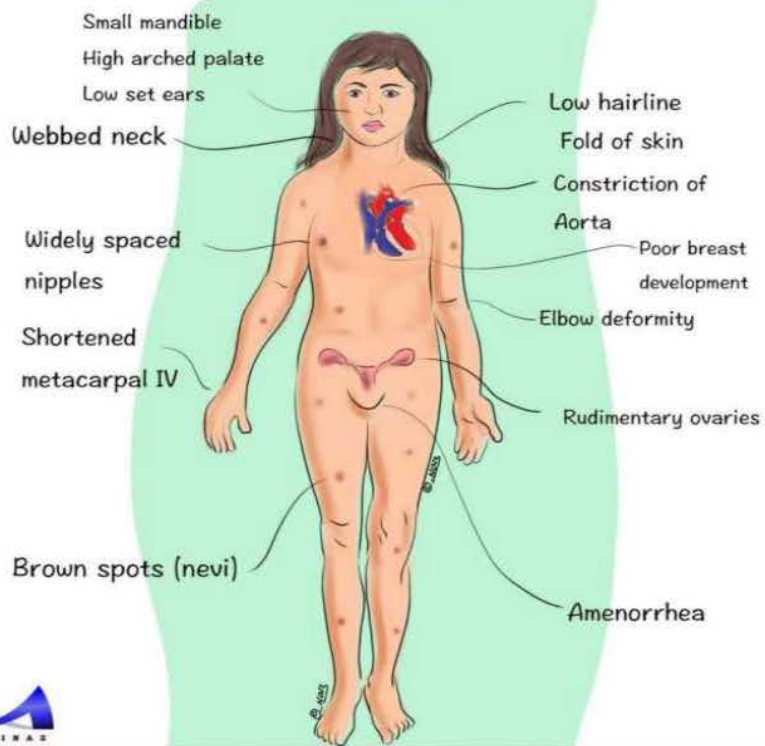
**H**yperaldosteronism (Conn syndrome)





# Turner Syndrome

[www.medinaz.com](http://www.medinaz.com)







# **Endocrine System**



## Acromegaly Symptoms

**A**rthralgia / **A**rthritis  
**B**lood pressure raised  
**C**arpal Tunnel **S**ndrome  
**D**iabetes  
**E**nlarged **O**rgans  
**F**ield **D**efect

“**ABCDEF**”



## 4 “S” of Adrenal Crisis Management

**S**alt : 0.9% saline

**S**teroids : I.V. cortisone 100 mg

**S**upport

**S**earch for the underlying illness






MEDINAZ

**P**rolactin **P**roduce **M**ilk  
**O**xytocin **O**oze (release) **M**ilk

©\_NMS

 naz\_artonomy



©\_NMS

**A**ddison's **D**isease

**C**ushing **S**yndrome

**A**drenal **D**eficiency

**C**ortisol **S**urge



©\_NMS



MEDINAZ



## Adrenal Crisis Management

**S**alt - 0.9% saline  
**S**teroids - IV hydrocortisone  
100mg q 8 h  
**S**upport  
**S**earch underlying causes

4 "S"



**C**retinism occurs in **C**hildren  
**M**yxoeidema occurs in **M**ature people





MEDINAZ

# CUSHING SYNDROME

www.medinaz.com

“CUSHING”

Central obesity, Collagen finer weakness,  
Comedones (acne)  
Urinary free cortisol and glucose increase  
Striae, Suppressed immunity  
Hypercortisolism, Hypertension,  
Hyperglycemia, Hypercholesterolemia  
Iatrogenic (Increased administration of corticosteroid)  
Noniatrogenic (Neoplasms)  
Glucose intolerance, Growth retardation

© - Naz

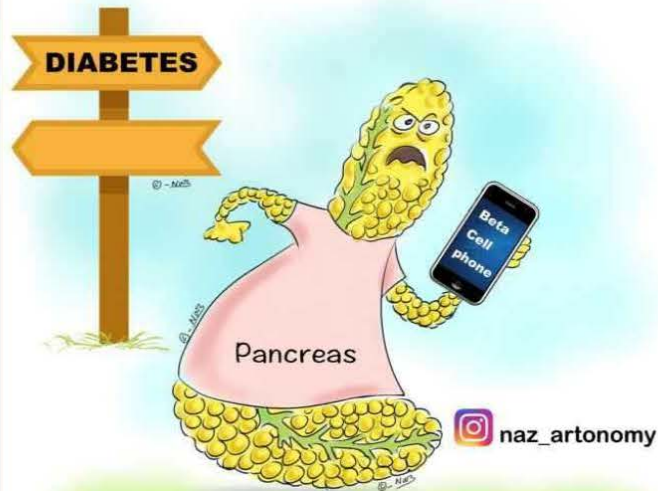


 naz\_aratomy



# DIABETES MELLITUS

www.medinaz.com



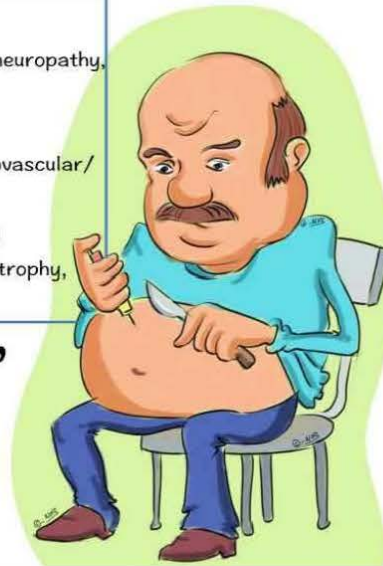
No signal...What the Hell !!!

## Diabetes Complications

www.medinaz.com

- K**idney – nephropathy
- N**euromuscular – peripheral neuropathy, mononeuritis, amyotrophy
- I**nfective – UTIs, TB
- V**ascular – coronary/cerebrovascular/ peripheral artery disease
- E**ye – cataracts, retinopathy
- S**kin – lipohypertrophy/lipoatrophy, necrobiosis lipoidica

“KNIVES”





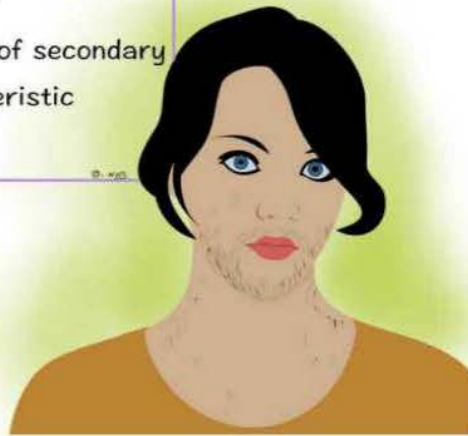
www.medinaz.com

## Hirsutism

**Hair** on body like a male

## Virilism

**Voice** & rest of secondary sexual characteristic like a male

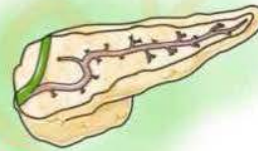


## MEN 1 affects

'P' Organs



Pituitary



Pancreas



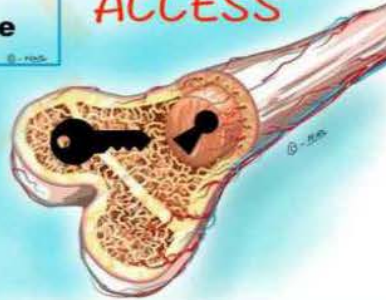
Parathyroid



## Osteoporosis Causes

- A**lcohol 
- C**orticosteroid
- C**alcium deficiency
- E**strogen deficiency
- S**moking
- S**edentary lifestyle

“ACCESS”



## 5 P's of Pheochromocytoma

- P**ressure (BP)
- P**ain (headache)
- P**erspiration
- P**alpitations
- P**allor

5 “p”

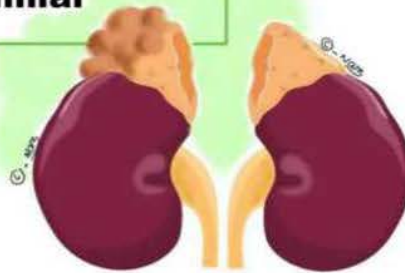






## 10% Rule of PHEOCHROMOCYTOMA

- 10% extra-adrenal**
- 10% bilateral**
- 10% malignant**
- 10% in children**
- 10% familial**



## Rickets Clinical Features

[www.medinaz.com](http://www.medinaz.com)






## Rickets Clinical Features

www.medinaz.com

“RICKETS”

- R = Rachitic rosary
- I = Pigeon chest
- C = Craniothorax
- K = Knock knees
- E = End of long bones become wide
- T = Teeth-delayed eruption & hypoplasia
- S = Skull-Frontal bossing & delayed closure of fontanelles

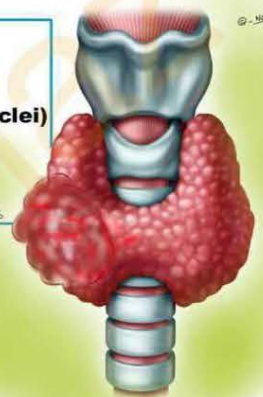


 naz\_artonomy

## Thyroid Neoplasms

5 “p”s

- P**apillary most popular
- P**apillae (branching)
- P**upil nuclei (Orphan Annie nuclei)
- P**sammoma bodies
- P**ositive prognosis





# **Gastrointestinal System**



## Abdominal pain causes during pregnancy

www.medinaz.com

### “LARA CROFT”

- Labour
- Abruption of placenta
- Rupture (eg. ectopic/uterus)
- Abortion
- Cholestasis
- Rectus sheath hematoma
- Ovarian tumor
- Fibroids
- Torsion of uterus



## Causes of Abdominal swelling

### 9 Fs

- Fat
- Fluid
- Full bladder
- Full-sized tumor
- False pregnancy
- Feces
- Flatus
- Fetus
- Fibroids



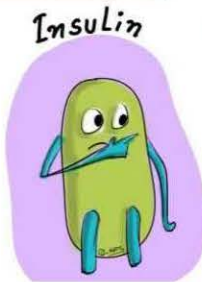


## Insulin-independent glucose uptake

www.medinaz.com

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

“BRICK LIPS”



## Leptin vs Ghrelin

www.medinaz.com

Leptin keeps you thin

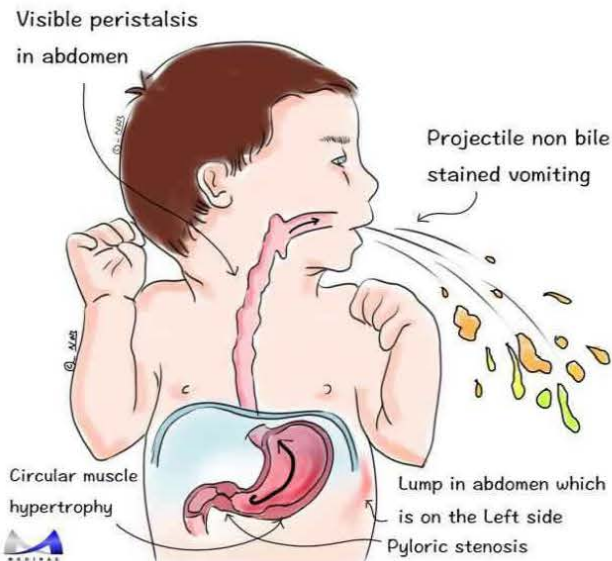
Ghrelin makes you hungry and greasy (grow)





# Pyloric Stenosis

www.medinaz.com




# Pyloric Stenosis

www.medinaz.com

- Peristalsis (Visible peristalsis in abdomen)
- Yuck! So the kid vomits everything he eats (non bile stained vomiting)
- Lump in abdomen which is on the Left side
- Olive mass, Doughnut sign on USG
- Ramstedt's pyloromyotomy (treatment)
- Imbalance of electrolytes
- Circular muscle hypertrophy

“PYLORIC”

 naz\_aratomy





## Causes of Vomiting



- |          |   |
|----------|---|
| <b>V</b> | <b>Vestibular / Vagal reflex</b>        |
| <b>O</b> | <b>Opiates</b>                          |
| <b>M</b> | <b>Migraine / Metabolic (DKA)</b>       |
| <b>I</b> | <b>Infection</b>                        |
| <b>T</b> | <b>Toxicity (cytotoxic, digoxin)</b>    |
| <b>I</b> | <b>Increased ICP / Ingested alcohol</b> |
| <b>N</b> | <b>Neurogenic</b>                       |
| <b>G</b> | <b>GI / Gestation</b>                   |

©-2010



**Gastric Ulcer**  
**Greater Pain**

**Duodenal Ulcer**  
**Decrease Pain**



## Somatostatin vs Somatomedin

www.medinaz.com

**Somato**statin keeps your growth **static**  
**Somato**medin **mediates** your growth

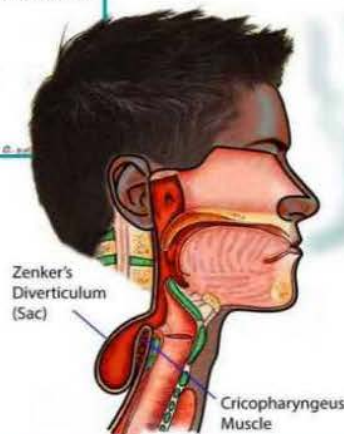


## Zenker diverticulum

www.medinaz.com

Elderly  
Males  
Inferior pharyngeal constrictor  
Killian triangle  
Esophageal dysmotility  
Halitosis

“Elder MIKE has  
bad breath”





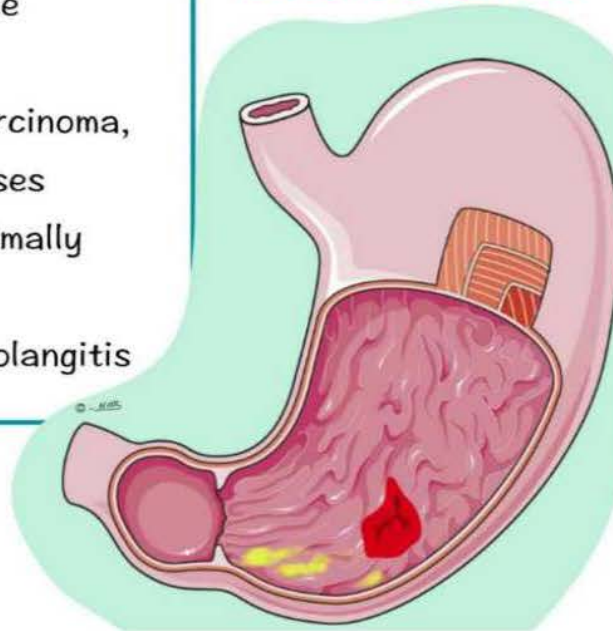


# Ulcerative colitis

[www.medinaz.com](http://www.medinaz.com)

- Ulcers
- Large intestine
- Continuous,
- Colorectal carcinoma,
- Crypt abscesses
- Extends proximally
- Red diarrhea
- Sclerosing cholangitis

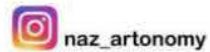
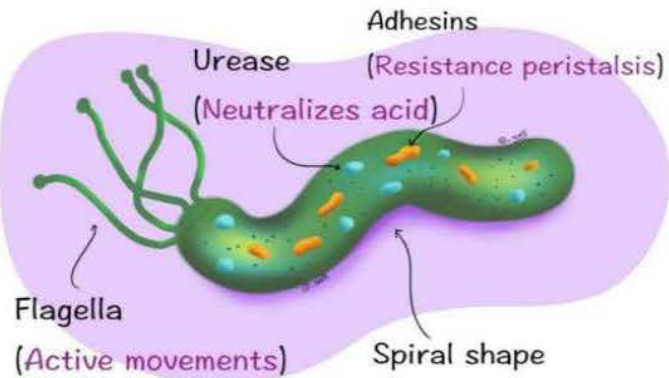
“ULCCERS”





# Helicobacter pylori

www.medinaz.com



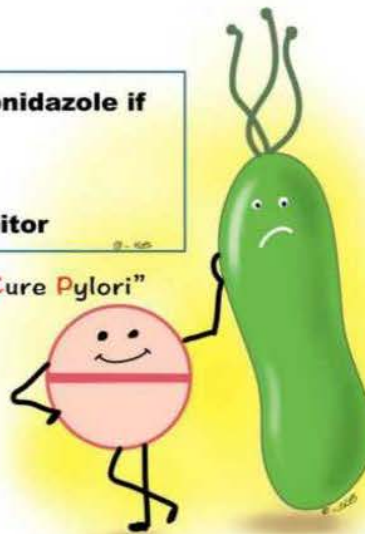
# Helicobacter pylori

www.medinaz.com

Triple therapy..

- A**moxicillin (metronidazole if penicillin allergy)
- C**larithromycin
- P**roton pump inhibitor

"Antibiotics Cure Pylori"





# Haematology

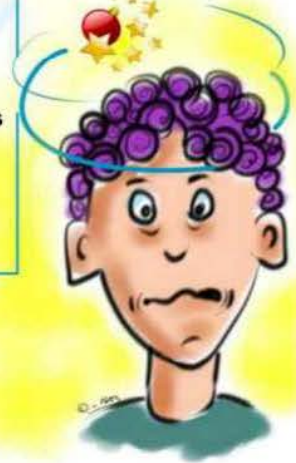


## Acute Intermittent Porphyria

www.medinaz.com

### 5 P<sub>s</sub>

- P**ain in abdomen
- P**olyneuropathy
- P**sychological abnormalities
- P**ink urine
- P**recipitated by medicines (sulphur containing drugs)



 naz\_artonomy

## Battle's Sign

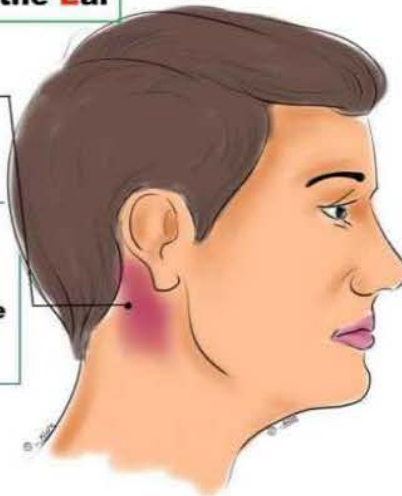
www.medinaz.com

**BattlE** = **B**ehind the **E**ar

**Battle's Sign**

4 **B**'s

- B**attle Sign
- B**ruises Seen
- B**asilar Skull fracture
- B**ehind the ear





## Causes of high ESR



**N**eoplasia  
**A**nemia, Autoimmune  
**P**regnancy  
**K**idney disease  
**I**nfection, Inflammation  
**N**eoplasm

### Also Remember

↳ Giant cell arteritis // Macroglobulinemia // Allergic Vasculitis  
Hyperfibrinogenemia // Necrotizing vasculitis

## Parenteral anti-coagulants



**H**EPARIN  
**E**NOXAPRIN  
**A**RGATROBAN  
**D**ALTEPARIN



# Kawasaki Disease

www.medinaz.com

Apply "Warm CREAM" in  
Kawasaki disease

- Warm = Fever >5 days
- C = Conjunctivitis (non-exudate)
- R = Rash
- E = Edema / Erythema of hands & feet
- A = Adenopathy cervical
- M = Mucositis, strawberry tongue



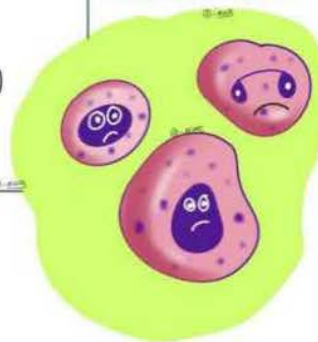
 naz\_artonomy

# Leukaemia signs & symptoms

www.medinaz.com

- Light skin (pallor)
- Enlarged spleen, liver lymph nodes
- Underweight
- Kidney failure
- Excess heat (fever)
- Mottled skin (haemorrhage)
- Infections
- Anaemia

"LEUKEMIA"





## Megaloblastic Anemia causing Drugs

www.medinaz.com

Methotrexate

AZT = zidovudine

Phenytoin

Liver disease

Ethanol

“MAPLE”



## Sickle Cell Anemia

signs..

**Splenomegaly,**

**Sludging**

**Infection**

**Cholelithiasis**

**Kidney - heamaturia**

**Liver congestion,**

**Leg ulcer**

**Eye changes**


“SICKLE”






## Thrombocytopenia Causes

**"PLATELETS"**



- P**latelet disorders (TTP,ITP,DIC)
- L**eukemia
- A**naemia
- T**rauma
- E**nlarged spleen
- L**iver disease
- E**thanol
- T**oxins (Benzene,Heparin,Aspirin)
- S**epsis

## Thrombotic Thrombocytopenic Purpura



- P**latelet count low
- A**nemia (microangiopathic hemolytic)
- R**enal failure
- T**emperature rise
- N**eurologic deficits
- E**R admission (emergency)
- S**chistocytes

**"PARTNERS"**





# Sickle cell anaemia

In Sickle cell anaemia  
**Glutamic acid** is replaced  
by **Valine**

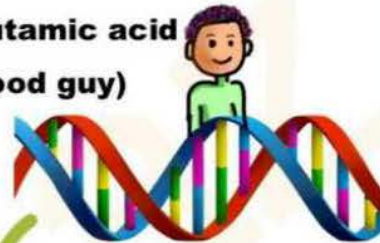
© - NPS

Sickle cell anaemia is  
a disease (bad condition).

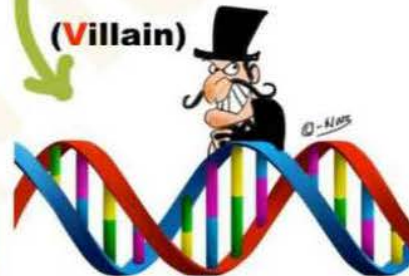
So **Villain** replaces  
**Good guy**.

© - NPS

**Glutamic acid**  
(**Good guy**)



**Valine**  
(**Villain**)



© - NPS



# **Infectious Disease**



## Aedes-carried Diseases

www.medinaz.com

Aedes like  
"DRY Chicken"

Dengue  
Rift valley fever  
Yellow fever  
Chikungunya



## Falciparum malaria complications

"CHAPLIN"

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





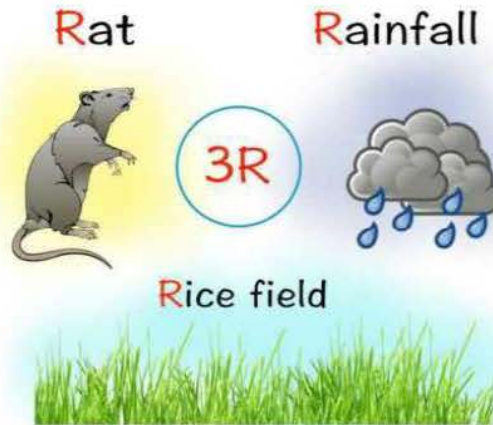
### Infection with Fever and Rash...think



- Tiny → Typhoid fever
- G → Gonococemia
- E → Endocarditis
- R → Rocky Mountain Spotted fever
- M → Meningococemia
- S → Sepsis (bacterid)

### Leptospirosis is associated with..

[www.medinaz.com](http://www.medinaz.com)





# Aspergillus

**A. niger** → Otomycosis

**A. nigER**  **Ear**  
Infection

# Aspergillus

**A.fumigatus** →  
Pulmonary aspergillosis  
Invasive aspergillosis  
Keratomycosis

**A.fumigatus**

fume

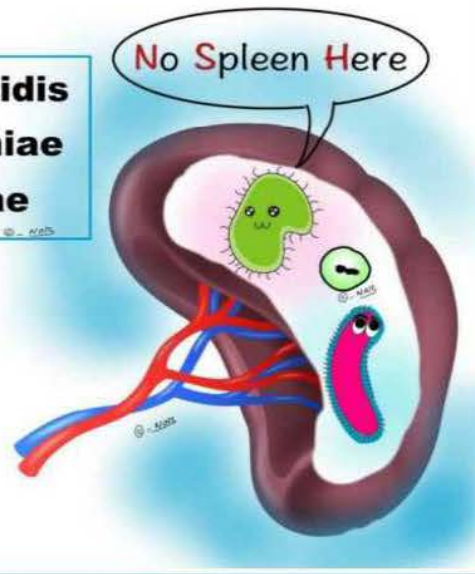
Fumes go to lungs and  
disseminate cause Pulmonary  
and Disseminated mycosis





## Asplenic need vaccines to protect against....

**N** meningitidis  
**S** pneumoniae  
**H** influenzae



## Botulism Symptoms

[www.medinaz.com](http://www.medinaz.com)

**D**iplopia  
**D**ysarthria  
**D**ysphagia  
**D**yspnea

“4 D’s”



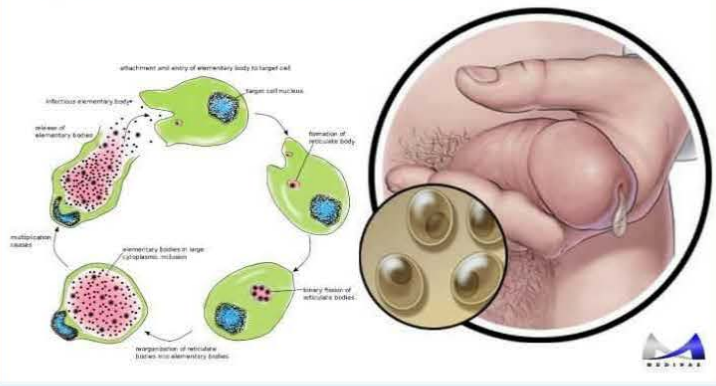


# Chlamydiae

www.medinaz.com

Elementary body (small, dense) is "Infectious" and Enters cell via Endocytosis; transforms into reticulate body

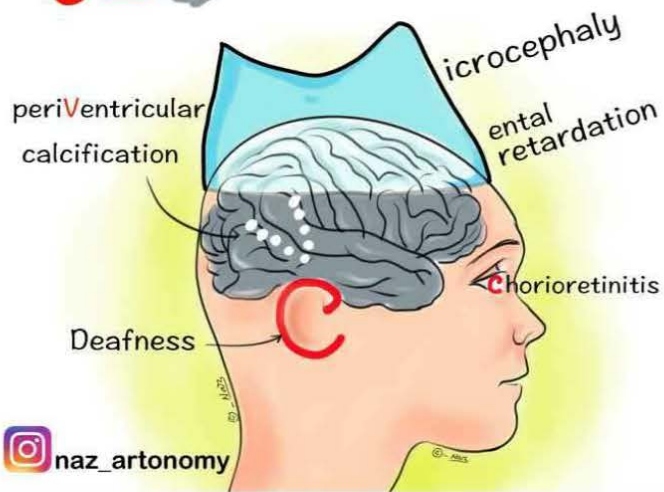
Reticulate body Replicates in cell by fission; Reorganizes into elementary bodies.



# Cytomegalovirus infection in Newborn

www.medinaz.com

CMV = CMV



naz\_artonomy



## Endemic Mycosis

www.medinaz.com

“Pakistan Cricket Board  
Headquarter”

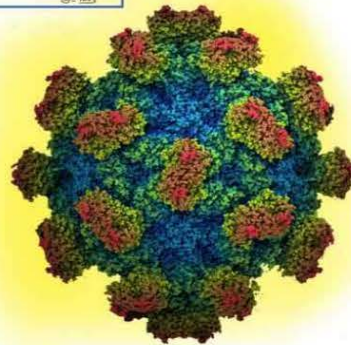
Paracoccidioidomycosis  
Coccidioidomycosis  
Blastomycosis  
Histoplasmosis



## Hepatitis A virus

www.medinaz.com

**A**symptomatic  
**A**cute  
**A**lone (No carrier state)







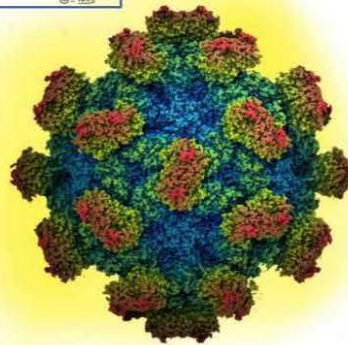
# Hepatitis **B** virus

[www.medinaz.com](http://www.medinaz.com)

Transmission

- B**lood
- B**aby- making (sexual)
- B**irthing (perinatal)

© - 2015

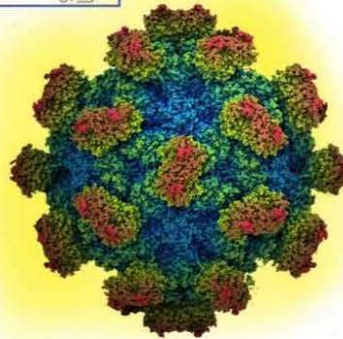


# Hepatitis **C** virus

[www.medinaz.com](http://www.medinaz.com)

- C**irrhosis
- C**arcinoma
- C**hronic
- C**arrier state (very common)

© - 2015



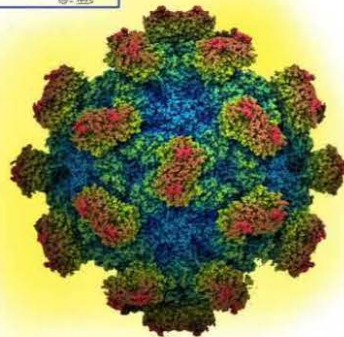


## Hepatitis **D** virus

[www.medinaz.com](http://www.medinaz.com)

**D**efective virus  
**D**epends on  
**H**BV HBsAg coat for  
**e**ntry into hepatocytes

© - MED



## Hepatitis **E** virus

[www.medinaz.com](http://www.medinaz.com)

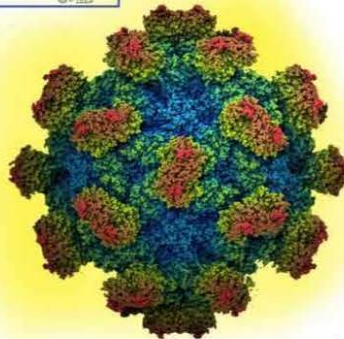
**E**xpectant (pregnant)

(Fulminant hepatitis in women)

**E**nteric

**E**pidemic

© - MED





# HIV Infection

www.medinaz.com

Four stages of untreated infection:

- F**lu-like (acute)
- F**eeling ne (latent)
- F**alling count
- F**inal crisis



# Measles (rubeola)

www.medinaz.com

- C**ough
- C**oryza
- C**onjunctivitis

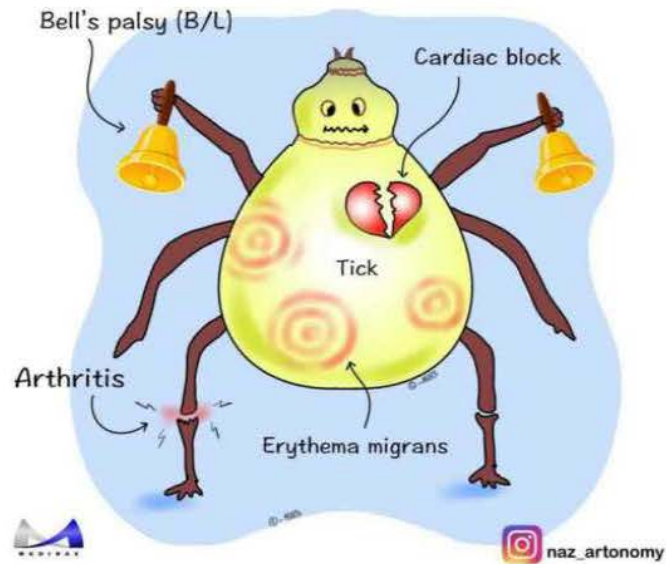
“3 C’s”





# Lyme Disease

www.medinaz.com



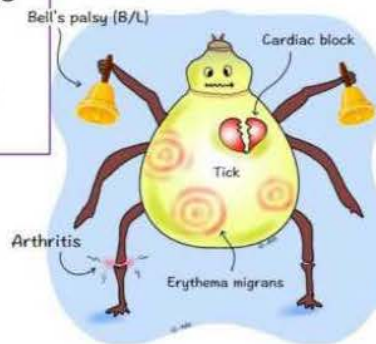
# Lyme Disease

www.medinaz.com



- Bell's palsy (B/L)
- Erythema migrans
- Arthritis
- K(c)ardiac block

“BEAK”





## Mumps Symptoms

www.medinaz.com

**P**arotitis  
**O**rchitis  
**a**septic **M**eningitis  
**P**ancreatitis

"Mumps makes your parotid glands  
and testes as big as **POM-Poms**"



## Mumps Complications

**S**alpingitis  
**O**rchitis  
**O**ophoritis  
**A**septic meningitis  
**P**ancreatitis

"**SOAP**"

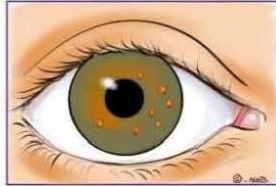




## Neurofibromatosis type 1 (NF1)

www.medinaz.com

Lisch nodules



Skin fold Freckling

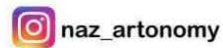


Lump on skin

Lump under skin



Cafe au lait spots



## Diagnostic criteria for Neurofibromatosis

**Relative (1st degree)**

**Osseous fibromas**

**Neurofibromas**

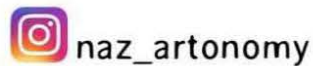
**Axillary freckling**

**Lisch nodules in eye**

**Dime size cafe au lait spots**

**Optic gliomas**

**"RONALDO"**





# Pseudomona



**Pseudomona aeruginosa**  
can produce **Green pus**

## Pseudomonas aeruginosa Treatment

[www.medinaz.com](http://www.medinaz.com)

- Carbapenems
- Aminoglycosides
- Monobactams
- Polymyxins (eg, polymyxin B, colistin)
- Fluoroquinolones (eg, ciprofloxacin, levofloxacin)
- Third- and fourth-generation cephalosporins (eg, ceftazidime, cefepime)
- Extended-spectrum penicillins (eg, piperacillin, ticarcillin)

“CAMPFIRE”





## Day of appearance of rash in febrile patient

- Varicella - day 1**
- Scarlet fever - day 2**
- Pox (small) - day 3**
- Measles - day 4**
- Typhus - day 5**
- Dengue - day 6**
- Typhoid - day 7**

“Very Sick Person Must Take Double Tablets”



## Rickettsia Vs Typhus Rash

[www.medinaz.com](http://www.medinaz.com)

### Rickettsia on the wRist



(Rash starts on hand and feet)

### Typhus on the Trunk

(Rash starts centrally and spreads out, sparing palms and soles)





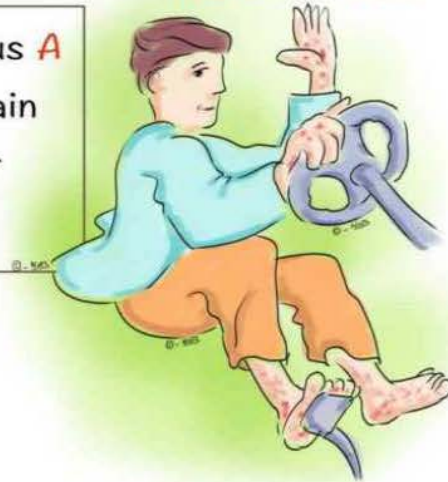


## Palm & Sole Rash

www.medinaz.com

“We drive **CARS** using  
our **Palms** and **Soles**”

Coxsackievirus **A**  
Rocky mountain  
spotted fever  
Syphilis



## Therapeutic use of Interferons

Interferon **Alpha** → **Viruses** HBV, HCV, HHV-8, HTLV-2

Interferon **Beta** → **m**ultiple Sclerosis

Interferon **Gamma** → **G**ranulomatous (Chronic) disease



## Allergic Rhinitis

## Acute Sinusitis

Frontal sinus  
(clear contents)

Ethmoid sinus  
(clear contents)

Middle meatus  
(clear contents)

Maxillary sinus  
(clear contents)

Nasal obstruction

Clear watery  
discharge

Frontal sinus  
(Inflamed and purulent)

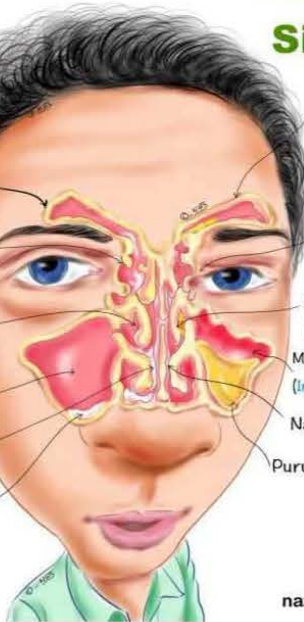
Ethmoid sinus  
(Inflamed and purulent)

Middle meatus  
(Ostial Inflammation)

Maxillary sinus  
(Inflamed and purulent)

Nasal obstruction

Purulent discharge



naz\_artonomy

## Streptococcus pneumoniae

www.medinaz.com

Most common cause of

**M**eningitis

**O**titis media (in children)

**P**neumonia

**S**inusitis

Mnemonic

**MOPS** can spread  
**pneumonia**



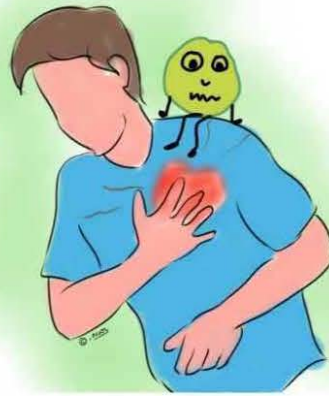


## Staphylococcus aureus causes

www.medinaz.com

**S**kin infections  
**O**steomyelitis  
**F**ood poisoning  
**T**oxic shock syndrome  
**P**neumonia  
**A**cute endocarditis  
**I**nfective arthritis  
**N**ecrotizing fasciitis  
**S**epsis

**“SOFT PAINS”**



## Syphilis vs H. ducreyi

www.medinaz.com

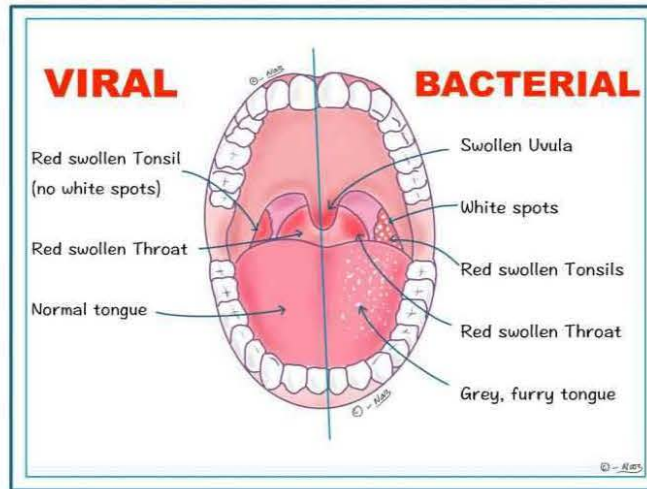
In **du-crey-i**, you do **cry**  
(Because the ulcer is **painful**)

**Syphilitic** ulcer is  
**Painless**





# THROAT INFECTION



## Vancomycin

www.medinaz.com

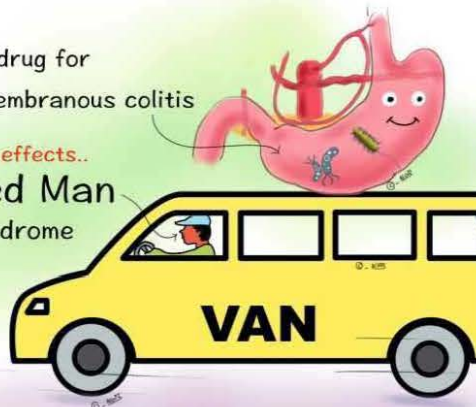
2nd line drug for  
Pseudomembranous colitis

side effects..

Red Man  
Syndrome



(DOC for)  
MRSA



\* recent guideline says 1st line



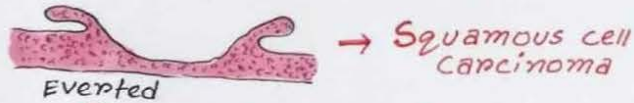
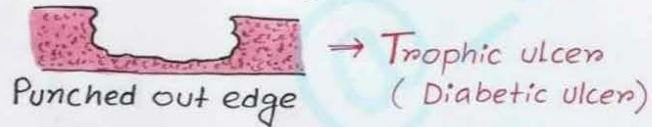
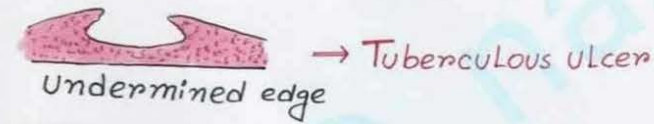
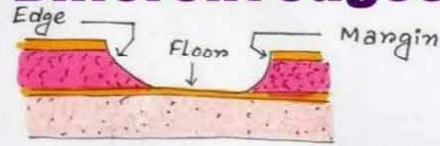
naz\_artonomy



# **Integumentary system**



## Different edges of Ulcer



## Cafe' au lait pigmentation (Meaning "Coffee in Milk")

**NEUROFIBRO-  
MATOSIS**

**S**MOOTH

Like the  
"Coast of  
California"



**ALBRIGHT** Syndrome  
(Polyostotic Fibrous  
Dysplasia)

**I**RREGULAR

Like "Coast of **M**aine"





## Café-Au-Lait Pigmentation

Commonly seen...

**Hypothyroidism**

**Neurofibromatosis  
(type 1)**

**Polyostotic fibrous dysplasia**

**Peut-Jegher's syndrome**

**“He Never Played  
(with) Pigments”**



## Erythema nodosum causes

[www.medinaz.com](http://www.medinaz.com)

**NO** cause (60% idiopathic)

**D**rugs: sulfa, iodide

**O**ral contraceptives

**S**arcoidosis

**U**lcerative colitis/Crohn disease

**M**icrobiology (TB, leprosy,  
histoplasmosis, chronic infection)



**“NODOSUM”**





## SIX (6) "P's" of LICHEN PLANUS



- P**urple
- P**olygonal
- P**ruritic
- P**lanar
- P**apules
- P**laques

## TYPES OF LICHEN PLANUS



- R**eticular
- E**rythematous
- P**apular & **P**laque type
- U**lcerative
- B**ullous
- lic** = lichen planus





## Diagnostic criteria for Neurofibromatosis

**Relative (1st degree)**

**O**sseous fibromas

**N**eurofibromas

**A**xillary freckling

**L**isch nodules in eye

**D**ime size cafe au lait spots

**O**ptic gliomas

**"RONALDO"**



## SLE

**S**erositis

**O**ral ulcer

**A**rthritis

**P**hoto-

sensitivity





# SLE

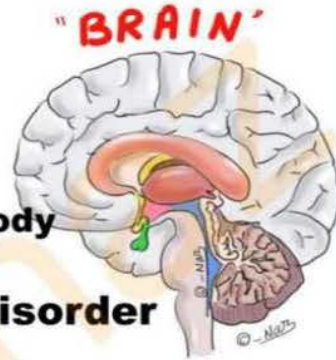
**B**lood disorders

**R**enal disease

**A**ntinuclear antibody

**I**mmunologic disorder

**N**eurologic disorder



# SLE

**M**alar rash

**D**iscoid rash





## Drugs causing SLE



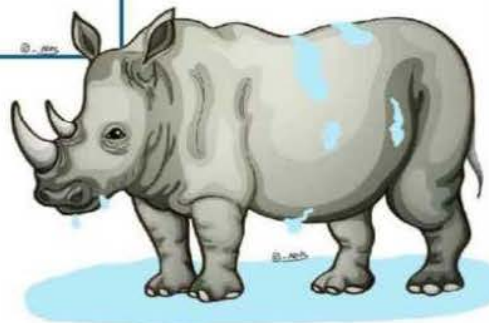
**S** = Sulfonamide  
**H** = Hydralazine  
**I** = INH  
**P** = Phenytoin  
**P** = Procainamide

## SLE criteria

[www.medinaz.com](http://www.medinaz.com)

Discoid rash  
ANA (+)  
Malar rash  
Photosensitivity  
Arthritis  
Serositis (pleural, pericardial)  
Renal involvement  
Hematologic abnormality  
Immunologic abnormality  
Neurologic abnormality (seizures, psychosis)  
Oral / nasal ulcer, Observed

“DAMP AS RHINO”





# **Biliary System**



# Charcot's Triad

www.medinaz.com

Colour change (jaundice)

Colic (biliary pain) / RUQ pain

Chills & fever

## 3C's



# Elevated bilirubin common causes

www.medinaz.com

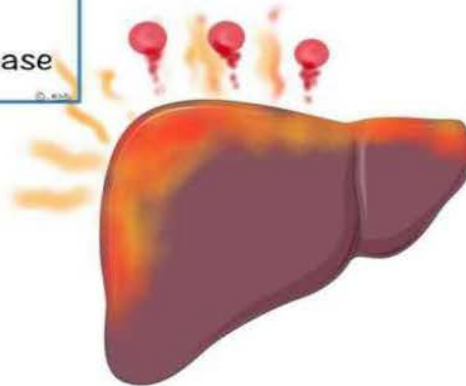
Hemolysis

Obstruction

Tumor

Liver disease

## "HOT Liver"





## Chronic liver failure signs

(found on the arms)

[www.medinaz.com](http://www.medinaz.com)

- Clubbing
- Leukonychia
- Asterixis
- Palmar erythema
- Scratch marks

“CLAPS”





# **Musculoskeletal system**



MEDINAZ

## GENU VALGUM

"Gum" makes your knees stick together



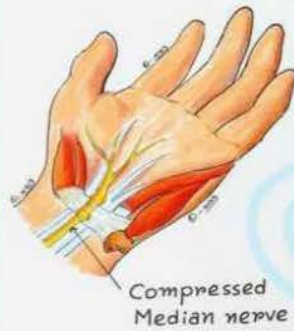
## GENU VARUM

"Rum" makes your knees spread apart



## Carpal tunnel syndrome

(causes)



- M**yoedema
- E**dema Premenstrually
- D**iabetes
- I**diopathic
- A**cnomegaly
- N**eoplasm
- T**rauma
- R**heumatoid arthritis
- A**myloidosis
- P**regnancy





## Congenital myopathy features

www.medinaz.com

- Dominantly inherited
- Reflexes decreased
- Enzymes normal
- Apathetic floppy baby
- Milestones delayed



“DREAM”



## Duchenne Muscular Dystrophy

www.medinaz.com

Age: 3-6 years

Shoulders and arms are held back awkwardly when walking

Sway back

Weak butt muscles

Pseudohypertrophy of calf muscles

Tight heel cord

Belly sticks out due to weak belly muscles

Poor balance falls often

walking on toes



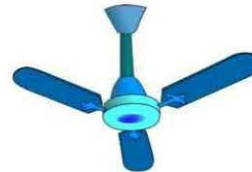


# Ectopia Lentis

www.medinaz.com

## mar**FAN** syndrome

**FAN** is up  
Superior dislocation



## homocystin**URIA**

**URINE** goes down  
Inferior dislocation



Instagram: naz\_artonomy

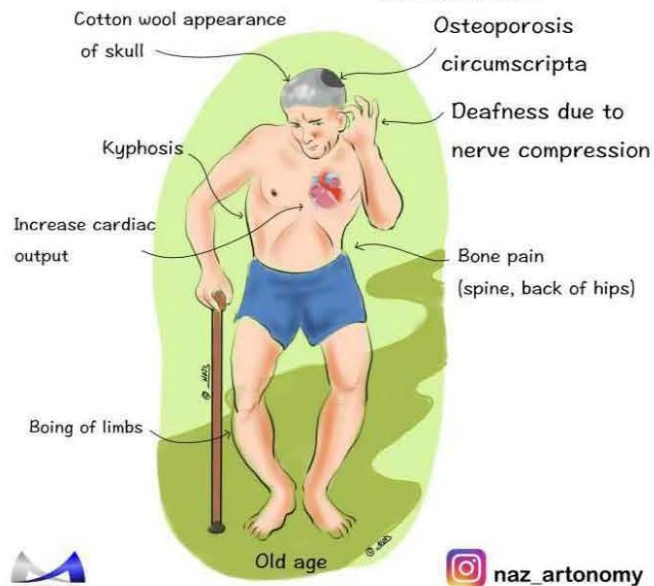
## weill-**MARCH**esani syndrome

we will **MARCH** forward  
Anterior dislocation



# Paget's disease

www.medinaz.com



Instagram: naz\_artonomy



## Osteogenesis Imperfecta

www.medinaz.com



## Osteogenesis Imperfecta

www.medinaz.com

**B**ones = multiple fractures  
**I** (eye) = blue sclerae  
**T**eeth = dental imperfections  
**E**ar = hearing loss

“BITE”

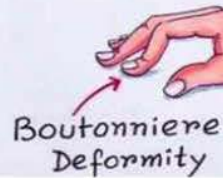




# Rheumatoid Arthritis



@naz\_aratomy



OLD CRAB



Multiple Myeloma

common findings

- OLD Age
- C = Calcium ELevated
- R = Renal Failure
- A = Anemia
- B = Bone Lytic Lesions



# **Nervous System**



# Horner syndrome

www.medinaz.com

Affected side

Anhidrosis

Ptosis

Miosis



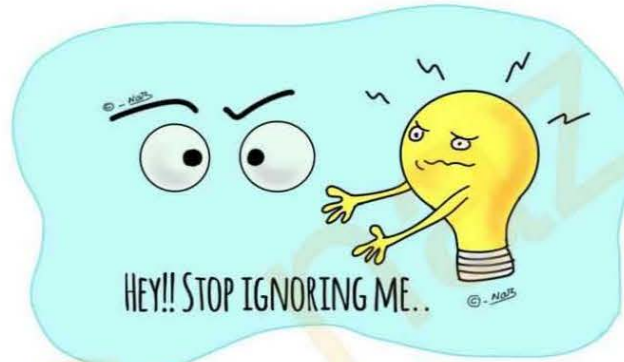
Horny PAMELA

# Horner's Syndrome

- Ptosis
- Anhidrosis
- Miosis
- Enophthalmos
- Loss of Ciliary-Spinal reflex
- Anisocoria



## Argyll Robertson Pupil



### Argyll Robertson Pupil (ARP)

→ Accommodation Reflex Present (ARP)  
**ARP**  
← Pupillary Reflex Absent (PRA)

## AUTISM

- A**ffect isolation
- U**nrelated to others
- T**widdle
- I**/You confusion in speech
- S**elf-mutilation
- T**emper tantrums
- I**nconsistent development
- C**oncrete thinking
- P**erceptual difficulties
- E**cholalia
- O**derly
- P**hysical motor disorder
- L**ack language skills
- E**xcessive activity

“AUTISTIC PEOPLE”





# Balint's Syndrome

www.medinaz.com

- Simultagnosia
- Optic ataxia
- Ocular apraxia
- Tunnel vision



“ShOOT”

# Bell's Palsy Symptoms

“BELL'S Palsy”

- Blink reflex abnormal
- Earache
- Lacrimation
- Loss of taste
- Sudden onset
- Palsy of 7th nerve muscles



All symptoms are **Unilateral**

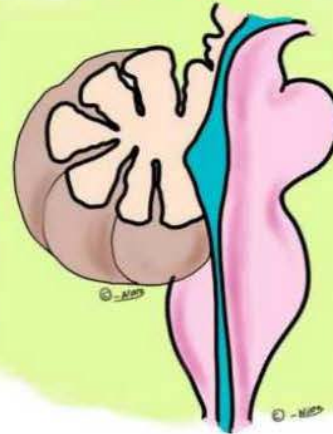




## Signs of Cerebellar Damage

- V**ertigo
- A**taxia
- N**ystagmus
- I**ntentional tremor
- S**lurred speech
- H**ypotonia
- E**xaggerated broad based gait
- D**ysdiadochokinesia

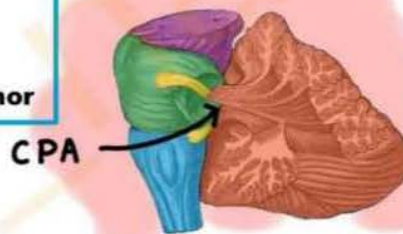
**“VANISHED”**



## Cerebellopontine angle Tumors

- G**lomus tumor
- A**coustic neuroma
- A**rachnoid cyst
- A**neurysm
- M**eningioma
- M**etastasis
- E**pidermoid tumor

**“GAME”**





## Chorea Common Causes

[www.medinaz.com](http://www.medinaz.com)

Sydenhams  
Vascular  
Increased RBCs (polycythemia)  
Toxins: CO, Mg, Hg  
Uremia  
SLE  
Senile chorea  
Drugs  
APLA syndrome  
Neurodegenerative conditions : HD  
Neuroacanthocytosis, DRPLA  
Conception related: Pregnancy, OCPs  
Endocrine: Hyperthyroidism, Hypo & Hyperglycemia

“St. VITUS’S DANCE”





## Decrease level of Consciousness (Metabolic causes) [www.medinaz.com](http://www.medinaz.com)

- Major end organs (liver, kidney)
- Endocrine / Electrolytes
- Toxins
- Acid-Base disorders
- Oxygenation
- Lung (PE, pneumonia)
- Infection / Inflammation
- Calcium

“METABOLIC”



## Meniere's Disease

- Fluctuating hearing loss
- Aural fullness
- Tinnitus
- Episodic vertigo

“FATE”





# Guillain-Barré syndrome

[www.medinaz.com](http://www.medinaz.com)

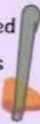
Antibodies directed against nerve cells



Acute inflammatory demyelinating polyneuropathy

Severe respiratory muscle weakness  
Need ventilatory support

Absence or depressed deep tendon reflexes

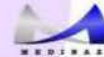


Associated with *Campylobacter jejuni*



Symmetrical muscle weakness usually begins in legs and ascends

Paresthesia of hands & feet





## Parkinson's Disease

www.medinaz.com

**B**e Bending / forward tilt

**S** Shuffling gait

**M** Mask like face

**A** Akinesia

**R** Rigidity

**T** Tremor



## Normal Pressure Hydrocephalus





# Seizure Causes

www.medinaz.com

## “VITAMINS”

- V**ascular - Stroke, bleeding, aneurysm
- I**nfectious - Meningitis, encephalitis, brain abscess
- T**rauma
- A**utoimmune - CNS vasculitis
- M**etabolic - Hypoxia, hypoglycemia, hypocalcemia, hypo & hypernatremia
- I**diopathic
- N**eoplastic
- p**Sychiatric

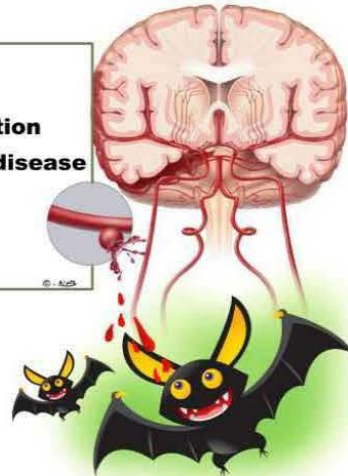


# Subarachnoid hemorrhage causes

www.medinaz.com

## “BATS”

- B**erry aneurysm
- A**rteriovenous malformation
- A**dult polycystic kidney disease
- T**rauma
- S**troke



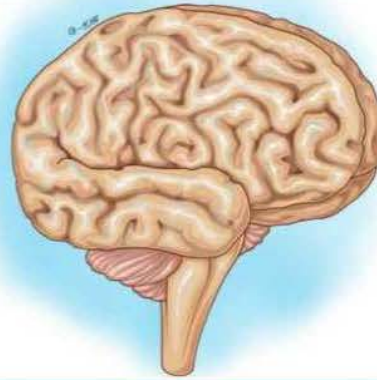


## Syncope causes (CNS)

www.medinaz.com

- Hypoxia/Hypoglycemia
- Epilepsy
- Anxiety
- Dysfunctional brain stem (basivertebral TIA)

“HEAD”



## Syncope causes (Vascular)

www.medinaz.com

- Vasovagal
- Ectopic (reminds one of hypovolemia)
- Situational
- Subclavian steal
- ENT (glossopharyngeal neuralgia)
- Low systemic vascular resistance (Addison's, diabetic vascular neuropathy)
- Sensitive carotid sinus

“VESSELS”





# Tuberous Sclerosis

www.medinaz.com

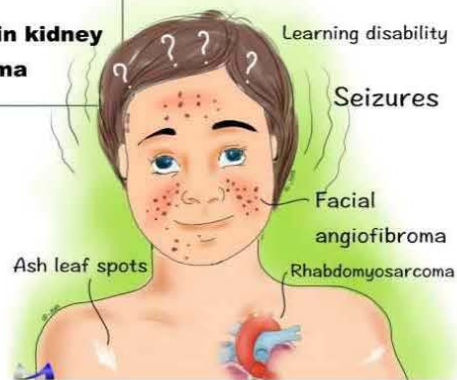


# Tuberous Sclerosis

www.medinaz.com

- A**sh leaf spots
- S**hagreen patches
- H**earth rhabdomyosarcoma
- L**ung hamartomas
- E**pilepsy
- A**ngiomyolipoma in kidney
- F**acial angiofibroma

“ASH LEAF”







# Psychiatry



# Alzheimer

- A**mnnesia – loss of memories
- A**nomia – unable to recall names of everyday objects
- A**praxia – unable to perform tasks of movement
- A**gnosia – inability to process sensory information
- A**phasia – disruption with ability to communicate

[www.medinaz.com](http://www.medinaz.com)

5 “A”



[naz\\_artonomy](https://www.instagram.com/naz_artonomy)





## Dementia common causes

www.medinaz.com

- Diabetes
- Ethanol
- Medication
- Environmental  
(e.g CO poisoning)
- Nutritional
- Trauma
- Infection
- Alzheimers

“DEMENTIA”

???



## Psychiatric Assessment

ALways SEND MAIL THROUGH POST OFFICE



- Appearance
- Speech
- Mood/Memory
- Thoughts
- Perception
- Orientation



## REM features

www.medinaz.com

Rapid pulse/respiratory rate  
Erection  
Mental activity increase  
Muscle paralysis



## Schizophrenia subtypes

www.medinaz.com

“Pure CURD”

Paranoid  
Catatonic  
Undifferentiated  
Residual  
Disorganised





## Sleep stages features

**DE**lta waves during **DE**epest sleep  
(Stage 3 & 4, slow wave)

**dREaM** during **REM** sleep

[www.medinaz.com](http://www.medinaz.com)



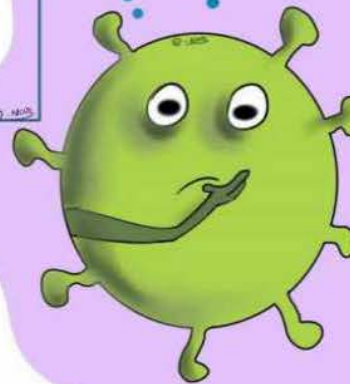


## AIDS Dementia complex features

www.medinaz.com

- A**trophy of cortex
- I**nfection/Inflammation
- D**emyelination
- S**ix months death

“AIDS”



## Narcolepsy Symptoms

www.medinaz.com

- H**allucination
- C**ataplexy
- A**ttacks of sleep
- P**aralysis on walking

“High CAP”





# **Renal system**

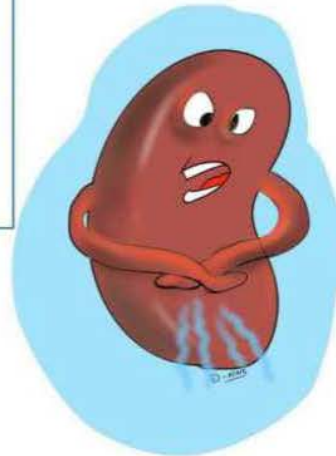


## Acute Renal Failure detection

www.medinaz.com

**A**cute presentation  
over hours and days  
**C**reatinine rises  
**U**rea rises ( oliguria <  
400ml/24hrs)

“**ACU**te”

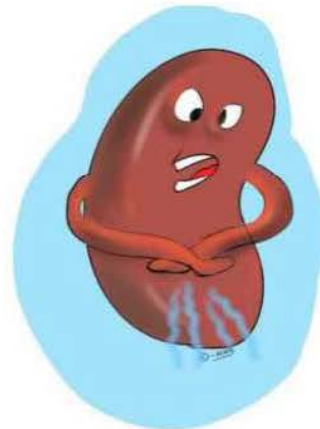


## Chronic Renal Failure presentation

www.medinaz.com

**N**ails are brown  
**A**rises blood pressure  
**S**kin is yellow  
**E**xcoriations (scratch mark)  
**R**etinopathy  
**P**allor  
**P**urport and bruises  
**P**ericarditis & cardiomegaly  
**P**leural effusions  
**P**ulmonary edema  
**P**eripheral edema  
**P**roximal myopathy  
**P**eripheral neuropathy

“**NASER** & 8 **P**'s”







## Dialysis Indications

- H**yperkalemia
- A**cidosis
- V**olume overload
- E**levated BUN
- P**ericarditis
- E**ncephalopathy
- E**dema

**“HAVE PEE”**

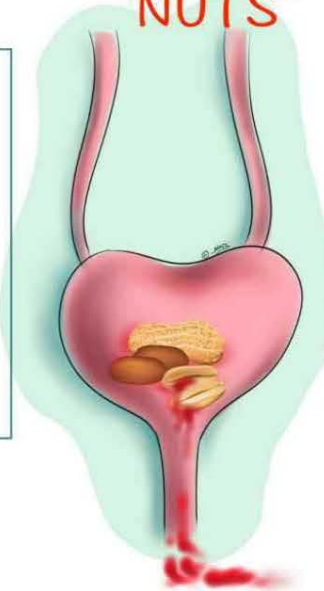


## Hematuria Urethral causes

[www.medinaz.com](http://www.medinaz.com)

**“NUTS”**

- N**eoplasm
- U**rethritis
- T**umor
- S**tone



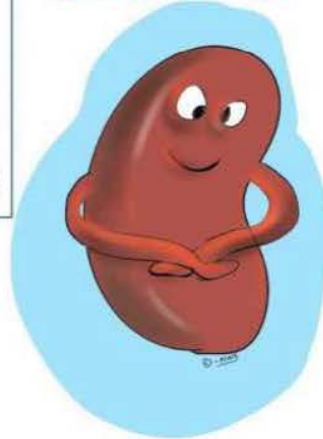


## Kidney enlargement causes

www.medinaz.com

- Scleroderma
- HIV nephropathy
- Amyloidosis
- Polycystic kidney disease
- Endocrinopathy (Diabetes)

“SHAPE”



## Nephritic Syndrome

(Glomerular diseases commonly presenting as nephritic syndrome)

- Post-streptococcal
- Alport's
- RPGN
- IgA nephropathy
- SLE

“PARIS”



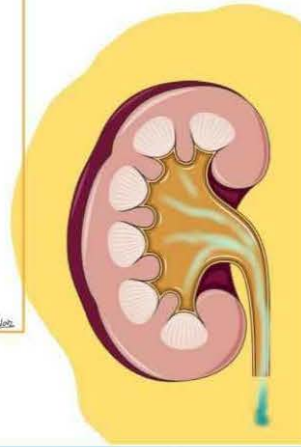


## Nephrotic syndrome features

www.medinaz.com

- Na<sup>+</sup> decreased (hyponatremia)
- Albumin decrease (hypoalbuminemia)
- Proteinuria > 3.5mg/day
- Hyperlipidemia
- Renal vein thrombosis
- Orbital edema
- Thromboembolism
- Infection (due to loss of immunoglobulins in urine)
- Coagulability (due to loss of antithrombin III in urine)

“NAPHTROTIC”



## Dialysis Complications

“CHAIR”



- Cardiovascular disease
- Hypertension
- Anaemia
- Infections
- Renal bone disease

© - NPS



# **Reproductive System**



## Severe Pre-eclampsia Signs



**H**emolysis  
**E**levated **L**iver function tests  
**L**ow  
**P**latelet Count

## Placenta crossing substances



**W**ANT **M**y  
**H**ot **D**og

**W** = **W**astes  
**A** = **A**ntibodies  
**N** = **N**utrients  
**T** = **T**eratogens  
**M**y = **M**icroorganism  
**H**ot = **H**ormones, HIV  
**D**og = **D**rugs



## Complications of Undescended Testis ( Cryptorchidism )

- Tumor**
- Epididymo orchitis**
- Seminoma**
- Torsion, Trauma**
- Inguinal Hernia**
- Sterility**

“**TESTIS**”

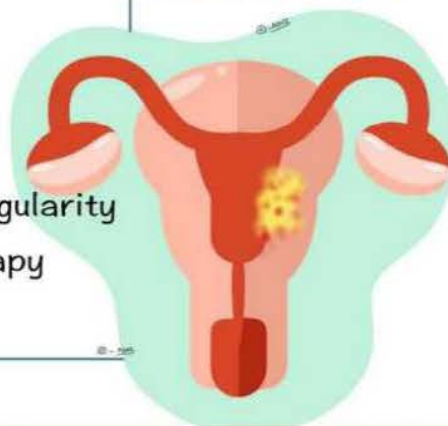


## Endometrial CA risk factors

[www.medinaz.com](http://www.medinaz.com)

“**ENDOMET**”

- Elderly**
- Nulliparity**
- Diabetes**
- Obesity**
- Menstrual irregularity**
- Estrogen therapy**
- hyperTension**





## Intra Uterine Device side effects

[www.medinaz.com](http://www.medinaz.com)

### “PAINS”

- Period that is late
- Abdominal cramps
- Increase in body temperature
- Noticeable vaginal discharge
- Spotting



## Oral Birth control pill complications

[www.medinaz.com](http://www.medinaz.com)

### “ACHES”

- Abdominal pain
- Chest pain
- Headache
- Eye problems
- Severe leg pain (DVT)





## Obstetrical complications of DIC

[www.medinaz.com](http://www.medinaz.com)

Toxaemia of pregnancy  
Emboli (amniotic)  
Abruptio placenta  
Retain fetus products

“TEAR”







# **Respiratory System**



# Epiglottitis

www.medinaz.com

## “AIR RAID”

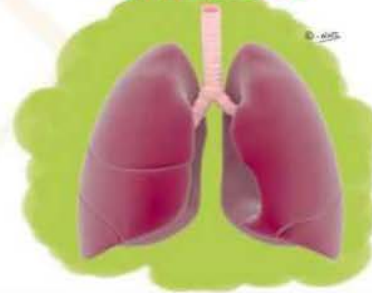
- Airway inflammation (Obstruction)
- Increased pulse
- Restlessness
- Retractions
- Anxiety increased
- Inspiratory stridor
- Drooling



# ARDS Causes

- Aspiration (gastric), Acute pancreatitis, Amniotic fluid embolus
- Raised ICP, Respiratory track infection-pneumonia
- DKA, DIC, Drugs
- Sepsis, Shock, Smoke inhalation, Severe burns

## “ARDS”





## Pneumonia Complications



Don't

- S**epticaemia
- L**ung abscess
- A**RDS
- P**ara-pneumonic effusion
- H**ypotension
- E**mpyema
- R**espiratory/Renal failure

## Acute management of Asthma Attack



- O**xygen
- S**albutamol
- H**ydrocortisone
- I**pratropium
- T**heophylline



## Kartagener syndrome

www.medinaz.com

Immotile cilia due to a dynein arm defect

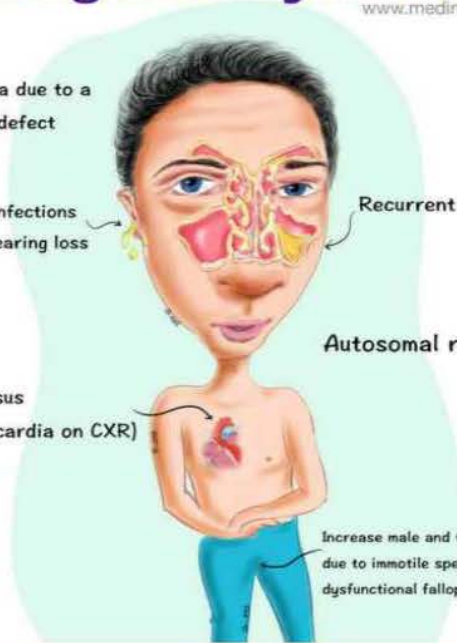
Chronic ear infections  
Conductive hearing loss

Recurrent sinusitis

Autosomal recessive

Situs inversus  
(eg, dextrocardia on CXR)

Increase male and female fertility due to immotile sperm and dysfunctional fallopian tube cilia



## Lung Cancer Complications

**S**uperior vena cava syndrome

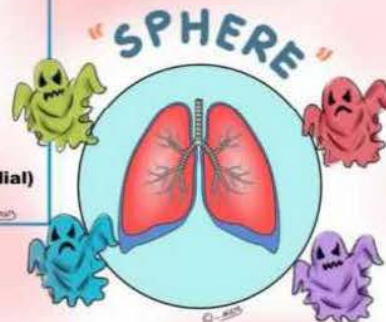
**P**ancoast tumor

**H**orner syndrome

**E**ndocrine (paraneoplastic)

**R**ecurrent laryngeal nerve compression (hoarseness)

**E**ffusions (pleural or pericardial)





## Rapid sequence intubation Medications

www.medinaz.com

- Vecuronium 0.1 mg/kg
- Cisatracurium 0.2 mg/kg
- Etomidate 0.3 mg/kg
- Rocuronium 0.6 mg/kg-1.2 mg/kg
- Succinylcholine 1 mg/kg

“Very Calmly Engage the Respiratory System”



## Rapid sequence intubation

www.medinaz.com

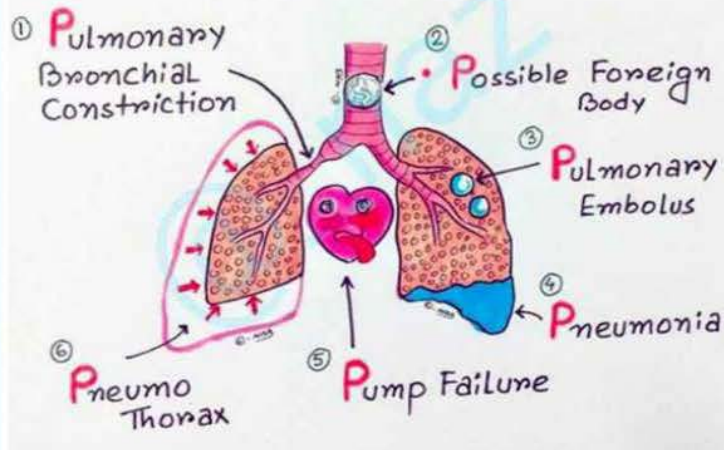
- Suction
- Oxygen
- Airway Equipment
- Positioning
- Monitoring & Meds
- EtCO<sub>2</sub> & other Equipment

“SOAP ME”





## 6-Ps of DYSPNEA



### **Tension pneumothorax: signs and symptoms**

[www.medinaz.com](http://www.medinaz.com)

**P**leuritic pain  
**T**racheal deviation  
**H**yperresonance  
**O**nset sudden  
**R**educed breath sounds (and dyspnea)  
**A**bsent fremitus  
**X**-ray shows collapse

**“P THORAX”**





# **Drug Of Choice**



# **INDEX**

- 1. Autonomic Nervous System**
- 2. Cardiovascular system**
- 3. Renal system**
- 4. Central nervous system**
- 5. Antimicrobial drugs**
- 6. Anticancer drugs**
- 7. Endocrinology**
- 8. Autacoids and Immunomodulators**
- 9. Respiratory system**
- 10. Gastrointestinal system**
- 11. Blood**
- 12. Anaesthesia**





## Autonomic nervous system

- ADHD – **Methylphenidate**
- ADHD with Tourette syndrome – **Atomoxetine**
- Alzheimer's disease – Mild to moderate – **Donepezil**  
Severe – **Memantine**
- Aortic dissection HOCM – **Beta blockers**
- Migraine prophylaxis - **Beta blockers**
- Atropine or Belladonna poisoning – **Physostigmine**
- BPH – **Tamsulosin**
- BPH with hypertension – **Terazosin**
- Brittle asthma – **Epinephrine**
- Bronchial challenge test – **Methacholine**
- Cheese reaction – **Phentolamine**
- Clonidine withdrawal hypertension – **Phentolamine**
- Intraoperative hypertension in pheochromocytoma - **Phentolamine**
- COPD – **Tiotropium**
- Cycloplegia – **Adult** – **Tropicamide**, **Children** – **atropine**
- CHF with oliguria – **Dopamine**
- Hypotension caused by hypothermia – **Dopamine**
- Glaucoma – Closed angle – **Acetazolamide**  
Open angle – **Latanoprost**  
Normal tension - **Latanoprost**
- Huntington's disease – **Tetrabenazine**
- Hypotension in pregnancy – **Ephedrine**
- Hypotension with anaesthetic agents – **Ephedrine**
- Motion sickness – **Scopolamine**
- Myasthenia gravis – Diagnosis – **Edrophonium**  
Treatment – **Pyridostigmine**
- Myasthenia crisis – **IVIg**



## Autonomic nervous system

- Narcoanalysis – Thiopental sodium
- Narcolepsy – Modafinil
- Shift worker disease – Modafinil
- Sleepiness in OSA – Modafinil
- NDRM reversal – Neostigmine
- Nicotine toxicity – Atropine
- Orthostatic hypotension – Fludrocortisone
- Organophosphate poisoning – Atropine
- Scorpion bite – Prazosin
- Anaphylactic shock – Epinephrine
- Septic shock – Norepinephrine
- Cardiogenic – Dopamine
- Stress ECHO – Dobutamine
- Stress incontinence – Duloxetine
- Urge incontinence – Darifenacin
- Xerostomia – Cevimeline



## Cardiovascular system

- Angina acute attack – Sublingual nitroglycerine
- Long term prophylaxis in stable angina – Beta blockers
- Aortic dissection – Labetalol
- Arterial fibrillation and flutter – Acute attack – IV Ibutilide  
Rhythm control – Amiodarone  
Rate control – Beta blockers
- Anticoagulation in Atrial fibrillation – Dabigartan, Apixaban
- Acute CHF first drug of choice – Furosemide
- Acute CHF Inotrope of choice – Dobutamine
- Chronic CHF – ACE inhibitors / ARBs
- Hypertriglyceridemia – Fibrates
- Chylomicronemia syndrome – Fibrates
- Type III hyperlipoproteinemia – Fibrates
- Hypercholesterolemia – Statins
- Hypertension first line drugs – ACE inhibitors, ARB, CCB
- Resistant hypertension – Aldosterone antagonists
- Hypertension in elderly – CCB
- Hypertension in young patients - ACE inhibitors / ARBs
- PSVT – IV Adenosine
- PSVT prophylaxis – Verapamil or beta blockers
- Anaphylactic shock – Epinephrine
- Cardiogenic shock – Norepinephrine or Dopamine
- Septic shock – Norepinephrine
- Vasodialatory shock – Norepinephrine
- SVT treatment & prophylaxis – Verapamil
- SVT associated CHF – Digoxin
- Torsades de pontes – Magnesium sulphate
- Ventricular extrasystole (symptomatic) – beta blockers
- Ventricular fibrillation – Amiodarone
- Ventricular tachycardia in MI and digitalis toxicity – Lidocaine
- WPW syndrome – IV procainamide



## Renal system

Cystinuria – Cysteine binding agent (Tiopronin) + Urine alkalanizer (Potassium citrate as sodium salt)

Pulmonary edema with CHF – Furosemide

Edema caused by liver cirrhosis – Spironolactone

Cerebral edema – Mannitol

Lupus nephritis – Cyclophosphamide + Glucocorticoids

Rapidly progressive glomerulonephritis - Cyclophosphamide + Glucocorticoids

Nephrotic syndrome – Steroids

Steroid resistant Nephrotic syndrome – Cyclosporine

Steroid dependent Nephrotic syndrome – Cyclophosphamide

Nephrotic syndrome with frequent relapse – Cyclophosphamide

### Urine incontinence

Overflow incontinence – Cholinergics (Bethanechol)

Urge incontinence – Anticholinergics (Darifenacin)

Stress incontinence – SNRI (Duloxetine)

Urinary tract infection cystitis – Cotrimoxazole

Pyelonephritis – Ciprofloxacin



## Central Nervous System

ADHD – Methyl phenidate  
Amyotrophic lateral sclerosis – Riluzole  
Alzheimer's disease – Donepezil  
Bell's palsy – Prednisolone  
Bipolar disorder – Lithium  
Depression – SSRI

### Epilepsy

Generalized tonic clonic – Valproate  
Absence seizure – Valproate  
Myoclonic seizure – Valproate  
Partial seizure – Carbamazepine  
Lennox Gastaut Syndrome – Valproate  
Infantile spasm – ACTH  
Infantile spasm with TS – Vigabatrin  
Rolandic epilepsy (benign epilepsy in childhood)  
– Carbamazepine  
Seizure in pregnancy – MgSO<sub>4</sub>  
Seizure in neonates – Phenobarbital  
Dravet syndrome (severe myoclonic epilepsy of  
childhood) – Valproate  
West syndrome (Infantile spasm + MR) – ACTH  
Status epilepticus – Lorazepam



## Central Nervous System

- Essential tremor – **Propranolol**
- Guillain barre syndrome – **IVIg**
- Cluster headache – **Triptans**
- Raised CSF pressure – **Acetazolamide**
- Paroxysmal hemicranias – **Indomethacin**
- Primary cough headache – **Indomethacin**
- Hypnic headache – **Lithium**
- Huntington's chorea – **Tetrabenazine**
- Insomnia (sleep induction – **Zaleplon**,  
Sleep maintenance – **Eszopiclone**)
- Jet lag – **Short acting Z compounds (Zaleplon)**
- Mania acute attack – **Atypical antipsychotics**
- Prophylaxis of mania – **Lithium**
- Migraine acute attack – **Triptans**
- Migraine prophylaxis – **Propranolol**
- Multiple sclerosis acute attack – **IV methyl prednisolone**
- RRMS – **INF beta**
- SPMS – **INF beta**
- PRMS – **Mitoxantrone**
- Narcolepsy – **Modafinil**



## Central Nervous System

Glossopharyngeal neuralgia – Carbamazepine

Trigeminal neuralgia – Carbamazepine

Parkinson's disease – Levodopa

Young onset Parkinson's disease – Selegeline

Motor fluctuation of levodopa – pramipexole

On-off phenomenon associated with levodopa  
– Entecapone

Neuroprotection in Parkinson's disease – MAO  
inhibitors (Rasageline & Selegeline)

Peripheral neuropathy – TCA/ SNRI/ GABA releasing drugs

Rapid cyclers – valproate

Restless leg syndrome – Dopamine agonists (pramipexole  
& Ropinirole)

Schizophrenia – Atypical antipsychotics (Aripiprazole)

Resistant Schizophrenia – Clozapine

Suicidal tendency – Clozapine

Tourette syndrome – Clonidine or Guanfacine



# Antimicrobials

- Actinomycosis – Penicillin G
- Anthrax - Penicillin G
- Gas gangrene - Penicillin G
- Leptospirosis - Penicillin G
- Rat bite fever - Penicillin G
- Streptococcal infection - Penicillin G
- Syphilis - Penicillin G
- Yaws - Penicillin G
- Meningococcal meningitis - Penicillin G
  
- Extraintestinal / Intestinal symptomatic amoeba  
– Metronidazole
- Intestinal symptomatic amebiasis – Paromomycin
- Aspergillosis – Voriconazole
- Scedosporium – Voriconazole
- Trichosporon – Voriconazole
- Bacterial vaginosis – Metronidazole
- Bacteroides – Metronidazole
- Tetanus – Metronidazole
- Trichomoniasis – Metronidazole
- Pseudomembranous enterocolitis – Vancomycin > Metronidazole
  
- Borellia – Doxycycline
- Brucella – Doxycycline + Rifampin
- Bartonella – Doxycycline





## Antimicrobials

- Chlamydia – Doxycycline
- Cholera – Doxycycline
- Granuloma inguinale – Doxycycline
- Lymphogranuloma venerum – Doxycycline
- Mycoplasma hominis – Doxycycline
- Inflammatory acne – Doxycycline
- Rickettsia – Doxycycline
- Pleurodesis – Doxycycline
- Pericardiodesis – Doxycycline
  
- Babesiosis – Atovaquone + Azithromycin
- Chancroid - Azithromycin
- Legionella - Azithromycin
- Mycoplasma pneumoniae - Azithromycin
- Chlamydia and Cholera in pregnancy - Azithromycin
- Campylobacter - Azithromycin
  
- Burn infection – Silver sulfadiazine
- Diphtheria – Erythromycin
- Pertusis – Erythromycin



# Antimicrobials

- Candida infection – **Fluconazole**
- Coccidioidal meningitis – **Fluconazole**
- Chaga's disease (American trypanosomiasis) – **Benznidazole**
- Cryptococcus – **Amphotericin B**
- Kala Azar - **Amphotericin B**
- Mucormycosis - **Amphotericin B**
- Primary amebic meningoencephalitis - **Amphotericin B**
- Systemic fungal infection - **Amphotericin B**
- Cryptosporidium – **Nitazoxanide**
- Dermatophytes – **Terbinafine** (except T.capitis – **Griseofulvin**)
- Diarrhea empirical therapy – **Fluoroquinolones**
  
- E.coli – **Ceftriaxone**
- Gonococcus - **Ceftriaxone**
- HACEK organisms - **Ceftriaxone**
- H. influenza meningitis - **Ceftriaxone**
- Klebsiella - **Ceftriaxone**
- Providencia - **Ceftriaxone**
- Typhoid - **Ceftriaxone**
- Salmonella - **Ceftriaxone**
- Acute bacterial meningitis empirical therapy - **Ceftriaxone**
- Meningitis with basilar skull fracture - **Ceftriaxone**
- Brain abscess - **Ceftriaxone**
- Subdural empyema - **Ceftriaxone**



## Antimicrobials

- Endemic mycosis – Itraconazole
- Sporotrichosis – Itraconazole
- Enterococcus faecalis – Ampicillin + Aminoglycosides
- Giardia – Metronidazole
- Gonococcus – Ceftriaxone  
(Spectinomycin in resistance cases)
- Hepatitis B – Entecavir
- Hepatitis C – New oral drugs
- HSV & VZV infection – Acyclovir  
(foscarnet in resistance cases)
- CMV – Ganciclovir
- H. influenza prophylaxis – Rifampicin
- H. pylori – Amoxicillin + Clarithromycin + PPI
- Influenza A – Oseltamivir
- Cutaneous leishmania – Sodium Stibogluconate



# Antimicrobials

## Malaria

Treatment & prophylaxis – **Chloroquine** (except **P. falciparum**)

**P. falciparum** – **Artesunate combination therapy (ACT)**

Chloroquine resistant malaria treatment - **Artesunate combination therapy (ACT)**

Chloroquine resistant malaria prophylaxis – **Mefloquine**

Severe falciparum malaria – **Artesunate**

Melioidosis – **Ceftazidime**

Moraxella – **Fluoroquinolone**

Mycobacterium avium complex – **Clarithromycin + Ethambutol**

Mycobacterium tuberculosis – First line drugs – **Isoniazid + Rifampicin + Pyrazinamide + Ethambutol**

Nocardia – **Cotrimoxazole**

Pneumocystis jirovecii - **Cotrimoxazole**

Plague – **Gentamycin**

Pneumococcal meningitis – **Vancomycin**

Rhodococcus – **Vancomycin**

Tularemia – **Gentamycin**

Pseudomonas – **Ceftazidime**

Pseudomonas resistant strains – **Ceftazidime + Aminoglycosides**

Multidrug resistant Pseudomonas – **Colistin**



## Antimicrobials

- RSV treatment – Ribavirin
- RSV prophylaxis – Pavilizumab
- Sleeping sickness – (Early) East African – Suramin,  
(late) East African – Melarsoprol  
(Early) West African – Pentamidine,  
(late) West African – Eflornithine
- Scabies – Permethrin cream (5%)
- Non penicillinase producing staphylococcus – Penicillin G
- MRSA – Vancomycin
- VRSA – Daptomycin
- Syphilis all stages (except CNS involvement) – Benzathine penicillin G
- Syphilis CNS involvement – Aqueous penicillin G
- Toxoplasma – Sulfadiazine + Pyrimethamine
- Toxoplasma in pregnancy – Spiramycin
- Whipple disease – Ceftriaxone or Carbapenam
- 
- Antifungal prophylaxis in induction chemotherapy of acute Leukemia – Posaconazole
- Asymptomatic bacteriuria – Nitrofurantoin or Amoxicillin
- Brain abscess – Ceftriaxone/cefotaxime + Metronidazole
- Subdural empyema - Ceftriaxone/cefotaxime + Metronidazole
- Cervicitis – Ceftriaxone + Azithromycin
- Urethritis - Ceftriaxone + Azithromycin
- Malignant otitis externa – Piperacillin + Tazobactam



## Antimicrobials

- Acute otitis media – Amoxicillin + Clavulanate
- Acute mastoiditis – Ceftriaxone/cefotaxime
- Chronic mastoiditis - Piperacillin + Tazobactam
- Epiglottitis - Ceftriaxone/cefotaxime
- Neonatal meningitis – Ampicillin + Gentamycin
- Neonatal sepsis - Ampicillin + Gentamycin
- Bacterial keratitis – Moxifloxacin solution
- Fungal keratitis – Natamycin
- Acute osteomyelitis – Ceftriaxone
- Prostatitis – Doxycycline or Cotrimoxazole
- Prosthetic joint infection – Ceftriaxone + Vancomycin
- Infective endocarditis (Staphylococcal) – Vancomycin

M E D I N A Z



## 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



# Endocrinology

- Acromegaly – Octreotide
- Addison disease – Hydrocortisone
- Congenital adrenal hyperplasia in patient – Hydrocortisone
- Anovulation – Clomiphene citrate
- PCOS - Clomiphene citrate
- BPH – alpha 1a antagonists (Tamsulosin, Silodosin)
- Carcinoid syndrome – Somatostatin analogues
- GRFoma - Somatostatin analogues
- Glucagonoma - Somatostatin analogues
- Somatostatinoma - Somatostatin analogues
- VIPoma - Somatostatin analogues
- Diabetes Insipidus – Desmopressin
- Diabetes mellitus type I – Insulin
- Gestational diabetes – Insulin
- Diabetic ketoacidosis – Insulin
- Diabetes mellitus type II treatment – Metformin
- Hypercalcemia of malignancy – Bisphosphonates
- Hyperprolactinemia – Cabergoline
- Hyperthyroidism – Methimazole
- Hyperthyroidism in pregnancy –
  - Ist trimester – Propylthiouracil,
  - 2 nd & 3 rd trimester – Methimazole





# Endocrinology

- Hypothyroidism – **Levothyroxine sodium**
- Insulinoma – **Diazoxide**
- Oral contraception – **Monophasic pills**
- Oligospermia – **Clomiphene citrate**
- Osteoporosis – **Zolendroic acid**
- Paget's disease - **Zolendroic acid**
- Premature labor – **Dexamethasone**
- Fetal CAH – **Dexamethasone**
- Prolactinoma – **Dopamine agonists**
- Riedel struma – **Tamoxifen**
- Subacute thyroiditis – **Aspirin**
- SIADH – **Vaptans (Tolvaptan)**
- Thyroid storm initial DOC – **Propranolol**
- Thyroid storm overall DOC – **Propylthiouracil**
- Toxic multinodular goitre – **Radioiodine**
- Hyper functioning solitary nodule – **Radioiodine**



## Autacoids & Immunomodulators

- Acute mountain sickness – **Acetazolamide**
- Acetaminophen toxicity – **N-acetyl cysteine**
- Allergic rhinitis – **Steroids**
- Ankylosing spondylitis – **NSAIDs**
- Cold agglutinin diseases – **Rituximab**
- Familial Mediterranean Fever – **Colchicine**
- Genital warts male – **Podophyllin**
- Genital warts female – **Imiquimod**
- Acute gout – **Indomethacin**
- Chronic gout – **Allopurinol**
- Head lice – **Permethrin 1% cream**
- Hypersensitivity reaction – **Epinephrine**
- Pseudomotor cerebri – **Acetazolamide**
- Migraine prophylaxis – **Propranolol**
- Migraine treatment – **Sumatriptan**
- Morning sickness – **Doxylamine**
- Patent ductus arteriosus (PDA) closure – **Indomethacin**
- Maintain patency of Patent ductus arteriosus (PDA) – **Misoprostol**
- Niacin induced flushing – **Aspirin**
- Mild psoriasis – **Oral retinoids**
- Psoriatic arthritis – **Methotrexate**
- Erythrodermic psoriasis – **Methotrexate**
- Pustular psoriasis – **Acitretin**
- Pyrexia in children – **Acetaminophen**
- Rheumatoid arthritis – **Methotrexate**
- Raynaud phenomenon – **CCB (DHPs)**
- Tumor lysis syndrome – **Allopurinol**
- Urticaria – **2<sup>nd</sup> generation anti-histaminics**



## Respiratory system

- Allergic bronchopulmonary aspergillosis – Prednisolone
- Proliferative bronchiolitis – Prednisolone
- Cryptogenic organizing pneumonia – Prednisolone
- Eosinophilic pneumonia – Prednisolone
- Pulmonary vasculitis – Prednisolone
- Sarcoidosis – Prednisolone
- Bronchial asthma acute attack – Short acting  
beta 2 agonists
- Bronchial asthma prophylaxis - Long acting  
beta 2 agonists
- Exercise induced bronchial asthma – Inhalational  
corticosteroids
- Chylothorax – Octreotide via chest tube
- COPD – Anticholinergics (Tiotropium)
- Cough Non-specific – Codeine
- Cough due to bronchial cancer – Morphine
- Pleurodesis – Doxycycline
- Pericardiodesis – Doxycycline
- Pulmonary hypertension class II & III (Low risk) – Bosentan
- Pulmonary hypertension class IV (High risk) – Epoprostenol
- Diuretic of choice in Pulmonary edema – Loop diuretics



## Gastrointestinal tract

- Acute bleeding gastric ulcer – I/V proton pump inhibitors (PPIs)
- Acute colonic pseudo-obstruction (Ogilvie syndrome)
  - Neostigmine
- Aspiration pneumonia prophylaxis in surgical patients
  - H<sub>2</sub> blockers
- Chemotherapy induced nausea and vomiting (early onset)
  - Ondansetron
- Chemotherapy induced nausea and vomiting (Late onset)
  - Aprepitant
- Dyspepsia - PPIs
- Gastrinoma – PPIs
- Gastroesophageal reflux disease (GERD) - PPIs
- NSAIDs induced ulcers – PPIs
- Peptic ulcer disease – PPIs
- Zolinger-Ellison syndrome – PPIs
- Stress ulcer – PPIs
- GERD in pregnancy – Antacids or Sucralfae
- Hemochromatosis – Deferoxamine
- Hiccups – Chlorpromazine
- HIV associated secretory diarrhea – Octreotide



## Gastrointestinal tract

### Ulcerative colitis

For maintenance and induction – **Mesalamine**

Mesalamine nonrespondants in induction – **Steroids**

Steroid dependence in induction – **Azathioprine**

Steroid resistance in induction – **Cyclosporine**

Crhon's disease maintenance and induction –

**Anti-TNF drugs (Infliximab)**

Sclerosing Cholangitis – **Glucocorticoids**

Whipple's disease – **Cotrimoxazole**

M E D I N A Z



## Haematology

Anemia associated with CKD or Inflammation –

**Erythropoetin analogue** (Darbopoetin alfa)

Atrial fibrillation associated thrombosis prophylaxis –

**Dabigatran or Apixaban**

Autoimmune haemolytic anemia – **Prednisolone + Rituximab**

Deep vein thrombosis treatment – **LMWH**

Deep vein thrombosis prophylaxis – **Warfarin**

Essential thrombocythemia – **Hydroxyurea + Aspirin**

Fibrinolysis – **Epsilon aminocaproic acid**

Heparin toxicity – **protamine sulphate**

Heparin induced thrombocytopenia – **Lepirudin**

Immune thrombocytopenic purpura – **Prednisolone**

Asymptomatic iron deficiency anemia – **Oral iron**

Myelodysplasia – **Azacitidine**

Neutropenia – **Filgrastim**

Paroxysmal Nocturnal Haemoglobinuria – **Eculizumab**

Polycythemia vera – **Anagrelide > Hydroxyurea**

Pure red cell aplasia – **Glucocorticoids**

Sickle cell anemia – **Hydroxyurea**

Myelofibrosis - **Hydroxyurea**

Thrombocytopenia – **Oprelvekin**

Transfusional hemosiderosis – **Desferrioxamine**

Von Willebrand disease – **Desmopressin**

Asymptomatic warfarin toxicity – **Vitamin K**

Symptomatic warfarin toxicity – **FFP**



# 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



# Anesthesia

## Inhalational agent of choice

Bronchial asthma maintenance agent – **Halothane**

Tocolysis – **Halothane**

Cardiac surgery – **Isoflurane**

Controlled hypotension – **Isoflurane**

LSCS maintenance – **Isoflurane**

Induction in infants, children, day care surgery –  
**Sevoflurane**

Myocardial ischemia – **Sevoflurane**

Neurosurgery – **Sevoflurane**

Day care surgery maintenance – **Desflurane**

Renal failure - **Desflurane**

Obese - **Desflurane**





## Anesthesia

### Muscle relaxant of choice

Intubation – Succinylcholine

Day care surgery - Succinylcholine

NDR choice for intubation – Rocuronium

NDR choice for day care surgery – Mivacurium

Hepatic failure – Atracurium

Renal failure – Atracurium

Myasthenia gravis – Atracurium

Old age – Atracurium

New born – Atracurium

Obese – Atracurium

Precurarization – Rocuronium

Cardiac surgery – Vecuronium

Cyanotic congenital heart diseases with right  
to left shunt – Pancuronium

Bronchial asthma – Vecuronium

## **FDA approved drugs in 2019**

### **Tafamidis meglumine**

For the treatment of cardiomyopathy of wild type or hereditary transthyretin-mediated amyloidosis.

### **Halobetasol propionate & Tazarotene**

For the treatment of plaque psoriasis

### **PrabotulinumtoxinA – xvfs**

For the improvement of glabellar lines

### **Risankizumab – rzaa**

For the treatment of plaque psoriasis

### **Testosterone undecanoate**

For the treatment of male conditions associated with a deficiency or absence of endogenous testosterone

### **Sumatriptan (nasal spray)**

For the treatment of acute migraine in adults,

### **Antihemophilic factor (recombinant), glycopegylated – exei**

For the treatment of hemophilia A

### **Caplacizumab – yhdp**

For the treatment of acquired thrombotic thrombocytopenic purpura

## **Venetoclax + Obinutuzumab**

For the treatment of chronic lymphocytic leukemia or small lymphocytic lymphoma

## **Ramucirumab**

For the treatment of hepatocellular carcinoma with elevated alpha-fetoprotein (AFP)

## **Triclabendazole**

For the treatment of fascioliasis (liver fluke infestation)

## **Immunoglobulin intravenous, Human – slra 10% liquid**

For the treatment of Primary Humoral Immunodeficiency Disease

## **Dolutegravir and Lamivudine**

For the treatment of HIV-1 infection in adults

## **Amifampridine**

For the treatment of Lambert-Eaton myasthenic syndrome in pediatrics

## **Dengue tetravalent vaccine, Live**

For the prevention of dengue disease,

## **Certolizumab pegol**

For the treatment of non-radiographic axial spondyloarthritis

## **Romozosumab**

For the treatment of osteoporosis in postmenopausal women at high risk for fracture

## **Cladribine**

For the treatment of relapsing multiple sclerosis

## **Siponimod**

For the treatment of relapsing multiple sclerosis

## **Midazolam**

For the treatment of intermittent, stereotypic episodes of frequent seizure activity

## **Amifampridine**

For the treatment of Lambert-Eaton myasthenic syndrome in pediatrics

## **Esketamine (nasal spray)**

For the treatment of treatment-resistant depression in adults

## **Solriamfetol**

For the treatment of excessive daytime sleepiness due to narcolepsy or obstructive sleep apnea

## **Trastuzumab & hyaluronidase – oysk**

For the treatment of HER2-overexpressing breast cancer

## **Atezolizumab**

For the treatment of triple negative breast cancer  
For the treatment of extensive-stage small cell lung cancer

## **Brexanolone**

For the treatment of postpartum depression

## **Erdafitinib**

For the treatment of locally advanced or metastatic urothelial carcinoma

## **Avelumab + axitinib**

For the first line treatment of advanced renal cell carcinoma

## **Ramucirumab**

For the treatment of hepatocellular carcinoma with elevated alpha-fetoprotein (AFP)

## **Pembrolizumab**

For the treatment of advanced renal cell carcinoma  
For the treatment of stage III non-small cell lung cancer

## **Netarsudil & latanoprost ophthalmic solution**

For the treatment of elevated intraocular pressure in patients with open-angle glaucoma or ocular hypertension,

## **Aclidinium bromide & Formoterol fumarate**

For the maintenance treatment of chronic obstructive pulmonary disease

## **Solriamfetol**

For the treatment of excessive daytime sleepiness due to narcolepsy or obstructive sleep apnea

## **FDA Approved drugs in 2017**

### **Voretigene Neparvovec**

AAV2 vector containing human RPE65 cDNA

Subretinal injection

Novel gene therapy for the treatment of Leber's congenital amaurosis

Leber's congenital amaurosis, or biallelic RPE65 mediated inherited retinal disease, is an inherited disorder causing progressive blindness

### **Netarsudil**

Rho kinase inhibitor

Increase aqueous outflow

Mechanism unknown  
Used in glaucoma

### **Latanoprostene Bunod**

Metabolizes in the eye by esterases to Latanoprost and Butanediol mononitrate  
Butanediol mononitrate, an NO – donating moiety that is further metabolized to 1,4 – butanediol and NO  
NO increase trabecular outflow  
Latanoprost increase uveoscleral outflow  
Used in glaucoma

### **Betrixaban**

Inhibitor of clotting factor Xa  
Used as anticoagulant

### **Dupilumab**

It is a monoclonal antibody  
Used to treat Atopic dermatitis  
It acts against IL-4R alpha and inactivate IL-4 & IL-13

### **Brodalumab, Guselkumab**

They are monoclonal antibodies  
Used in psoriasis  
Brodalumab is an antibody against IL-17  
Guselkumab is an antibody against IL-23

### **Semaglutide**

Recombinant glucagon like peptide (GLP) analogs  
They can not be given orally, injectable drug  
Used in type II diabetes

## **Etelcalcetide**

It is a calcium sensing receptor agonist  
Calcimimetic drug  
Used in hyper parathyroid induced osteoporosis

## **Dapagliflozin, Ertugliflozin**

Blockers of SGLT-2 in PCT of kidney  
Increase glucose secretion in urine

## **Plecanatide**

It stimulates guanylate cyclase C  
Approved for chronic idiopathic constipation

## **Naldemedine**

Opioid antagonist ( $\mu$  receptor antagonist)  
It is not absorbed from GIT  
It is used in opioid induced constipation

## **Telotristat ethyl**

It inhibits the formation of serotonin  
It inhibits the enzyme tryptophan hydroxylase  
Approved for diarrhoea due to carcinoid syndrome

## **Cerliponase alfa**

It is a recombinant Tripeptidyl peptidase – 1 enzyme  
It was approved for a lysosomal storage disease called infantile neuronal ceroid lipofuscinosis  
It is given by intracerebral ventricular injection

## **Vestronidase alfa – VJBK**

Recombinant beta glucuronidase  
Approved for Mucopolysaccharidosis VII

### **Inotuzumab ozogamicin**

Approved for Acute Lymphoid Leukemia (ALL)  
Inotuzumab is a monoclonal antibody against CD22

### **Emicizumab KXWH**

Monoclonal antibody targeting the clotting factor IX & X  
Approved for treatment of haemophilia

### **Glicaprevir / Pibrentasvir**

Approved for Hepatitis C  
Combination of protease inhibitor and NS5a inhibitor

### **Tocilizumab**

Monoclonal antibody against IL-6  
Approved for the treatment of Rheumatoid arthritis and Cytokine release syndrome

### **Letermovir**

Inhibit DNA terminase complex and inhibit the virus maturation  
Approved for CMV infection

### **Lesinurad**

It inhibits URAT-1 transporter in kidney and increase uric acid secretion  
Approved for chronic gout

### **Sarilumab**

Monoclonal antibody against IL-6  
Approved for the treatment of Rheumatoid arthritis



## **Abaloparatide**

It is PTH<sub>1-34</sub> molecule

Used in osteoporosis by activating the osteoblasts

Cannot be given orally

## **Amantadine**

It is commonly used for Influenza and Parkinsonism

It can block NMDA receptors and approved for levodopa induced dyskinesia

## **Edaravone**

It is a free radical scavenger

Approved for amyotrophic lateral sclerosis (ALS)

## **Safinamide**

It is MAO-B inhibitor

Approved in parkinsonism

## **Ribociclib/Abemaciclib**

CDK-4 & 6 inhibitors

Approved for cancer treatment (Breast cancer)

## **Niraparib**

Inhibitor of poly ADP ribose polymerase enzyme

Used in ovarian carcinoma

## **Darvalumab**

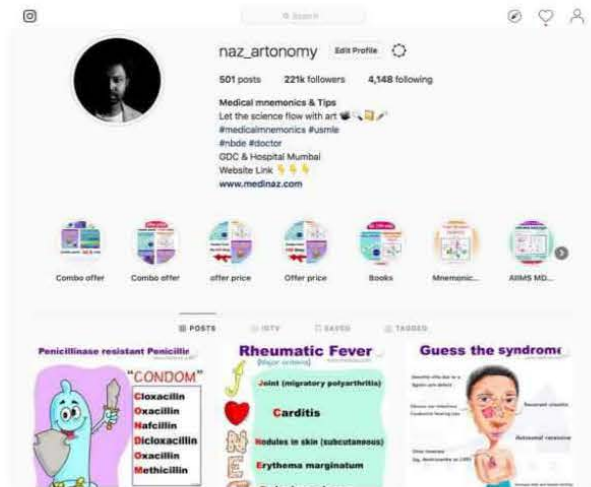
Monoclonal antibodies against apoptosis ligands

Used for bladder carcinoma (urothelial carcinoma)

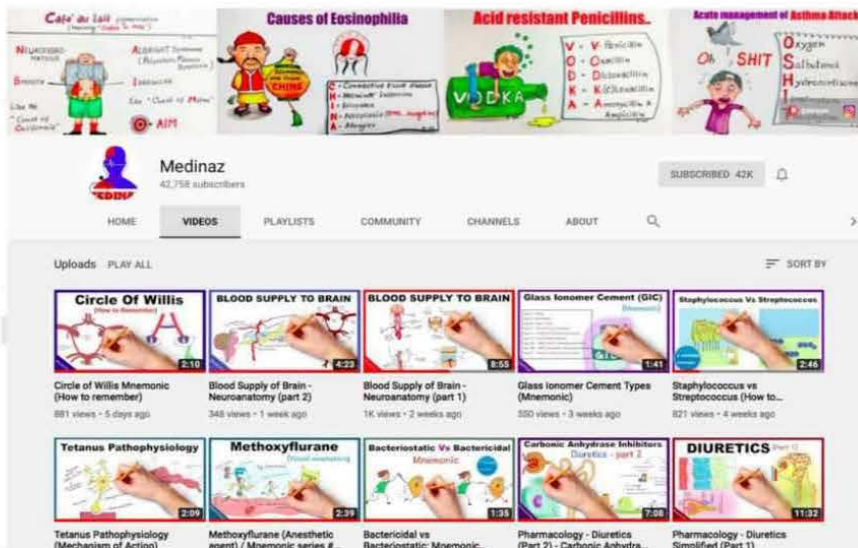


# Follow us on

## Instagram - **naz\_artonomy**



## YouTube - **“MEDINAZ”**



MED NAZ