ANATOMY

Bowel components

'Dow Jones Industrial Average Closing Stock Report':
From proximal to distal:
Duodenum
Jejunum
Ileum
Appendix
Colon
Sigmoid
Rectum

Alternatively: to include the cecum, "Dow Jones Industrial Climbing Average Closing Stock Report".
Knowledge Level 1, System: Alimentary
Anonymous Contributor

Diaphragm apertures: spinal levels

Aortic hiatus = 12 letters = T12
Oesophagus = 10 letters = T10
Vena cava = 8 letters = T8
Knowledge Level 1, System: Alimentary
Oriade Adeoye  Dept. of Medicine, College of Health Sciences, OAU, Ile-Ife

Duodenum: lengths of parts

"Counting 1 to 4 but staggered":
1st part: 2 inches
2nd part: 3 inches
3rd part: 4 inches
4th part: 1 inch
Knowledge Level 5, System: Alimentary
Anonymous Contributor

Liver inferior markings showing right/left lobe vs. vascular divisions

There's a Hepatic "H" on inferior of liver. One vertical stick of the H is the dividing line for anatomical right/left lobe and the other vertical stick is the divider for vascular halves. Stick that divides the liver into vascular halves is the one with vena cava impression (since vena cava carries blood, it's fortunate that it's the divider for blood halves).
Knowledge Level 5, System: Alimentary
Robert O'Connor  University College Dublin

Meckel's diverticulum details

2 inches long.
2 feet from end of ileum.
2 times more common in men.
2% occurrence in population.
2 types of tissues may be present.
Note: "di-" means "two", so diverticulum is the thing with all the twos.
Knowledge Level 2, System: Alimentary
Robert O'Connor  University College Dublin

Aorta vs. vena cava: right vs. left

Aorta and right each have 5 letters, so aorta is on the right.
Vena and cava and left each have 4 letters, so vena cava is on the left.
Knowledge Level 1, System: Cardiovascular
Robert O'Connor  University College Dublin

Aortic arch: major branch order

Knowledge Level 1, System: Cardiovascular
Anonymous Contributor

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Knowledge Level 1, System: Cardiovascular
Robert O'Connor  University College Dublin

Aortic arch: major branch order

Knowledge Level 1, System: Cardiovascular
Anonymous Contributor
“Know your ABC’S”:
Aortic arch gives rise to:
  - Brachiocephalic trunk
  - Left Common Carotid
  - Left Subclavian

Beware though trick question of What is first branch of aorta? Technically, it’s the coronary arteries.
Knowledge Level 1, System: Cardiovascular
Anonymous Contributor

**Atrioventricular valves**

**“LAB RAT”**:  
  - Left Atrium: Bicuspid
  - Right Atrium: Tricuspid
Knowledge Level 1, System: Cardiovascular
Amir A. Ghaferi Johns Hopkins School of Medicine

**Axillary artery branches**

**“Screw The Lawyer Save A Patient”**:  
  - Superior thoracic
  - Thoracoacromial
  - Lateral thoracic
  - Subscapular
  - Anterior circumflex humeral
  - Posterior circumflex humeral

Alternatively: “Some Times Life Seems A Pain”.
Knowledge Level 2, System: Cardiovascular
Anonymous contributor and Joe Azzopardi Not specified and Xarabank

**Brachial artery: recurrent and collateral branches**

**“I Am Pretty Sexy”**
  - Inferior ulnar collateral artery goes with Anterior ulnar recurrent artery.
  - Posterior ulnar recurrent artery goes with Superior ulnar collateral artery.

Alternatively: “I Am Pretty Smart”.
Knowledge Level 2, System: Cardiovascular
Paul’s Boutique Western University College of Osteopathic Medicine of the Pacific

**Carotid sheath contents**

**“I See 10 CC’s in the IV”**:  
I See (I.C.) = Internal Carotid artery
10 = CN 10 (Vagus nerve)
CC = Common Carotid artery
IV = Internal Jugular Vein
Knowledge Level 1, System: Cardiovascular
Anonymous Contributor

**Cavernous sinus contents**

**O TOM CAT**:  
O TOM are lateral wall components, in order from superior to inferior.
CA are the components within the sinus, from medial to lateral. CA ends at the level of T from O TOM.
See diagram.
  - Oculomotor nerve (III)
  - Trochlear nerve (IV)
  - Ophthalmic nerve (V1)
  - Maxillary nerve (V2)
  - Carotid artery
  - Abducent nerve (VI)

T: When written, connects to the T of OTOM.
Knowledge Level 4, System: Cardiovascular
Jonathan Vafai New York University School of Medicine

**Coeliac trunk: branches**
Left Hand Side (LHS):
- Left gastric artery
- Hepatic artery
- Splenic artery

Knowledge Level 1, System: Cardiovascular
Dr. Harsh Sharma

**Descending abdominal aorta branches from diaphragm to iliacs**

"Prostitutes Cause Sagging Swollen Red Testicles [in men] Living In Sin":
- Phrenic [inferior]
- Celiac
- Superior mesenteric
- Suprarenal [middle]
- Renal
- Testicular ["in men" only]
- Lumbar
- Inferior mesenteric
- Sacral

Knowledge Level 2, System: Cardiovascular
Josser Mt. Sinai Medical School

**External carotid artery branches**

"Some Anatomists Like F*#king, Others Prefer S & M":
- Superior thyroid
- Ascending pharyngeal
- Lingual
- Facial
- Occipital
- Posterior auricular
- Superficial temporal
- Maxillary
  - Alternatively: As She Lay Flat, Oscar's Passion Slowly Mounted".

Knowledge Level 2, System: Cardiovascular
Anonymous Contributor

**Femoral triangle: arrangement of contents**

<table>
<thead>
<tr>
<th>NAVAL:</th>
</tr>
</thead>
<tbody>
<tr>
<td>From lateral hip towards medial navel:</td>
</tr>
<tr>
<td>Nerve (directly behind sheath)</td>
</tr>
<tr>
<td>Artery (within sheath)</td>
</tr>
<tr>
<td>Vein (within sheath)</td>
</tr>
<tr>
<td>Empty space (between vein and lymph)</td>
</tr>
<tr>
<td>Lymphatics (with deep inguinal node)</td>
</tr>
</tbody>
</table>
  - Nerve/Artery/Vein are all called Femoral. |

Knowledge Level 1, System: Cardiovascular
Andrew J. Vasil  UMD School of Medicine, Duluth, MN

**Heart valve sequence**

"Try Pulling My Aorta":
- Tricuspid
- Pulmonary
- Mitral
- Aorta

Knowledge Level 1, System: Cardiovascular
Michael Franco  Melbourne University, Australia

**Inferior vena cava tributaries**
"I Like To Rise So High":
Iliaсs
Lumbar
Testicular
Renal
Suprarenal
Hepatic vein.
Think of the IVC wanting to rise high up to the heart.
Knowledge Level 3, System: Cardiovascular
Usman Ahmad  KMC

**Internal iliac artery: anterior branches**

What Bill admitted to Hilary: "I Milked Our Insatiable Intern's Udders Under the Desk":
Inferior gluteal
Middle rectal
Obturator
Inferior vesical artery
Internal pudendal artery
Umbilical
U/D=Uterine artery (female)/ Deferential artery (male)
Knowledge Level 4, System: Cardiovascular
Anonymous Contributor

**Internal jugular vein: tributaries**

"Medical Schools Let Confident People In":
From inferior to superior:
Middle thyroid
Superior thyroid
Lingual
Common facial
Pharyngeal
Inferior petrosal sinus
Knowledge Level 6, System: Cardiovascular
LaShawn A. Weaver  Medical University of South Carolina

**Liver: side with ligamentum venosum/ caudate lobe vs. side with quadrate lobe/ ligamentum teres**

"VC goes with VC":
The Venosum and Caudate is on same side as Vena Cava [posterior]. Therefore, quadrate and teres must be on anterior by default.
See inferior-view diagram.
Knowledge Level 4, System: Cardiovascular
Robert O'Connor  University College Dublin

**Lung lobe numbers: right vs. left**

Tricuspid heart valve and tri-lobed lung both on the right side.
Bicuspid and bi-lobed lung both on the left side.
Knowledge Level 1, System: Cardiovascular
Robert O'Connor  University College Dublin

**Maxillary artery branches**

"DAM I AM Piss Drunk But Stupid Drunk I Prefer, Must Phone Alcoholics Anonymous":
Deep auricular
Anterior tympanic
Middle meningeal
Inferior alveolar
Accessory meningeal
Masseteric
Pterygoid
Deep temporal
Buccal
Sphenopalatine
Descending palatine
Portal-systemic anastomoses: main 2 places that retroperitoneals connect into systemic

Retroperitoneals hook up with Renal and Paravertebral veins.

Knowledge Level 6, System: Cardiovascular
Anonymous Contributor

Saphenous veins: path of great vs. small at malleolus

"MAGDelaine has varicose veins" [The saphenous veins are important for varicose veins]:
Medial malleolus, Anterior to maleolus, and Great saphenous go together.
Then the opposites of these go together: Small saphenous is posterior to the lateral maleolus.
Knowledge Level 3, System: Cardiovascular
Robert O'Connor  University College Dublin

Thoracic cage: relations to the important venous structures

Behind the sternoclavicular joints: the brachiocephalic veins begin.
Behind the 1st costal cartilage on the right the superior vena cava begins.
Behind the 2nd costal cartilage on the right the azygos vein ends.
Behind the 3rd costal cartilage on the right the superior vena cava ends.
Knowledge Level 6, System: Cardiovascular
Fred Reid  Undergrad at St-Andrews, UK

Thoracoacromial artery branches

ABCD:
Acromial
Breast (pectoral)
Clavicular
Deltoid
Knowledge Level 6, System: Cardiovascular
Anonymous contributor  UCLA School of Medicine

Scalp layers

SCALP:
From superficial to deep:
Skin
Connective tissue
Aponeurosis
Loose areolar tissue
Pericranium
Knowledge Level 1, System: Integumental
Anonymous Contributor

Ureter to ovarian/testicular artery relation

"Water under the bridge":
The ureters (which carry water), are posterior to the ovarian/testicular artery.
Clinically important, since a common surgical error is to cut ureter instead of ovarian artery when removing uterus.
Knowledge Level 2, System: Kidney/Urine
Anonymous Contributor

Spleen: dimensions, weight, surface anatomy

"1,3,5,7,9,11":
Spleen dimensions are 1 inch x 3 inches x 5 inches.
Weight is 7 ounces.
It underlies ribs 9 through 11.
Knowledge Level 5, System: Lymphoid
Anonymous Contributor
Thoracic duct: relation to azygous vein and esophagus

“The duck between 2 gooses”:
Thoracic duct (duck) is between 2 gooses, azygous and esophagus.
Knowledge Level 5, System: Lymphoid
Anonymous Contributor

Abdominal muscles

“Spare TIRE around their abdomen”:
Transversus abdominis
Internal abdominal oblique
Rectus abdominis
External abdominal oblique
Knowledge Level 1, System: Muscle
Anonymous Contributor

Anterior forearm muscles: superficial group

“Pimps F*ck Prostitutes For Fun”:
Pronator teres
Flexor carpi radialis
Palmaris longus
Flexor carpi ulnaris
Flexor digitorum superficialis
Knowledge Level 3, System: Muscle
Rob

Bicipital groove: attachments of muscles near it

“The lady between two majors”:
Teres major attaches to medial lip of groove.
Pectoralis major to lateral lip of groove.
Latissimus (Lady) is on floor of groove, between the 2 majors.
Knowledge Level 3, System: Muscle
Sandeep

Brachioradialis: function, innervation, one relation, one attachment

BrachioRadialis:
Function: Its the Beer raising muscle, flexes elbow, strongest when wrist is oriented like holding a beer.
Innervation: Breaks Rule: it’s a flexor muscle, But Radial. (Radial nerve usually is for extensors: Recall BEST rule: B was for brachioradialis).
Important relation: Behind it is the Radial nerve in the cubital fossa.
Attachment: Attaches to Bottom of Radius.
Knowledge Level 4, System: Muscle
Robert O'Connor University College Dublin

Elbow: muscles that flex it

Three B’s Bend the eBow:
Brachialis
Biceps
Brachioradialis
Knowledge Level 2, System: Muscle
Anonymous Contributor

Elbow: which side has common flexor origin

FM (as in FM Radio):
Flexor Medial, so Common Flexor Origin is on the medial side.
Knowledge Level 2, System: Muscle
Anonymous Contributor

Erector spinae muscles
"I Love Sex":

From lateral to medial:
- Iliocostalis
- Longissimus
- Spinalis

Alternatively: "I Long for Spinach"

"Sex" helps you think of "Erector", but "Long" and "Spinach" help you remember the muscles' names.

**Knowledge Level 7, System: Muscle**
Michael A. Chaplin  SUNY-HSCB Downstate College of Medicine

**Eye rotation by oblique muscles**

"I Love S&M":

- Inferior oblique: Lateral eye rotation.
- Superior oblique: Medial eye rotation.

**Knowledge Level 1, System: Muscle**
CS Eddleman  Medical Student, Texas Tech SOM

**Interossei muscles: actions of dorsal vs. palmar in hand**

"PAd and DAb":

The Palmar Adduct and the Dorsal Abduct.

- Use your hand to dab with a pad.

**Knowledge Level 5, System: Muscle**
Dr. Atif Farooq and Anonymous Contributor  Rawalpindi Medical College, Pakistan and Not Specified

**Intrinsic muscles of hand (palmar surface)**

"A OF A OF A":

- Thenar, lateral to medial:
  - Abductor pollicis longus
  - Opponens pollicis
  - Flexor pollicis brevis
  - Adductor pollicis.

- Hypothenar, lateral to medial:
  - Opponens digitii minimi
  - Flexor digitii minimi
  - Abductor digitii minimi

**Knowledge Level 4, System: Muscle**
Anonymous Contributor

**Inversion vs. eversion muscles in leg**

Second letter rule for inversion/eversion:

- Eversion muscles:
  - pEneus longus
  - pEneus brevis
  - pEneus terius

- Inversion muscles:
  - tBalis anterior
  - tBalis posterior

**Knowledge Level 6, System: Muscle**
Robert O'Connor  University College Dublin

**Lumbricals action**

Lumbral action is to hold a pea, that is to flex the metacarpophalangeal joint and extend the interphalangeal joints. When look at hand in this position, can see this makes an "L" shape, since L is for Lumbral.

**Knowledge Level 4, System: Muscle**
Robert O'Connor  University College Dublin

**Muscles: potentially absent ones**

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---
Muscles which may be absent but may be important:
5 P's:
- Palmaris longus [upper limb]
- Plantaris [lower limb]
- Peroneus tertius [lower limb]
- Pyramidalis [anterior abdominal wall]
- Psoas minor [posterior abdominal wall]

Knowledge Level 3, System: Muscle
Shebrain Cairo University

Oblique muscles: direction of externals vs. internals

"Hands in your pockets":
When put hands in your pockets, fingers now lie on top of external obliques and fingers point their direction of fibers: down and towards midline.
- Note: "oblique" tells that must be going at an angle.
- Internal obliques are at right angles to external.
Knowledge Level 1, System: Muscle
Anonymous Contributor

Plantarflexion vs. dorsiflexion

Plantarflexion occurs when you squish a plant with your foot.
Knowledge Level 1, System: Muscle
Anonymous Contributor

Popliteal fossa: muscles arrangement

The two Semi's go together, Semimembranosus and Semitendinosus.
The Membranosus is Medial and since the two semis go together, Semitendinosus is also medial. Therefore, Biceps Femoris has to be lateral.
- Of the semi's, to remember which one is superficial: the Tendonosus is on Top.
Knowledge Level 3, System: Muscle
Anonymous Contributor

Pterygoid muscles: function of lateral vs. medial

"Look at how your jaw ends up when saying first syllable of 'Lateral' or 'Medial'":
- "La": your jaw is now open, so Lateral opens mouth.
- "Me": your jaw is still closed, so medial closes the mandible.
Knowledge Level 4, System: Muscle
Robert O'Connor University College Dublin

Rotator cuff muscles

"The SITS muscles":
- Clockwise from top:
  Supraspinatus
  Infraspinatus
  Teres minor
  Subscapularis
A pro baseball pitcher has injured his rotator cuff muscles. As a result, he SITS out for the rest of the game, and then get sent to the minor leagues.
Knowledge Level 2, System: Muscle
Anne Conlin and Robert O'Connor University of Western Ontario Medical School, London, Canada and University College Dublin

Serratus anterior: innervation

SALT:
- Serratus Anterior = Long Thoracic.
Knowledge Level 2, System: Muscle
Erin B. Dominiak Loyola University Chicago Stritch School of Medicine

Serratus anterior: innervation and action

"C5-6-7 raise your arms up to heaven":
- Long thoracic nerve roots (567) innervate Serratus anterior.
  - Test C567 roots clinically by ability to raise arm past 90 degrees.
Knowledge Level 2, System: Muscle
Anonymous Contributor
Soleus vs. gastrocnemius muscle function

"Stand on your SoleS. Explosive gas":
You stand on soles of your shoes, so Soleus is for posture.
Gasoline is explosive, so Gastrocnemius is for explosive movement.
Knowledge Level 3, System: Muscle
Robert O'Connor  University College Dublin

Supination vs. pronation

"SOUPination": Supination is to turn your arm palm up, as if you are holding a bowl of soup.
"POUR-nation": Pronation is to turn your arm with the palm down, as if you are pouring out whatever is your bowl.
Alternatively, Pronation donation: Pronation is palm facing downward, as if making a donation.
Knowledge Level 1, System: Muscle
LCK and Anonymous Contributor  University of Ottawa and Not Specified

Bell's palsy: symptoms

Bell’S Palsy:
Blink reflex abnormal
Earache
Lacrimation [deficient, excess]
Loss of taste
Sudden onset
Palsy of VII nerve muscles
• All symptoms are unilateral.
Knowledge Level 4, System: Nervous
Robert O'Connor  University College Dublin

Brachial plexus branches

"My Aunt Raped My Uncle":
• From lateral to medial:
Musculocutaneous
Axillary
Radial
Median
Ulnar
Knowledge Level 1, System: Nervous
Anonymous Contributor

Brachial plexus subunits

"Randy Travis Drinks Cold Beer":
Roots
Trunks
Divisions
Cords
Branches
• Alternatively: "Read The Damn Cadaver Book!"
• Alternatively: "Real Texans Drink Coors Beer".
Knowledge Level 1, System: Nervous
Karl and Anonymous Contributor  Boston U. School of Medicine and Not Specified

Brachial plexus: branches of posterior cord

STAR:
Subscapular [upper and lower]
Thoracodorsal
Axillary
Radial
Knowledge Level 2, System: Nervous
Zaineb Vakil  Gulf Medical College Ajman

Buttock quadrant safest for needle insertion

"Shut up and butt out":
The Upper Outer quadrant of the Buttrock safely avoids hitting sciatic nerve.
Knowledge Level 2, System: Nervous
Anonymous Contributor
Carpal tunnel syndrome causes

MEDIAN TRAP:
Myxoedema
Edema premenstrually
Diabetes
Idiopathic
Agromegaly
Neoplasm
Trauma
Rheumatoid arthritis
Amyloidosis
Pregnancy

Mnemonic fits nicely since median nerve is trapped.
Knowledge Level 4, System: Nervous
Anonymous Contributor

Cervical plexus: arrangement of the important nerves

"GLAST":
4 compass points: clockwise from north on the right side of neck:
Great auricular
Lesser occipital
Accessory nerve pops out between L and S
Supraclavicular
Transverse cervical
See diagram.
Knowledge Level 3, System: Nervous
Robert O'Connor University College Dublin

Deep tendon reflexes: root supply

God designed body reflexes according to a nursery rhyme:
One, two -- buckle my shoe. Three, four -- kick the door. Five, six -- pick up sticks. Seven, eight -- shut the gate.
S1,2 = ankle jerk
L3,4 = knee jerk
C5,6 = biceps and brachioradialis
C7,8 = triceps
Knowledge Level 2, System: Nervous
Bryan Traynor Massachusetts General Hospital and Brigham and Women's Hospital, Boston, USA

Diaphragm innervation

"3, 4, 5 keeps the diaphragm alive":
Diaphragm innervation is cervical roots 3, 4, and 5.
Knowledge Level 1, System: Nervous
Michael Nawfal

Extraocular muscles cranial nerve innervation

"LR6SO4 rest 3":
Lateral Rectus is 6th
Superior Oblique is 4th
rest are all 3rd cranial nerve
Knowledge Level 2, System: Nervous
Atul Singh Detroit Medical Center

Facial nerve: branches after Stylomastoid foramen

"Ten Zulus Buggered My Cat (Painfully)"
From superior to inferior:
Temporal branch
Zygomatic branch
Buccal branch
Mandibular branch
Cervical branch

(Posterior auricular nerve)
Alternatively: "Passing Through Zanzibar By Motor Car" (PA for Posterior Auricular).
Knowledge Level 1, System: Nervous
Stephan Sanders and Kris Downing Nottingham Medical School, UK and UCR/UCLA Biomedical Sciences Program, USA
Lingual nerve course

The Lingual nerve
Took a curve
Around the Hyoglossus.
"Well I'll be f*#ked!"
Said Wharton's Duct,
"The bastard's gone and crossed us!"
Knowledge Level 6, System: Nervous
Sam Hinton  University of California, San Diego

Lumbar plexus

"I, I Get Laid On Fridays":
Iliohypogastric [L1]
Iliohypogastric [L1]
Genitofemoral [L1, L2]
Lateral femoral cutaneous [L2, L3]
Obturator [L2, L3, L4]
Femoral [L2, L3, L4]
Alternatively: "I twice Get Laid On Fridays".
Alternatively: "Interested In Getting Laid On Fridays?"
Knowledge Level 3, System: Nervous
Alfred Munoz  MCP-Hahnemann School Of Medicine

Lumbar plexus roots

"2 from 1, 2 from 2, 2 from 3":
2 nerves from 1 root: Ilioinguinal (L1), Ilioinguinal (L1).
2 nerves from 2 roots: Genitofemoral (L1,L2), Lateral Femoral (L2,L3).
2 nerves from 3 roots: Obturator (L2,L3,L4), Femoral (L2,L3,L4).
Knowledge Level 4, System: Nervous
Robert O'Connor  University College Dublin

Median nerve: hand muscles innervated

"The LOAF muscles":
Lumbricals 1 and 2
Opponens pollicis
Abductor pollicis brevis
Flexor pollicis brevis
Alternatively: LLOAF, with 2 L's, to recall there's 2 lumbricals.
To remember that these are the Median nerve muscles, think "Meat LOAF".
Knowledge Level 2, System: Nervous
Samuel Atom Baek Kim

Median nerve: recognizing it in an opened axilla

The Median nerve is the Middle of a giant capital "M" formed by the musculocutaneous and ulnar nerves.
Knowledge Level 2, System: Nervous
Robert O'Connor  University College Dublin

Pectoral nerves: path of lateral vs. medial

"Lateral Less, Medial More":
Lateral pectoral nerve only goes through Pectoralis major, but
Medial pectoral nerve goes through both Pectoralis major and minor.
Knowledge Level 5, System: Nervous
Anonymous Contributor

Pelvis: sacral innervation
“S2,3,4 keeps the 3 P’s off the floor (Penis, Poo, and Pee).
S2,3,4 innervates the anal sphincter, urethral sphicter, and causes erection.
Knowledge Level 2, System: Nervous
Anonymous Contributor National University of Ireland, Galway and University of Sydney, Australia

Penis autonomic innervation actions

Parasympathetic Puts it up. Sympathetic Spruts it out”.
Alternatively: "Point and Shoot": Parasympathetic Points it, Sympathetic Shoots out the semen.
Erection and Ejaculation (Emission).
Knowledge Level 2, System: Nervous
Andrew J. Vasil and John Nguyen University of Minnesota School of Medicine and University of Texas Medical Branch at Galveston

Radial nerve: muscles innervated

"Try A Big Chocolate Chip Sundae, Double Dip Cherries And Peanuts Preferably Included”:
In order of their innervation, proximal to distal:
Triceps
Anconeus
Brachioradialis
ext. Carpi radialis longus
ext. Carpi radialis brevis
Supinator
ext. Digits
ext. Digits minimi
ext. Carpi ulnaris
Abductor poll. longus
ext. Poll. brevis
ext. Poll. longus
ext. Indicis
For the neighboring words that start with the same letter (eg: chocolate and chip), notice that the longer word in the mnemonic, corresponds to the longer of the two muscle names (ex: ext. carpi radialis longus and ext. carpi radialis brevis)
Knowledge Level 6, System: Nervous
Anonymous Contributor Medical College of Ohio

Radial nerve: muscles supplied (simplified)

“BEST muscles”:
Brachioradialis
Extensors
Supinator
Triceps
Knowledge Level 1, System: Nervous
Anonymous Contributor

Scalp: nerve supply

GLASS:
Greater occipital/ Greater auricular
Lesser occipital
Auriculotemporal
Supratrochlear
Supraorbital
Knowledge Level 5, System: Nervous
Anonymous Contributor

Spinal cord: length in vertebral column

SCULL:
Spinal Cord Until L2 (L.L).
Knowledge Level 3, System: Nervous
Lior Greenberg Technion Faculty of Medicine, Haifa, Israel

Thigh: innervation by compartment
"MAP OF Sciatic":
Medial compartment: Obturator
Anterior compartment: Femoral
Posterior compartment: Sciatic
So all the thigh muscles in that compartment get innervated by that nerve.
Knowledge Level 1, System: Nervous
Anonymous Contributor

**Trigeminal nerve: where branches exit skull**

"Standing Room Only":
Superior orbital fissure is V1
foramen Rotundum is V2
foramen Ovale is V3
Knowledge Level 1, System: Nervous
Anonymous Contributor

**V3 innervated muscles (branchial arch 1 derivatives)**

"M.D. My TV":
Mastication [masseter, temporalis, pterygoids]
Digastric [anterior belly]
Mylohyoid
tensor Tympani
tensor Veli palatini
Knowledge Level 2, System: Nervous
Christian Erickson  Duke University

**V3: sensory branches**

"Buccaneers Are Inferior Linguists":
Buccal
Articulotemporal
Inferior alveolar
Lingual
Knowledge Level 5, System: Nervous
Jennifer Chuang  University of Vermont School of Medicine

**Vagus nerve: path into thorax**

"I Left my Aunt in Vegas":
Left Vagus nerve goes Anterior descending into the thorax.
Knowledge Level 4, System: Nervous
Anonymous Contributor

**Anatomical planes: coronal, horizontal, sagittal**

Coronal: A classic painting/stained glass window of a saint/angel has a corona radiating around the person's head. The plane of the glass/page is cutting their head in the coronal plane.
Horizontal: Someone coming over the horizon has their abdomen cut in the horizontal plane.
Sagittal: the remaining one by default.
Knowledge Level 1, System: Other/Miscellaneous
Robert O'Connor  University College Dublin

**Cubital fossa contents**

"Really Need Booze To Be At My Nicest":
From lateral to medial:
Radial Nerve
Biceps Tendon
Brachial Artery
Median Nerve
Knowledge Level 2, System: Other/Miscellaneous
Anonymous Contributor

**Hand: nerve lesions**

Hi Yield [ID 3262]
DR CUMA:
Drop=Radial nerve
Claw=Ulnar nerve
Median nerve=Ape hand (or Apostol [preacher] hand)
Knowledge Level 1, System: Other/Miscellaneous
Anonymous Contributor

Inguinal canal: walls

"MALT: 2M, 2A, 2L, 2T":
Starting from superior, moving around in order to posterior:
Superior wall (roof): 2 Muscles:
   internal oblique Muscle
   transverse abdominus Muscle
Anterior wall: 2 Aponeuroses:
   Aponeurosis of external oblique
   Aponeurosis of internal oblique
Lower wall (floor): 2 Ligaments:
   inguinal Ligament
   lacunar Ligament
Posterior wall: 2Ts:
   Transversalis fascia
   conjoint Tendon
Knowledge Level 1, System: Other/Miscellaneous
Miruna Segarceanu  UMF Carol Davila, Bucharest, Romania

Mediastinums: posterior mediastinum structures

There are 4 birds:
The esophaGOOSE (esophagus)
The vaGOOSE nerve
The azyGOOSE vein
The thoracic DUCK (duct)
Knowledge Level 2, System: Other/Miscellaneous
Aron Flagg  Finch University of Health Sciences / The Chicago Medical School

Perineal vs. peroneal

Perineal is in between the legs.
Peroneal is on the leg.
Knowledge Level 1, System: Other/Miscellaneous
Anonymous Contributor

Retroperitoneal structures list

SAD PUCKER:
Suprarenal glands
Aorta & IVC
Duodenum (half)
Pancreas
Ureters
Colon (ascending & descending)
Kidneys
Esophagus (anterior & left covered)
Rectum
Knowledge Level 2, System: Other/Miscellaneous
Ron Norman  AECC

Superior mediastinum contents
**Superior mediastinum: contents**

PVT Left BATTLE:
- Phrenic nerve
- Vagus nerve
- Thoracic duct
- Left recurrent laryngeal nerve (not the right)
- Brachiocephalic veins
- Aortic arch (and its 3 branches)
- Thymus
- Trachea
- Lymph nodes
- Esophagus

Knowledge Level 2, System: Other/Miscellaneous
Anonmyous Contributor  University of Pittsburgh School of Medicine

**Supine vs. prone body position**

"Supine is on your spine.
Therefore, prone’s the "other" one.

Also, prone to suffocate in prone position.

Knowledge Level 1, System: Other/Miscellaneous
Carol Kasper and Sandy Honeycutt  MacMurray College, Jacksonville, IL, USA and Nursing student

**Bronchi: which is more vertical**

"Right on Red":
Many places allow making a right hand turn at a red light, if you first come to a complete stop.
A child swallowing a red penny is more likely to get it stopped down the right bronchus, since it is more vertical.

Knowledge Level 4, System: Pulmonary
Lior Greenberg  Technion Faculty of Medicine, Haifa, Israel

**Bronchopulmonary segments of right lung**

"A PALM Seed Makes Another Little Palm":
- In order from superior to inferior:
  - Apical
  - Posterior
  - Anterior
  - Lateral
  - Medial
  - Superior
  - Medial basal
  - Anterior basal
  - Lateral basal
  - Posterior basal

Knowledge Level 7, System: Pulmonary
Derek Bell  University of Queensland

**Lung lobes: one having lingula, lobe numbers**

Lingula is on left.
The lingula is like an atrophied lobe, so the left lung must have 2 "other" lobes, and therefore right lung has 3 lobes.

Knowledge Level 1, System: Pulmonary
Teresa Myers  Student, UNC

**Nasal cavity components**
“Never Call Me Needle Nose!”:
Nares [external]
Conchae
Meatuses
Nares [internal]
Nasopharynx
Note mnemonic sentence is nasally-related.
Knowledge Level 5, System: Pulmonary
Anonymous Contributor

<table>
<thead>
<tr>
<th>Pleura surface markings</th>
</tr>
</thead>
</table>
| “All the even ribs, in order: 2, 4, 6, 8, 10, 12 show its route”:
  Rib2: sharp angle inferiorly
  Rib4: the left pleura does a lateral shift to accommodate heart
  Rib6: both diverge laterally
  Rib8: midclavicular line
  Rib10: midaxillary line
  Rib12: the back
  See diagram. |
Knowledge Level 2, System: Pulmonary
Anonymous Contributor

<table>
<thead>
<tr>
<th>Tonsils: The three types</th>
</tr>
</thead>
</table>
| “PPL (people) have tonsils”:
  Pharyngeal
  Palatine
  Lingual |
Knowledge Level 3, System: Pulmonary
Anonymous Contributor

<table>
<thead>
<tr>
<th>Voicebox: names of parts in sagittal cross-section</th>
</tr>
</thead>
</table>
| “There’s 3 V’s in your Voicebox”:
  Vestibular fold
  Ventricle
  Vocal fold
  Note: Vestibular and Vocal cord also known as false and true cords respectively. |
Knowledge Level 5, System: Pulmonary
Robert O’Connor University College Dublin

<table>
<thead>
<tr>
<th>Anteflexed vs. anteverted: what bodypart each describes</th>
</tr>
</thead>
</table>
| “Anteflexed and Anteverted both bend toward Anterior”:
  The “V” words go together: Verted is for the cerVix (therefore flexed must be uterus). |
Knowledge Level 4, System: Reproductive
Robert O’Connor University College Dublin

<table>
<thead>
<tr>
<th>Broad ligament: contents</th>
</tr>
</thead>
</table>
| BROAD:
  Bundle (ovarian neurovascular bundle)
  Round ligament
  Ovarian ligament
  Artefacts (vestigial structures)
  Duct (oviduct) |
Knowledge Level 1, System: Reproductive
David Colbert UWA Medicine

<table>
<thead>
<tr>
<th>Scrotum layers</th>
</tr>
</thead>
</table>
"Some Damn Englishman Called It The Testis":
From superficial to deep:
Skin
Dartos
External spermatic fascia
Cremaster
Internal spermatic fascia
Tunica vaginalis
Testis
Knowledge Level 2, System: Reproductive
Anonymous Contributor

**Sperm pathway through male reproductive tract**

SEVEN UP:
Seminiferous tubules
Epididymis
Vas deferens
Ejaculatory duct
Nothing
Urethra
Penis
Knowledge Level 2, System: Reproductive
Ken Evans Saskatchewan Health, Acute and Emergency Services

**Sperm: path through male reproductive system**

"My boyfriend's name is STEVE":
Seminiferous Tubules
Epididymis
Vas deferens
Ejaculatory duct
Knowledge Level 1, System: Reproductive
Amy Harrington MCP Hahnemann

**Spermatic cord contents**

"Piles Don't Contribute To A Good Sex Life":
Pampiniform plexus
Ductus deferens
Cremasteric artery
Testicular artery
Artery of the ductus deferens
Genital branch of the genitofemoral nerve
Sympathetic nerve fibers
Lymphatic vessels
Knowledge Level 2, System: Reproductive
TR Columbia PandS

**Arm fractures: nerves affected by humerus fracture location**

ARM fracture:
From superior to inferior:
Axillary: head of humerus
Radial: mid shaft
Median: supracondular
Knowledge Level 1, System: Skeletal
Ritesh Patel M.D.

**Carpal bones**
"Stop Letting Those People Touch The Cadaver's Hand":

Proximal row, lateral-to-medial:
Scaphoid
Lunate
Triquetrum
Pisiform

Distal row, lateral-to-medial:
Trapezium
Trapezoid
Capitate
Hamate

Knowledge Level 1, System: Skeletal
Edward Tanner  University of Alabama SOM

**Carpal bones: trapezium vs. trapezoid location**

Since there’s two T’s in carpal bone mnemonic sentences, need to know which T is where:
TrapeziUM is by the thUMB, TrapeziOID is inSIDE.
Alternatively, TrapeziUM is by the thUMB, TrapezOID is by its SIDE.

Knowledge Level 1, System: Skeletal
Tom Ball  Imperial College, UK

**Carpel bones**

"So Long To Pinky, Here Comes The Thumb":

Proximal row, lateral-to-medial, then distal row, medial-to-medial:
Scaphoid
Lunate
Triquetrum
Pisiform
Hamate
Capitate
Trapezoid
Trapezium

Knowledge Level 1, System: Skeletal
Anonymous Contributor

**Cartilage derivatives of 1st pharyngeal arch (mandibular)**

"TMA Super Sexy Guy" (or Girl):

Incus
Malleus
Anterior ligament of malleus
Spine of sphenoid
Sphenomandibular ligament
Genial tubercle of mandible

Knowledge Level 7, System: Skeletal
Ron Norman  AECC

**Cranial bones**

"PEST OF 6":

Parietal
Ethmoid
Sphenoid
Temporal
Occipital
Frontal

The 6 just reminds that there’s 6 of them to remember.

Knowledge Level 1, System: Skeletal
Anonymous Contributor

**Foramen ovale contents**
OVALE:
Otic ganglion (just inferior)
V3 cranial nerve
Accessory meningeal artery
Lesser petrosal nerve
Emissary veins
Knowledge Level 6, System: Skeletal
Syukree  UKM

**Genu valgum vs. genu vargum**

Genu valGUM (knock-knee): knees are GUMmed together.
Varum (bowleg) is the other by default, or Far rhymes with Var, so knees are far apart.
Knowledge Level 1, System: Skeletal
Andrew J. Vasil  UMD School of Medicine, Duluth, MN

**Hand fractures: Colle’s vs. Smith’s**

Colle's fracture: arm in fall position makes a 'C' shape.
Smith’s fracture: arm in fall position makes a 'S' shape.
See diagram.
Knowledge Level 1, System: Skeletal
Soichiro Fushimi  Okayama University Medical School, Japan

**Joints in the midline**

"SC":
In medial line, below Second Cervical, joints are Secondary Cartilaginous and usually have a diSC.
Notes: secondary cartilaginous is also known as symphysis. The one that doesn't have a disc is xiphi-ternal.
Knowledge Level 1, System: Skeletal
Anonymous Contributor

**Lordosis vs. kyphosis**

Lordosis: Lumbar.
KYphosis is HY up on the spine.
Knowledge Level 3, System: Skeletal
Anonymous Contributor

**Medial malleolus: order of tendons, artery, nerve behind it**

"Tom, Dick, And Nervous Harry":
From anterior to posterior:
Tibialis
Digitorum
Artery
Nerve
Hallocus
Full names for these are: Tibialis Posterior, Flexor Digitorum Longus, Posterior Tibial Artery, Posterior Tibial Nerve, Flexor Hallicus Longus.
Alternatively: "Tom, Dick ANd Harry".
Alternatively: "Tom, Dick And Not Harry".
Knowledge Level 3, System: Skeletal
Deepa S. and LCK  Medical student and University of Ottawa

**Navicular contacts 3 of 5 cuneiform bones**

"Navicular is like the Navigator logo":
There are 3 things coming off each.
See diagram.
Therefore, cuboid has to contact 2 of the 5.
Knowledge Level 6, System: Skeletal
Robert O'Connor  University College Dublin

**Ossification ages**
"Every Potential Anatomist Should Know When"
When they ossify, in order of increasing year:
Elbow: 16 years
Pelvis, Ankle: 17 years
Shoulder, Knee: 18 years
Wrist: 19 years
Knowledge Level 4, System: Skeletal
Saurabh Sikka

Rib costal groove: order of intercostal blood vessels and nerve

VAN:
From superior to inferior:
Vein
Artery
Nerve
Knowledge Level 2, System: Skeletal
Anonymous Contributor

Superior orbital fissure: structures passing through

"Lazy French Tarts Lie Naked In Anticipation Of Sex":
Lacrimal nerve
Frontal nerve
Trochlear nerve
Lateral nerve
Nasociliary nerve
Internal nerve
Abducens nerve
Ophthalmic veins
Sympathetic nerves
Knowledge Level 4, System: Skeletal
Anonymous Contributor

Tibia: muscles of pes anserinus (the muscles attached to tibia’s medial side)

“A Girl between Two Sergeants”:
Gracilis is between
Sartorius and
Semitendinosus
Knowledge Level 4, System: Skeletal
Beenish Dow Medical College

Vertebrae: recognizing a thoracic from lumbar

Examine vertebral body shape:
Thoracic is heart-shaped body since your heart is in your thorax.
Lumbar is kidney-bean shaped since kidneys are in lumbar area.
See diagram.
Knowledge Level 3, System: Skeletal
Robert O’Connor University College Dublin

Wrist: radial side vs. ulnar side

Make a fist with your thumb up in the air and say “Rad!”.
Your thumb is now pointing to your Radius.
Note: ‘Rad!’ was a late 80's catchphrase, short for ‘Radical’. Things that were good were called ‘Rad’.
Knowledge Level 1, System: Skeletal
Patrick Esperanzate University College Dublin

ANESTHESIOLOGY

Xylocaine: where not to use with epinephrine

Hi Yield
Vasoconstrictive effects of xylocaine with epinephrine are helpful in providing hemostasis while suturing. However, may cause local ischemic necrosis in distal structures such as the digits, tip of nose, penis, ears.

Robert Lueken  Eastern Virginia Medical School

**Spinal anesthesia agents**

“Little Boys Prefer Toys”:
- Lidocaine
- Bupivacaine
- Procaine
- Tetracaine

Knowledge Level 3, System: Nervous
Anonymous Contributor

**Anesthesia machine/room check**

MS MAID:
- Monitors (EKG, SpO2, EtCO2, etc)
- Suction
- Machine check (according to ASA guidelines)
- Airway equipment (ETT, laryngoscope, oral/nasal airway)
- IV equipment
- Drugs (emergency, inductions, NMBs, etc)

Knowledge Level 1, System: Other/Miscellaneous
Anonymous Contributor

**General anaesthesia: equipment check prior to inducing**

**MALES**:
- Masks
- Airways
- Laryngoscopes
- Endotracheal tubes
- Suction/Stylette, bougie

Knowledge Level 2, System: Other/Miscellaneous
Steve Gust  HMO, Gove District Hospital, NT Australia

**Endotracheal intubation: diagnosis of poor bilateral breath sounds after intubation**

**DOPE**:
- Displaced (usually right mainstem, pyreform fossa, etc.)
- Obstruction (kinked or bitten tube, mucous plug, etc.)
- Pneumothorax (collapsed lung)
- Esophagus

Knowledge Level 5, System: Pulmonary
Marc Colbeck

**BEHAVIOURAL SCIENCE / PSYCHOLOGY**

**Cluster personality disorders**

Cluster A Disorder = Atypical. Unusual and eccentric.
Cluster B Disorder = Beast. Uncontrolled wildness.
Cluster C Disorder = Coward [avoidant type], Compulsive [obsessive-compulsive type], or Clingy [dependent type].

Knowledge Level 1, System: Nervous
Robert O’Connor  University College Dublin

**Depression: major episode characteristics**
**SPACE DIGS:**  
Sleep disruption  
Psychomotor retardation  
Appetite change  
Concentration loss  
Energy loss  
Depressed mood  
Interest wanes  
Guilt  
Suicidal tendencies  
Knowledge Level 2, System: Nervous  
Robert O'Connor  University College Dublin

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**Gain: primary vs. secondary vs. tertiary**  
Primary: Patient's Psyche improved.  
Secondary: Symptom Sympathy for patient.  
Tertiary: Therapist's gain.  
Knowledge Level 3, System: Nervous  
Robert O'Connor  University College Dublin

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**Middle adolescence (14-17 years): characteristics**  
HERO:  
Heterosexual crushes/ Homosexual Experience  
Education regarding short term benefits  
Risk taking  
Omnipotence  
And there is interest in being a Hero (popular).  
Knowledge Level 5, System: Nervous  
Dr. Atif Farooq Khawaja  Rawalpindi Medical College, Pakistan, Gujranwala

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**Narcolepsy: symptoms, epidemiology**  
CHAP:  
Cataplexy  
Hallucinations  
Attacks of sleep  
Paralysis on waking  
Add: Usual presentation is a young male, hence "chap".  
Knowledge Level 3, System: Nervous  
Robert O'Connor  University College Dublin

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**Sleep stages: features**  
DElta waves during DEpest sleep (stages 3 & 4, slow-wave).  
dREmA during REM sleep.  
Knowledge Level 3, System: Nervous  
Anonymous Contributor

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**Keober-Ross dying process: stages**  
"Death Always Brings Great Acceptance":  
Denial  
Anger  
Bargaining  
Grieving  
Acceptance  
Knowledge Level 3, System: Other/Miscellaneous  
Sung H. Kim and Samuel Atom Baek-Kim  Tuckahoe, NY

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**Impotence causes**
PLANE:
Psychogenic: performance anxiety
Libido: decreased with androgen deficiency, drugs
Autonomic neuropathy: impede blood flow redirection
Nitric oxide deficiency: impaired synthesis, decreased blood pressure
Erectile reserve: can’t maintain an erection
Knowledge Level 3, System: Reproductive
Ben Beckwith University of Queensland, Australia

Male erectile dysfunction (MED): biological causes

MED:
Medicines (propranalol, methyldopa, SSRI, etc.)
Ethanol
Diabetes mellitus
Knowledge Level 4, System: Reproductive
Dr. Atif Farooq Khawaja Rawalpindi Medical College, Pakistan, Gujranwala

Premature ejaculation: treatment

2 S’s:
SSRIs [eg: fluoxetine]
Squeezing technique [glans pressure before climax]
More detail with 2 more S’s:
Sensate-focus exercises [relieves anxiety]
Stop and start method [5-6 rehearsals of stopping stimulation before climax]
Knowledge Level 7, System: Reproductive
Dr. Atif Farooq Khawaja Rawalpindi Medical College, Pakistan, Gujranwala

BIOCHEMISTRY

B vitamin names

‘The Rhythm Nearly Proved Contagious’:
In increasing order:
Thiamine (B1)
Riboflavin (B2)
Niacin (B3)
Pyridoxine (B6)
Cobalamin (B12)
Knowledge Level 2, System: Alimentary
Anonymous Contributor

Essential amino acids

‘PVT. TIM HALL always argues, never tires’:
Phe
Val
Thr
Trp
Ile
Met
His
Arg
Lue
Lys
Always argues: the A is for Arg, not Asp.
‘Never tires’: T is not Tyr, but is both Thr and Trp.
Knowledge Level 3, System: Alimentary
Anonymous Contributor

Fasting state: branched-chain amino acids used by skeletal muscles

Knowledge Level 3, System: Alimentary
Anonymous Contributor
“Muscles LIVe fast”:
Leucine
Isoleucine
Valine
Knowledge Level 2, System: Alimentary
Daniel Marcano  Medical school graduate

Folate deficiency: causes

A FOLIC DROP:
Alcoholism
Folic acid antagonists
Oral contraceptives
Low dietary intake
Infection with Giardia
Celiac sprue
Dilatin
Relative folate deficiency
Old
Pregnant
Knowledge Level 5, System: Alimentary
Robert O’Connor  University College Dublin

Glycogen storage: Anderson’s (IV) vs. Cori’s (III) enzyme defect

ABCD:
Anderson’s=Branching enzyme.
Cori’s=Debranching enzyme.
Otherwise, can’t really distinguish clinically.
Knowledge Level 3, System: Alimentary
Anonymous Contributor

Glycogen storage: names of types I through VI

“Viagra Pills Cause A Major Hardon”:
Von Gierke’s
Pompe’s
Cori’s
Anderson’s
McArdle’s
Her’s
Knowledge Level 1, System: Alimentary
Chris Reed  Medical College of Wisconsin

Glycolysis steps

“Goodness Gracious, Father Franklin Did Go By Picking Pumpkins (to) Prepare Pies”:
Glucose
Glucose-6-P
Fructose-6-P
Fructose-1,6-diP
Dihydroxyacetone-P
Glyceraldehyde-P
1,3-BiPhosphoglycerate
3-Phosphoglycerate
2-Phosphoglycerate (to)
Phosphoenolpyruvate [PEP]

Pyruvate
‘Did’, ‘By’ and ‘Pies’ tell you the first part of those three: di-, bi-, and py-.
‘PrEPare’ tells location of PEP in the process.
Knowledge Level 4, System: Alimentary
Ken Evans  Saskatchewan Health, Acute and Emergency Services

Hypervitaminosis A: signs and symptoms

Hi Yield [ID 755]
"Increased Vitamin A makes you **HARD**:

**Headache**/**Hepatomegaly**

**Anorexia**/**Alopecia**

**Really painful bones**

**Dry skin**/**Drowsiness**

Knowledge Level 1, System: Alimentary

Usman Ahmad  KMC

**Infantile Beriberi symptoms**

Restlessness

Sleeplessness

Breathlessness

Soundlessness (aphonia)

Eatlessness (anorexia)

Great heartedness (dilated heart)

Alternatively: Get 5 of 'em with **BERI**: **Breathless**, **Big hearted**, **Eatless**, **Restless**, **Insomnia**.

Knowledge Level 3, System: Alimentary

Usman Ahmad  KMC

**Phosphorylation cascade: action during low glucose**

"In the Phasted State, Phosphorylate":

The phosphorylation cascade becomes active when blood glucose is low.

Knowledge Level 5, System: Alimentary

Anonymous Contributor

**Type 1 glycogen storage disease**

Type 1 = one (**Von**), ie Von Giereke's disease

Knowledge Level 3, System: Alimentary

Dr. Waqas H. Sheikh  BVI Co.

**Van den Bergh reaction (Jaundice test)**

"**Indirect reacting bilirubin = Unconjugated bilirubin**":

Both start with vowels, so they go together: **Indirect & Unconjugated**.

Knowledge Level 2, System: Alimentary

Dr. Waqas H. Sheikh  BVI Co.

**Vitamin B3 (niacin, nicotinic acid) deficiency: pellagra**

The 3 D's of pellagra:

Dermatitis

Diarrhea

Dementia

Note vitamin B3 is the 3 D's.

Knowledge Level 3, System: Alimentary

Andrew J. Vasil  UMD School of Medicine, Duluth, MN

**Vitamins: which are fat soluble**

**KADE**:

Vitamin **K**

Vitamin **A**

Vitamin **D**

Vitamin **E**

Knowledge Level 2, System: Alimentary

Anonymous Contributor

**Coagulation common pathway: factors in order**

10 + 5 - 2 = 13

Coagulation common pathway:

Factor **X** to Factor **V** to Factor **II** to Factor **XIII**

Knowledge Level 1, System: Cardiovascular

John Chung  University of Hawaii John A. Burns School of Medicine

**Fabry's disease**
FABRY’S:
Foam cells found in glomeruli and tubules/ Febrile episodes
Alpha galactosidase A deficiency/ Angiokeratomas
Burning pain in extremities/ BUN increased in serum/ Boys
Renal failure
YX genotype (male, X linked recessive)
Sphingolipidoses
Knowledge Level 3, System: Cardiovascular
Rinku Uberoi UNIBE

Hemoglobin binding curve: causes of shift to right
Hi Yield [ID 2561]
“CADET, face right!”:
CO2
Acid
2,3-DPG (aka 2,3 BPG)
Exercise
Temperature
Knowledge Level 1, System: Cardiovascular
Anonymous Contributor

Porphyrias: acute intermittent porphyria symptoms
Hi Yield [ID 2062]
5 P’s:
- Pain in abdomen
- Polyneuropathy
- Psychological abnormalities
- Pink urine
- Precipitated by drugs (e.g., barbiturates, oral contraceptives, sulpha drugs)
Knowledge Level 3, System: Cardiovascular
Anuradha

Sickle cell disease pathophysiology
[ID 745]
SICKle cell disease is due to a Substitution of the SICKst amino acid of the B chain.
Knowledge Level 4, System: Cardiovascular
Anonymous Contributor

Vitamin K dependent cofactors
Hi Yield [ID 3143]
“Several Tend To Nicely Stop Clots”:
Factor Seven, Ten, Two, Nine.
Protein S, Protein C.
Knowledge Level 1, System: Cardiovascular
Medical Student Class 2004 University of Western Ontario

Adrenaline mechanism
[ID 654]
"ABC of Adrenaline":
Adrenaline--> activates Beta receptors--> increases Cyclic AMP
Knowledge Level 1, System: Endocrine
Usman Ahmad

Insulin: function
Hi Yield [ID 172]
INsuLIN stimulates 2 things to go
IN 2 cells: Potassium and Glucose.
Knowledge Level 1, System: Endocrine
Anonymous Contributor

BUN: creatinine elevation: causes
Hi Yield [ID 2159]
ABCD:
- Azotremia (pre-renal)
- Bleeding (GI)
- Catabolic status
- Diet (high protein parenteral nutrition)
Knowledge Level 3, System: Kidney/Urine
Anthony Chan

G6PD: oxidant drugs inducing hemolytic anemia
Hi Yield [ID 2208]
AAA:
Antibiotic (eg: sulfamethoxazole)
Antimalarial (eg: primaquine)
Antipyretics (eg: acetanilid, but not aspirin or acetaminophen)
Knowledge Level 3, System: Lymphoid
Andrew J. Vasil  UMD School of Medicine, Duluth, MN

Carbon monoxide: electron transport chain target
“CO blocks CO”:
Carbon monoxide (CO) blocks Cytochrome Oxidase (CO)
Knowledge Level 3, System: Other/Miscellaneous
Anonymous Contributor

Citric acid cycle compounds
"Can I Keep Selling Sex For Money, Officer?":
Citrate
Isocitrate
alpha Ketoglutarate
Succinyl CoA
Succinate
Fumarate
Malate
Oxaloacetate
Knowledge Level 1, System: Other/Miscellaneous
Ramon Ter-Oganesyan and Rebecca University of California Irvine

DNA bond strength (nucleotides)
“Crazy Glue”:
Strongest bonds are between Cytosine and Guanine, strong like Crazy Glue (3 H-bonds), whereas the A=T only have 2 H-bonds.
This is relevant to DNA replication, as the weaker A=T will be the site where RNA primer makes the initial break.
Knowledge Level 4, System: Other/Miscellaneous
Lior Greenberg  Technion Faculty of Medicine, Haifa, Israel

Electron transport chain: Rotenone’s site of action
Rotenone is a site specific inhibitor of complex one.
Knowledge Level 3, System: Other/Miscellaneous
Anonymous Contributor

Enzyme kinetics: competitive vs. non-competitive inhibition
With Kompetitive inhibition: Km increases; no change in Vmax.
With Non-kompetitive inhibition: No change in Km; Vmax decreases.
Knowledge Level 1, System: Other/Miscellaneous
Patricia Sanchez  INTEC University, Santo Domingo, Dominican Republic

Enzymes: classification
"Over The HILL”:
Oxidoreductases
Transferases
Hydrolases
Isomerases
Ligases
Lyases
Enzymes get reaction over the hill. See diagram.
Knowledge Level 2, System: Other/Miscellaneous
Kenny Livingstone  St. Andrews medical student

Enzymes: competitive inhibitors
“Competition is hard because we have to travel more kilometers (Km) with the same velocity”:
With competitive inhibitors, velocity remains same but Km increases
Knowledge Level 1, System: Other/Miscellaneous
Dr. Waqas H. Sheikh  BVI Co.

G protein type for respective receptors
"KISS and KICK till you’re SICK of SEX" (QISS and QIQ till you’re SIQ of SQS):
This gives the G-protein type (Gq, Gi, or Gs) for all the receptors. Receptors are in alphabetical order:
alpha1=Q
alpha2=I
beta1=S
beta3=S
M1=Q
M2=I
M3=Q
D1=S
D2=I
H1=Q
H2=S
V1=Q
V2=S
Knowledge Level 4, System: Other/Miscellaneous
Khawaja Atif Farooq and Julien Pham Rawalpindi Medical College, Horizon Medical Institute, Pakistan and University of Washington

<table>
<thead>
<tr>
<th>Metabolism sites</th>
<th>[ID 612]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use both arms to HUG:</td>
<td></td>
</tr>
<tr>
<td>Heme synthesis</td>
<td></td>
</tr>
<tr>
<td>Urea cycle</td>
<td></td>
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<tr>
<td>Gluconeogenesis</td>
<td></td>
</tr>
<tr>
<td>These reactions occur in both cytoplasm and mitochondria.</td>
<td></td>
</tr>
<tr>
<td>Knowledge Level 4, System: Other/Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>Rinku Uberoi</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Na/K pump: concentrations of Na vs. K on inside/outside of cell, pump action, number of molecules moved</th>
<th>Hi Yield [ID 160]</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIKIN:</td>
<td></td>
</tr>
<tr>
<td>There is a High K concentration INSide the cell.</td>
<td></td>
</tr>
<tr>
<td>From this can deduce that the Na/K pump pumps K into cell and Na out of cell.</td>
<td></td>
</tr>
<tr>
<td>Alternatively: When I was learning this pump (circa 1992), a band that was &quot;in&quot; was Kris Kross, and a band that was &quot;out&quot; was &quot;Sha Na Na Na&quot;:</td>
<td></td>
</tr>
<tr>
<td>So pump moves K K (2 K) in and Na Na Na (3 Na) out.</td>
<td></td>
</tr>
<tr>
<td>Sadly, as infectious as their debut album was, Kris Kross can really no longer be classed as &quot;in&quot;.</td>
<td></td>
</tr>
<tr>
<td>Knowledge Level 2, System: Other/Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>Anonymous Contributor</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Na+/K+ pump: movement of ions and quantity</th>
<th>Hi Yield [ID 2529]</th>
</tr>
</thead>
<tbody>
<tr>
<td>K+ and in each consist of 2 characters, so 2 K+ are pumped in.</td>
<td></td>
</tr>
<tr>
<td>Na+ and out each consist of 3 characters, so 3 Na+ are pumped out.</td>
<td></td>
</tr>
<tr>
<td>Knowledge Level 1, System: Other/Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>Anonymous Contributor</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phenylketonuria: which enzyme is deficient</th>
<th>Hi Yield [ID 915]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenylketonuria is caused by a deficiency of:</td>
<td></td>
</tr>
<tr>
<td>Phenylalanine</td>
<td></td>
</tr>
<tr>
<td>Hydroxylase</td>
<td></td>
</tr>
<tr>
<td>Knowledge Level 3, System: Other/Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>Anonymous Contributor</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pompe’s disease: type</th>
<th>Hi Yield [ID 824]</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Police = Po + lys”:</td>
<td></td>
</tr>
<tr>
<td>Pompe’s disease is a lysosomal storage disease (alpha 1,4 glucosidase).</td>
<td></td>
</tr>
<tr>
<td>Knowledge Level 1, System: Other/Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>Lior Greenberg Technion Faculty of Medicine, Haifa, Israel</td>
<td></td>
</tr>
</tbody>
</table>

| Pyruvate: products of complete oxidation | Hi Yield [ID 1133] |
"4 Naked Fun 3 Coeds + 1 Guy": Complete oxidation of pyruvate yields:
4 NADH
FADH2
3 CO2
1 GTP
Knowledge Level 1, System: Other/Miscellaneous
Anonymous Columbia College of Physicians and Surgeons

**Tangier's disease: hallmark**

"Tangierene tonsils":
Hallmark is large orange tonsils.
Important clinical note: there is no increased risk of atherosclerosis, just like eating tangerenes.
Knowledge Level 4, System: Other/Miscellaneous
Anonymous Contributor

**CARDIOLOGY**

**Aortic regurgitation: causes**

**CREAM:**
Congenital
Rheumatic damage
Endocarditis
Aortic dissection/ Aortic root dilatation
Marfan's
Knowledge Level 3, System: Cardiovascular
Jamal Khan Birmingham University Medical Student

**Aortic stenosis characteristics**

**SAD:**
Syncope
Angina
Dyspnoea
Knowledge Level 1, System: Cardiovascular
Anonymous Contributor

**Apex beat: abnormalities found on palpation, causes of impalpable**

**HILT:**
Heaving
Impalpable
Laterally displaced
Thrusting/ Tapping
If it is impalpable, causes are COPD:
COPD
Obesity
Pleural, Pericardial effusion
Dextrocardia
Knowledge Level 2, System: Cardiovascular
Sushant Varma Medical student, University of Sheffield, UK

**Apex beat: differential for impalpable apex beat**

**DOPES:**
Dextrocardia
Obesity
Pericarditis/ Pericardial tamponade/ Pneumothorax
Emphysema
Sinus inversus/ Student incompetence/ Scoliosis/ Skeletal abnormalities (eg pectus excavatum)
Knowledge Level 2, System: Cardiovascular
Fiona Hayes and Moses Lee Tong Chsia and Dalton Boyo UWCM, Cardiff, UK and Not Specified and Medical Student

**Atrial fibrillation: causes**

**Hi Yield**
A S#!T:
Alcohol
Stenosis (mitral valve)
Hypertension
Infarction/ Ischaemia
Thyrotoxicosis
Knowledge Level 1, System: Cardiovascular
Anonymous Contributor

Atrial fibrillation: causes

PIRATES:
Pulmonary: PE, COPD
Iatrogenic
Rheumatic heart: mitral regurgitation
Atherosclerotic: MI, CAD
Thyroid: hyperthyroid
Endocarditis
Sick sinus syndrome
Knowledge Level 1, System: Cardiovascular
Anonymous Contributor

Atrial fibrillation: management

ABCD:
Anti-coagulate
Beta-block to control rate
Cardiovert
Digoxin
Knowledge Level 1, System: Cardiovascular
Anonymous Contributor

Beck's triad (cardiac tamponade)

3 D's:
Distant heart sounds
Distended jugular veins
Decreased arterial pressure
Knowledge Level 3, System: Cardiovascular
Anonymous Contributor

Betablockers: cardioselective betablockers

“Betablockers Acting Exclusively At Myocardium”
Cardioselective betablockers are:
Betaxolol
Acebutolol
Esmolol
Atenolol
Metoprolol
Knowledge Level 5, System: Cardiovascular
Diljot Singh Bedi  GMCH Chandigarh, India

CHF: causes of exacerbation

FAILURE:
Forgot medication
Arrhythmia/ Anaemia
Ischemia/ Infarction/ Infection
Lifestyle: taken too much salt
Upregulation of CO: pregnancy, hyperthyroidism
Renal failure
Embolism: pulmonary
Knowledge Level 6, System: Cardiovascular
Lau Yue Young Geoffrey

Coronary artery bypass graft: indications
DUST:
Depressed ventricular function
Unstable angina
Stenosis of the left main stem
Triple vessel disease
Knowledge Level 1, System: Cardiovascular
Sushant Varma  Medical student, University of Sheffield, UK

Coronary artery bypass graft: indications
Hi Yield  [ID 2067]

DUST:
Depressed ventricular function
Unstable angina
Stenosis of the left main stem
Triple vessel disease
Knowledge Level 1, System: Cardiovascular
Sushant Varma  University of Sheffield, UK

Depressed ST-segment: causes
Hi Yield  [ID 1167]

DEPRESSED ST:
Drooping valve (MVP)
Enlargement of LV with strain
Potassium loss (hypokalemia)
Reciprocal ST- depression (in I/W AMI)
Embolism in lungs (pulmonary embolism)
Subendocardial ischemia
Subendocardial infarct
Encephalon haemorrhage (intracranial haemorrhage)
Dilated cardiomyopathy
Shock
Toxicity of digitalis, quinidine
Knowledge Level 8, System: Cardiovascular
Dr. Sonali V.

ECG: left vs. right bundle block
[IID 218]

“WILLiAM MaRRoW”:
W pattern in V1-V2 and M pattern in V3-V6 is Left bundle block.
M pattern in V1-V2 and W in V3-V6 is Right bundle block.
Note: consider bundle branch blocks when QRS complex is wide.
Knowledge Level 3, System: Cardiovascular
Anonymous Contributor

Exercise ramp ECG: contraindications
[IID 2068]

RAMP:
Recent MI
Aortic stenosis
MI in the last 7 days
Pulmonary hypertension
Knowledge Level 3, System: Cardiovascular
Sushant Varma  University of Sheffield, UK

Heart compensatory mechanisms that ‘save’ organ blood flow during shock
[IID 433]

“Heart SAVER”:
Sympathoadrenal system
Atrial natriuretic factor
Vasopressin
Endogenous digitalis-like factor
Renin-angiotensin-aldosterone system
In all 5, system is activated/factor is released
Knowledge Level 3, System: Cardiovascular
Anonymous Contributor

JVP: wave form
Hi Yield  [ID 2022]
ASK ME:
Atrial contraction
Systole (ventricular contraction)
Closure (closure) of tricusps, so atrial filling
Maximal atrial filling
Emptying of atrium
See diagram.
Knowledge Level 3, System: Cardiovascular
Hafizur Rahman Manchester Royal Infirmary, Manc Medical School

MI: basic management

BOOMAR:
Bed rest
Oxygen
Opiate
Monitor
Anticoagulate
Reduce clot size
Knowledge Level 1, System: Cardiovascular
Anonymous Contributor

MI: signs and symptoms

PULSE:
Persistent chest pains
Upset stomach
Lightheadedness
Shortness of breath
Excessive sweating
Knowledge Level 1, System: Cardiovascular
Sara Nemetz

MI: therapeutic treatment

"O BATMAN!":
Oxygen
Beta blocker
ASA
Thrombolytics (eg heparin)
Morphine
Ace prn
Nitroglycerin
Knowledge Level 1, System: Cardiovascular
Kristy Thomas, PA-C Mesquite Medical Associates, Mesquite, NV

MI: therapeutic treatment

MONAH:
Morphine
Oxygen
Nitrogen
Aspirin
Heparin
Knowledge Level 1, System: Cardiovascular
Anonymous Contributor

MI: treatment of acute MI

COAG:
Cyclomorph
Oxygen
Aspirin
Glycerol trinitrate
Knowledge Level 1, System: Cardiovascular
Alan Desmond Cork University Hospital

Mitral stenosis (MS) vs. regurgitation (MR): epidemiology

Knowledge Level 3, System: Cardiovascular
Mervyn Jenner Liverpool Heart and Chest Hospital
MS is a female title (Ms.) and it is female predominant.  
MR is a male title (Mr.) and it is male predominant.  
Knowledge Level 4, System: Cardiovascular  
Anonymous Contributor

**Murmur attributes** (ID 1437)

"IL PQRST" (person has ill PQRST heart waves):
- Intensity
- Location
- Pitch
- Quality
- Radiation
- Shape
- Timing 
Knowledge Level 6, System: Cardiovascular  
Ghassan Abu Said 4th year Medical Student

**Murmurs: innocent murmur features** (ID 1243)

8 S's:
- Soft
- Systolic
- Short
- Sounds (S1 & S2) normal
- Symptomless
- Special tests normal (X-ray, EKG)
- Standing/Sitting (vary with position)
- Sternal depression 
Knowledge Level 4, System: Cardiovascular  
Ziad Jaradat Jordan University School of Medicine

**Murmurs: louder with inspiration vs expiration** (ID 3061)

Left sided murmurs louder with expiration  
Right sided murmurs louder with inspiration.  
Knowledge Level 3, System: Cardiovascular  
Anonymous Contributor

**Murmurs: questions to ask** (ID 3073)

SCRIPT:
- Site
- Character (eg harsh, soft, blowing)
- Radiation
- Intensity
- Pitch
- Timing 
Knowledge Level 2, System: Cardiovascular  
Jamal Khan Birmingham University Medical Student

**Murmurs: right vs. left loudness** (ID 475)

"RILE": 
Right sided heart murmurs are louder on inspiration. 
Left sided heart murmurs are loudest on expiration. 
Knowledge Level 2, System: Cardiovascular  
Anonymous Contributor

**Murmurs: systolic vs. diastolic** (ID 967)

PASS: Pulmonic & Aortic Stenosis=Systolic.  
PAID: Pulmonic & Aortic Insufficiency=Diastolic.  
Knowledge Level 1, System: Cardiovascular  
W. Ciulla, RN, PA-C New Life Medical Clinic

**Myocardial infarctions: treatment** (ID 2181)
**INFARCTIONS:**
IV access
Narcotic analgesics (eg morphine, pethidine)
Facilities for defibrillation (DF)
Aspirin/ Anticoagulant (heparin)
Rest
Converting enzyme inhibitor
Thrombolysis
IV beta blocker
Oxygen 60%
Nitrates
Stool Softeners

Knowledge Level 2, System: Cardiovascular
Anonymous Contributor

**Pericarditis: causes**

**CARDIAC RIND:**
Collagen vascular disease
Aortic aneurysm
Radiation
Drugs (such as hydralazine)
Infections
Acute renal failure
Cardiac infarction
Rheumatic fever
Injury
Neoplasms
Dressler's syndrome

Knowledge Level 5, System: Cardiovascular
Anonymous Contributor

**Pericarditis: EKG**

“PericarditiS”:
PR depression in precordial leads.
ST elevation.

Knowledge Level 3, System: Cardiovascular
Anonymous Contributor

**Peripheral vascular insufficiency: inspection criteria**

**SICVD:**
Symmetry of leg musculature
Integrity of skin
Color of toenails
Varicose veins
Distribution of hair

Knowledge Level 1, System: Cardiovascular
Jeffrey Turner  Memorial University, Canada

**Pulseless electrical activity: causes**

**PATCH MED:**
Pulmonary embolus
Acidosis
Tension pneumothorax
Cardiac tamponade
Hypokalemia/ Hyperkalemia/ Hypoxia/ Hypothermia/ Hypovolemia
Myocardial infarction
Electrolyte derangements
Drugs

Knowledge Level 2, System: Cardiovascular
Will Anderson  University of Alberta, Edmonton, Alberta, Canada

**Rheumatic fever: Revised Jones' criteria**
JONES criteria:
Major criteria:
- Joint (arthritis)
- Obvious (Cardiac)
- Nodule (Rheumatic)
- Erythema marginatum
- Sydenham chorea
Minor criteria:
- Inflammatory cells (leukocytosis)
- Temperature (fever)
- ESR/CRP elevated
- Raised PR interval
- Itself (previous Hx of Rheumatic fever)
- Arthralgia
Knowledge Level 3, System: Cardiovascular
Anthony Chan  Chinese University of Hong Kong

ST elevation causes in ECG

Elevation:
- Electrolytes
- LBBB
- Early repolarization
- Ventricular hypertrophy
- Aneurysm
- Treatment (eg pericardiocentesis)
- Injury (AMI, contusion)
- Osborne waves (hypothermia)
- Non-occlusive vasospasm
Knowledge Level 4, System: Cardiovascular
Ken Evans  Saskatchewan Health, Acute and Emergency Services

Supraventricular tachycardia: treatment

ABCDE:
- Adenosine
- Beta-blocker
- Calcium channel antagonist
- Digoxin
- Excitation (vagal stimulation)
Knowledge Level 5, System: Cardiovascular
Richard Thompson  Queens University, Belfast, NI

Ventricular tachycardia: treatment

LAMB:
- Lidocaine
- Amiodarone
- Mexiletine/Magnesium
- Beta-blocker
Knowledge Level 5, System: Cardiovascular
Richard Thompson  Queens University, Belfast, NI

CHEMISTRY

Benzene ring: order of substituents

"Benzene likes to ROMP":
- From R group moving around the ring:
  R group
  Ortho
  Meta
  Para
Knowledge Level 1, System: Other/Miscellaneous
Sabra and Josh Kunken  Undergrad, Univ. of Calif, Berkeley

Cation vs. anion: positive vs. negative
The t in cation looks like a plus sign: "ca+ion".
Cation is positive, anion is negative.
Knowledge Level 1, System: Other/Miscellaneous
Ken Evans  Saskatchewan Health, Acute and Emergency Services

**Cis/trans (geometric) isomer nomenclature**

"Zame Zide. Opposite."
Z is the 2 functional groups on the same side of double bond.
E is for opposite sides.
Knowledge Level 1, System: Other/Miscellaneous
Anonymous Contributor

**Cis/trans (geometric) isomers: arrangement of functional groups**

Cis starts with a C and the functional groups form a C.
Trans, therefore is the other one by default.
Knowledge Level 1, System: Other/Miscellaneous
Spencer Oates

**Gibb’s free energy formula**

"Good Honey Tastes Sweet":
(\(\Delta\)G = H - TS)
Knowledge Level 1, System: Other/Miscellaneous
Ken Evans  Saskatchewan Health, Acute and Emergency Services

**Oxidation vs. reduction: electrochemical cell and electron gain/loss**

AN OIL RIG CAT:
At the ANode, Oxidation Involves Loss of electrons.
Reduction Involves Gaining electrons at the CAThode.
Knowledge Level 1, System: Other/Miscellaneous
Susan Monash (Peninsula) Undergrad

**DERMATOLOGY**

**Clubbing: causes**

CLUBBING:
Cyanotic heart disease
Lung disease (hypoxia, lung cancer, bronchiectasis, cystic fibrosis)
UC/Crohn’s disease
Biliary cirrhosis
Birth defect (harmless)
Infective endocarditis
Neoplasm (esp. Hodgkins)
GI malabsorption
Knowledge Level 2, System: Integumental
Anonymous Contributor

**White patch of skin: differential**

‘Vitiligo PATCH’:
Vitiligo
Pityriasis alba/ Post-inflammatory hypopigmentation
Age related hypopigmentation
Tinea versicolor/ Tuberculous sclerosis (ashleaf macule)
Congenital birthmark
Hansen’s (leprosy)
Knowledge Level 5, System: Integumental
Dr. Chetan Wasekar  Set G.S. Medical College, KEM Hospital, Bombay

**Wound healing: factors delaying**

[ID 1387]
**DID NOT HEAL:**
Drugs
Infection/ Icterus/ Ischemia
Diabetes
Nutrition
Oxygen (hypoxia)
Toxins
Hypothermia/ Hyperthermia
EtOH
Acidosis
Local anesthetics

Knowledge Level 4, System: Integumental
Mohamed Azim Assistant lecturer of Pediatric Surgery, Alexandria University, Egypt

**EMBRYOLOGY**

**Branchial arch giving rise to aorta**

"Aor- from Four":
Aorta is from fourth arch.
Knowledge Level 4, System: Cardiovascular
Robert O'Connor University College Dublin

**Tetrology of Fallot**

"Don't DROP the baby":
Defect (VSD)
Right ventricular hypertrophy
Overriding aorta
Pulmonary stenosis
Knowledge Level 1, System: Cardiovascular
K. Ennix University of Tennessee at Memphis

**Potter syndrome: features**

POTTER:
Pulmonary hypoplasia
Oligohydrominios
Twisted skin (wrinkly skin)
Twisted face (Potter facies)
Extremities defects
Renal agenesis (bilateral)
Knowledge Level 6, System: Kidney/Urine
Dr. Atif Farooq Khawaja Rawalpindi Medical College, Islamabad, Gujranwala, Pakistan

**Cranial and spinal neural crest: major derivatives**

GAMES:
Gliac cells (of peripheral ganglia)
Arachnoid (and pia)
Melanocytes
Enteric ganglia
Schwann cells
Knowledge Level 3, System: Nervous
Ron Norman AECC

**Neuroectoderm derivatives**

Neuroectoderm gives rise to:
Neurons
Neuroglia
Neurohypophysis
pitNeuro (pituitary gland)
Knowledge Level 6, System: Nervous
Payam Mehranpour

**Fetal alcohol syndrome (FAS): features**
FAS:
Facial hypoplasia/Forebrain malformation
Attention deficit disorder/Altered joints
Short stature/Septal defects/Small I.Q
Knowledge Level 5, System: Other/Miscellaneous
Dr. Atif Farooq Khawaja Rawalpindi Medical College, Pakistan/Gujranwala

Mesoderm components

MESODERM:
Mesothelium (peritoneal, pleural, pericardial)/Muscle (striated, smooth, cardiac)
Embryologic
Spleen/Soft tissue/Serosus linings/Sarcoma/Somite
Osseous tissue/Outer layer of suprarenal gland (cortex)/Ovaries
Dura/Ducts of genitalia
Endothelium
Renal
Microglia/Mesenchyme/Male gonad
Knowledge Level 5, System: Other/Miscellaneous
Rinku Uberoi UNIBE

Teratogenesis: when it occurs

Teratogenesis is most likely during organogenesis—between the:
Third and
Eighth weeks of gestation.
Knowledge Level 3, System: Other/Miscellaneous
Rinku Uberoi

Weeks 2, 3, 4 of development: an event for each

Week Two: Bilaminar germ disc.
Week Three: Trilaminar germ disc.
Week Four: Four limbs appear.
Knowledge Level 2, System: Other/Miscellaneous
Robert O’Connor University College Dublin

Placenta-crossing substances

"WANT My Hot Dog":
Wastes
Antibodies
Nutrients
Teratogens
Microorganisms
Hormones/HIV
Drugs
Knowledge Level 4, System: Reproductive
Anonymous Contributor

EMERGENCY MEDICINE

Ipecac: contraindications

4 C’s:
Comatose
Convulsing
Corrosive
hydroCarbon
Knowledge Level 6, System: Alimentary
Vince Yamashiroya

Acute LVF management

Hi Yield [ID 606]
Hi Yield [ID 861]
Hi Yield [ID 173]
Hi Yield [ID 498]
Hi Yield [ID 1753]
Hi Yield [ID 525]
Atrial fibrillation: causes of new onset

THE ATRIAL FIBS:
- Thyroid
- Hypothermia
- Embolism (P.E.)
- Alcohol
- Trauma (cardiac contusion)
- Recent surgery (post CABG)
- Ischemia
- Atrial enlargement
- Lone or idiopathic
- Fever, anemia, high-output states
- Infarct
- Bad valves (mitral stenosis)
- Stimulants (cocaine, theo, amphet, caffeine)

Knowledge Level 9, System: Cardiovascular
Sam LaCapra, M.D., F.A.C.E.P. Emergency Physician

JVP: raised JVP differential

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

Knowledge Level 5, System: Cardiovascular
Dr. Mohsin Maqbool Bahawal-Victoria Hospital, Bahawalpur

MI: immediate treatment

DOGASH:
- Diamorphine
- Oxygen
- GTN spray
- Aspirin 300mg
- Streptokinase
- Heparin

Knowledge Level 2, System: Cardiovascular
Ken Hodson Medical Student, University of Bristol

PEA/Asystole (ACLS): etiology

ITCHPAD:
- Infarction
- Tension pneumothorax
- Cardiac tamponade
- Hypovolemia/ Hypothermia/ Hypo-, Hyperkalemia/ Hypomagnesemia/ Hypoxemia
- Pulmonary embolism
- Acidosis
- Drug overdose

Knowledge Level 4, System: Cardiovascular
Carl Roberts A.S.EMS, CCEMT-P, CFP US Army Special Forces

Shock: signs and symptoms
TV SPARC CUBE:
Thirst
Vomiting
Sweating
Pulse weak
Anxious
Respirations shallow/rapid
Cool
Cyanotic
Unconscious
BP low
Eyes blank
Knowledge Level 3, System: Cardiovascular
Anonymous Contributor

Subarachnoid hemorrhage (SAH) causes

BATS:
Berry aneurysm
Arteriovenous malformation/ Adult polycystic kidney disease
Trauma (eg being struck with baseball bat)
Stroke
Knowledge Level 3, System: Cardiovascular
Cusano and Mamta  SGUSOM

Syncope causes, by system

HEAD HEART VESSELS:
CNS causes include HEAD:
Hypoxia/ Hypoglycemia
Epilepsy
Anxiety
Dysfunctional brain stem (basivertebral TIA)
Cardiac causes are HEART:
Heart attack
Embolism (PE)
Aortic obstruction (IHSS, AS or myxoma)
Rhythm disturbance, ventricular
Tachycardia
Vascular causes are VESSELS:
Vasovagal
Ectopic (reminds one of hypovolemia)
Situational
Subclavian steal
ENT (glossopharyngeal neuralgia)
Low systemic vascular resistance (Addison's, diabetic vascular neuropathy)
Sensitive carotid sinus
Knowledge Level 6, System: Cardiovascular
Bill Young MD  University of Kentucky Dept of Emergency Medicine

Ventricular fibrillation: treatment

Shock= Defibrillate
Everybody= Epinephrine
Little= Lidocaine
Big= Bretylium
Momma= MgSO4
Poppa= Pocainamide
Knowledge Level 1, System: Cardiovascular
Anonymous Contributor

Vfib/Vtach drugs used according to ACLS
"Every Little Boy Must Pray":
Epinephrine
Lidocaine
Bretylium
Magsulfate
Procaainamide
Knowledge Level 2, System: Cardiovascular
Midnight Medic  Paramedic in Texas

Diabetic ketoacidosis management

F*CKING:
Fluids (crystalloids)
Urea (check it)
Creatinine (check it)/ Catheterize
K+ (potassium)
Insulin (5u/hour. Note: sliding scale no longer recommended in the UK)
Nasogastic tube (if patient comatose)
Glucose (once serum levels drop to 12)
Knowledge Level 4, System: Endocrine
Graeme Little  University College London

Coma causes checklist

AEIOU TIPS:
Acidosis/ Alcohol
Epilepsy
Infection
Overdosed
Uremia
Trauma to head
Insulin: too little or too much
Psychosis episode
Stroke occurred
Knowledge Level 2, System: Nervous
Midnight Medic  Paramedic in Texas

Meningococcal meningitis: complications

SAD REP:
Sepsis/ Shock/ Subdural effusion
Ataxia/ Abscess (brain)
DIC/ Deafness
Retardation
Epilepsy
Paralysis
Knowledge Level 5, System: Nervous
Richard Thompson  Queens University, Belfast, NI

Miosis: causes of pin-point pupils

CPR ON SLIME:
Clonidine
Phenothiazines
Resting (deep sleep)
Opiates
Narcotics
Stroke (pontine hemorrhage)
Lomotil (diphenoxylate)
Insecticides
Mushrooms/ Muscarinic (inocybe, clitocybe)
Eye drops
Knowledge Level 7, System: Nervous
Sam LaCapra, M.D., F.A.C.E.P.  Emergency Physician

Neurological focal deficits
10 S's:
Sugar (hypo, hyper)
Stroke
Seizure (Todd's paralysis)
Subdural hematoma
Subarachnoid hemorrhage
Space occupying lesion (tumor, avm, aneurysm, abscess)
Spinal cord syndromes
Somatiform (conversion reaction)
Sclerosis (MS)
Some migraines
Knowledge Level 9, System: Nervous
Sam LaCapra, M.D., F.A.C.E.P. Emergency Physician

**Unconsciousness: differential**

**FISH SHAPED:**
Fainted
Illness/ Infantile febrile convulsions
Shock
Head injuries
Stroke (CVE)
Heart problems
Asphyxia
Poisons
Epilepsy
Diabetes
Knowledge Level 1, System: Nervous
B Sylvester Surrey Ambulance Service (UK)

**Coma and significantly reduced conscious state causes: causes**

**COMA:**
CO2 and CO excess
Overdose: TCAs, Benzos, EtOH, insulin, paracetamol, etc.
Metabolic: BSL, Na+, K+, Mg2+, urea, ammonia, etc.
Apoplexy: stroke, SAH, extradural, subdural, Ca, meningitis, encephalitis, cerebral abscess, etc.
Knowledge Level 4, System: Other/Miscellaneous
Steve Gust HMO, Gove District Hospital, NT Australia

**Malignant hyperthermia treatment**

"Some Hot Dude Better Give Iced Fluids Fast!" (Hot dude = hypothermia):
Stop triggering agents
Hyperventilate/ Hundred percent oxygen
Dantrolene (2.5mg/kg)
Bicarbonate
Glucose and insulin
IV Fluids and cooling blanket
Fluid output monitoring/ Furosemide/ Fast heart [tachycardia]
Knowledge Level 3, System: Other/Miscellaneous
Anonymous Contributor

**RLQ pain: differential**

**APPENDICITIS:**
Appendicitis/ Abscess
PID/ Period
Pancreatitis
Ectopic/ Endometriosis
Neoplasia
Diverticulitis
Intussusception
Crohns Disease/ Cyst (ovarian)
IBD
Torsion (ovary)
Irritable Bowel Syndrome
Stones
Knowledge Level 1, System: Other/Miscellaneous
**Shock: types**

RN CHAMPS:
- Respiratory
- Neurogenic
- Cardiogenic
- Hemorrhagic
- Anaphylactic
- Metabolic
- Psychogenic
- Septic

Alternatively: "MR. C.H. SNAP", or "NH CRAMPS".

**ARDS: diagnostic criteria**

ARDS:
- Acute onset
- Ratio (PaO2/FiO2) less than 200
- Diffuse infiltration
- Swan-Ganz Wedge pressure less than 19 mmHg

**Asthma: management of acute severe**

"O S#!T":
- Oxygen (high dose: >60%)
- Salbutamol (5mg via oxygen-driven nebuliser)
- Hydrocortisone (or prednisolone)
- Ipratropium bromide (if life threatening)
- Theophylline (or preferably aminophylline-if life threatening)

**Fall: potential causes**

I'VE FALLEN:
- Illness
- Vestibular
- Environmental
- Feet/ Footwear
- Alcohol and drugs
- Low blood pressure
- Low O2 states
- Ears/ Eyes
- Neuropathy

**ENT**

**Oralpharangeal cancers: aetiology**

6 S's:
- Smoking
- Spicy food
- Syphilis
- Spirits [booze]
- Sore tooth
- Sepsis
  - Also bezel nuts.

**Nasopharyngeal carcinoma: classic symptoms**
NOSE:
Neck mass
Obstructed nasal passage
Serous otitis media externa
Epistaxis or discharge
Knowledge Level 3, System: Pulmonary
Anonymous Contributor

EPIDEMIOLOGY / BIOSTATISTICS

Alcohol withdrawal effects

“$#IT$”:
Shakes/ Seizures/ Sweats/ Stomach pains (n/v)
Hallucinosis (auditory)
Increased vitals/ Insomnia
Tremens (delirium tremens-the lethal part)
Knowledge Level 3, System: Alimentary
HBV  Morehouse School of Medicine

Suicide risk factors

SAD PERSONS:
Sex: male
Age: young, elderly
Depression
Previous suicide attempts
Ethanol and other drugs
Reality testing/ Rational thought (loss of)
Social support lacking
Organized suicide plan
No spouse
Sickness/ Stated future intent
Knowledge Level 4, System: Nervous
Anonymous Contributor

Accuracy of test: sensitivity vs. specificity

Sensitivity of a test: related to the rate of false Negatives.
Specificity of a test: related to the rate of false Positives.
Alternatively written:
Sensitiv: No Non-Negatives.
Specific: Punny Pseudo-Positives.
Knowledge Level 2, System: Other/Miscellaneous
Fred Reid  Undergrad at St-Andrews, UK

Hill criteria for causality

“’Clowns Pursuing Epidemiology’ Commonly Behind The Silly Samples”:
Consistency
Plausibility
Experimentation
Biological gradient
Coherence
Temporality
Strength of association
Specificity
Knowledge Level 6, System: Other/Miscellaneous
TR  Columbia PandS

Incidence vs. prevalence

Incidence: Initiate Infection In Interval.
Knowledge Level 1, System: Other/Miscellaneous
Robert O’Connor  University College Dublin

Informed consent: requirements, exceptions

Hi Yield [ID 402]
Hi Yield [ID 151]
Hi Yield [ID 344]
Hi Yield [ID 925]
Hi Yield [ID 1411]
Hi Yield [ID 858]
"Sign this DOC before we can start": Discussion Obtain agreement Coercion-free Exceptions to informed consent are WIPE: Waiver Incompetent Privilege (therapeutic privilege) Emergency

Knowledge Level 1, System: Other/Miscellaneous Robert O’Connor University College Dublin

Prevention: primary vs. secondary vs. tertiary

Primary: Predisposing factors decreased.
Secondary: Severity decreased.
Tertiary: Therapy, Training.

Knowledge Level 1, System: Other/Miscellaneous Robert O’Connor University College Dublin

Recall bias

REcall bias is a problem with RETrospective studies and is based on ability to REmember.

Knowledge Level 4, System: Other/Miscellaneous Rinku Uberoi

GASTROENTEROLOGY

Bilirubin: common causes for increased levels

"HOT Liver": Hemolysis Obstruction Tumor Liver disease

Knowledge Level 4, System: Alimentary Sung H. Kim

Celiac sprue gluten sensitive enteropathy: gluten-containing grains

BROW: Barley Rye Oats Wheat

Flattened intestinal villi of celiac sprue are smooth, like an eyebrow.

Knowledge Level 4, System: Alimentary Jack A. Pasquale, MD St. George’s University, School of Medicine

Charcot’s triad (gallstones)

"Charge a FEE": Charcot’s triad is: Fever Epigastric & RUQ pain Emesis & nausea

Knowledge Level 2, System: Alimentary Anonymous Contributor

Cholangitis features
CHOLANGITITS:
Charcot's triad/ Conjugated bilirubin increase
Hepatic abscesses/ Hepatic (intra/extra) bile ducts/ HLA B8, DR3
Obstruction
Leukocytosis
Alkaline phosphatase increase
Neoplasms
Gallstones
Inflammatory bowel disease (ulcerative colitis)
Transaminase increase
Infection
Sclerosing
Knowledge Level 3, System: Alimentary
Rinku S. Uberoi  UNIBE

Cirrhosis: causes of hepatic cirrhosis

HEPATIC:
Hemochromatosis (primary)
Enzyme deficiency (alpha-1-anti-trypsin)
Post hepatic (infection + drug induced)
Alcoholic
Tyrosinosis
Indian childhood (galactosemia)
Cardiac/ Cholestatic (biliary)/ Cancer/ Copper (Wilson's)
Knowledge Level 2, System: Alimentary
Dr. Chetan Wasekar

Crohn's disease: morphology, symptoms

CHRISTMAS:
Cobblestones
High temperature
Reduced lumen
Intestinal fistulae
Skip lesions
Transmural (all layers, may ulcerate)
Malabsorption
Abdominal pain
Submucosal fibrosis
Knowledge Level 2, System: Alimentary
Samuel Atom Baek-Kim

Digestive disorders: pH level

With vomiting both the pH and food come up.
With diarrhea both the pH and food go down.
Knowledge Level 3, System: Alimentary
Joel Topf  Indiana University

GIT symptoms

BAD ANAL S#!T:
Bleeding
Abdominal pain
Dysphagia
Abdominal bloating
Nausea & vomiting
Anorexia/ Appetite changes
Lethargy
S#!ts (diarrhea)
Heartburn
Increased bilirubin (jaundice)
Temperature (fever)
Knowledge Level 1, System: Alimentary
The Cashman  University of Queensland, Australia

H. Pylori treatment regimen (rough guidelines)

Knowledge Level 3, System: Alimentary
The Cashman  University of Queensland, Australia
"Please Make Tummy Better":
Proton pump inhibitor
Metronidazole
Tetracycline
Bismuth
Alternatively: TOMB:
Tetracycline
Omeprazole
Metronidazole
Bismuth

Knowledge Level 2, System: Alimentary
Steven Holsenback and Leena Alexander  COMP and Texas, USA

Hepatic encephalopathy: precipitating factors

HEPATICS:
Hemorrhage in GIT/ Hyperkalemia
Excess protein in diet
Paracentesis
Acidosis/ Anemia
Trauma
Infection
Colon surgery
Sedatives

Knowledge Level 4, System: Alimentary
Dr. Chetan Wasekar

IBD: extraintestinal manifestations

A PIE SAC:
 Aphthous ulcers
 Pyoderma gangrenosum
 Iritis
 Erythema nodosum
 Sclerosing cholangitis
 Arthritis
 Clubbing of fingertips

Knowledge Level 5, System: Alimentary
Anonymous Contributor

IBD: surgery indications

"I CHOP":
Infection
Carcinoma
Haemorrhage
Obstruction
Perforation
"Chop" convenient since surgery chops them open.

Knowledge Level 3, System: Alimentary
Anonymous Contributor

Liver failure (chronic): signs found on the arms

CLAPS:
Clubbing
Leukonychia
Asterixis
Palmar erythema
Scratch marks

Knowledge Level 1, System: Alimentary
Jason

Pancreatitis (acute): causes

Hi Yield [ID 143]
GET SMASHED:
Gallstones
Ethanol
Trauma
Steroids
Mumps
Autoimmune (PAN)
Scorpion stings
Hyperlipidemia/ Hypercalcemia
ERCP
Drugs (including azathioprine and diuretics)

Note: 'Get Smashed' is slang in some countries for drinking, and ethanol is an important pancreatitis cause.

Knowledge Level 3, System: Alimentary
Chris Perry Edinburgh Medical School

<table>
<thead>
<tr>
<th>Pancreatitis: criteria</th>
</tr>
</thead>
</table>
PANCREAS:
PaO2 below 8
Age >55
Neutrophils: WCC >15
Calcium below 2
Renal: Urea >16
Enzymes: LDH >600; AST >200
Albumin below 32
Sugar: Glucose >10 (unless diabetic patient)
Knowledge Level 4, System: Alimentary
Daniel Henning 4th yr Medical Student, Belfast, UK

<table>
<thead>
<tr>
<th>Pancreatitis: Ranson criteria for pancreatitis at admission</th>
</tr>
</thead>
</table>
LEGAL:
Leukocytes > 16,000
Enzyme AST > 250
Glucose > 200
Age > 55
LDH > 350
Knowledge Level 2, System: Alimentary
Pedro Tulio

<table>
<thead>
<tr>
<th>Ulcerative colitis: complications</th>
</tr>
</thead>
</table>
"PAST Colitis":
Pyoderma gangrenosum
Ankylosing spondylitis
Sclerosing pericholangitis
Toxic megacolon
Colon carcinoma
Knowledge Level 4, System: Alimentary
Ritu Garg

<table>
<thead>
<tr>
<th>Vomiting: extra GI differential</th>
</tr>
</thead>
</table>
VOMITING:
Vestibular disturbance/ Vagal (reflex pain)
Opiates
Migrane/ Metabolic (DKA, gastroparesis, hypercalcemia)
Infections
Toxicity (cytotoxic, digitalis toxicity)
Increased ICP, Ingested alcohol
Neurogenic, psychogenic
Gestation
Knowledge Level 3, System: Alimentary
Anil Pandit, Manipal College of Medical Sciences, Pokhara, Nepal

<table>
<thead>
<tr>
<th>Haemachromatosis complications</th>
</tr>
</thead>
</table>
"HaemoChromatosis Can Cause Deposits Anywhere":
Hypogonadism
Cancer (hepatocellular)
Cirrhosis
Cardiomyopathy
Diabetes mellitus
Arthropathy
Knowledge Level 6, System: Cardiovascular
Logan Mitchell  Dunedin Medical School, New Zealand

**Diabetic ketoacidosis: precipitating factors**

5 I's:
Infection
Ischaemia (cardiac, mesenteric)
Infarction
Ignorance (poor control)
Intoxication (alcohol)
Knowledge Level 4, System: Endocrine
James Thomas

**GENETICS**

**Achondroplasia dwarfism: inheritance pattern**

Achondroplasia Dwarfism is Autosomal Dominant.
Knowledge Level 6, System: Endocrine
Robert O'Connor  University College Dublin

**DiGeorge/ Velocardiofacial syndrome: features**

CATCH 22:
Cardiac abnormalities
Abnormal facies
Thymic aplasia
Cleft palate
Hypocalcemia
22q11 deletion
Knowledge Level 7, System: Lymphoid
Anonymous Contributor

**Tay Sach's features**

SACHS:
Spot in macula
Ashkenazic Jews
CNS degeneration
Hex A deficiency
Storage disease
Extra details with TAY:
Testing recommended
Autosomal recessive/ Amaurosis
Young death (<4 yrs)
Knowledge Level 2, System: Nervous
Robert O'Connor  University College Dublin

**Blots: function of Southern vs. Northern vs. Western**

"SN0W DR0P":
Match up the 1st word letter with 2nd word letter:
Southern=DNA
Northern=RNA
Western=Protein
The 0's in snow drop are zeros, since there is no Eastern blot.
Knowledge Level 1, System: Other/Miscellaneous
Anonymous Contributor

**Cell cycle stages**

Knowledge Level 1, System: Other/Miscellaneous
Anonymous Contributor
"Go Sally Go! Make Children!":
G1 phase (Growth phase 1)
S phase (DNA Synthesis)
G2 phase (Growth phase 2)
M phase (Mitosis)
C phase (Cytokinesis)

Chromosome 15 diseases
Chromosome 15 has its own MAP:
Marfan syndrome
Angelman syndrome
Prader-Willi syndrome

Codons: nonsense mutation
“Stop talking nonsense!”:
Nonsense mutation causes premature stop.

Cri-du-chat syndrome: chromosomal deletion causing it is 5p(-)
What’s another name for a cat that’s five letters long and starts with a P? (Answer: pussy).
Why is the cat crying? Missing its P.

DNA: Z vs. B form: which is inactive
ZZZZ is sleeping (inactive).
B form is therefore active DNA.

Down syndrome pathology
DOWN:
Decreased alpha-fetoprotein and unconjugated estriol (maternal)
One extra chromosome twenty-one
Women of advanced age

Exon vs. intron function
Exons Expressed.
InTrons In Trash.

Hurler syndrome features
HURLER'S:
Heptosplenomegaly
Ugly facies
Recessive (AR inheritance)
L-iduronidase deficiency (alpha)
Eyes clouded
Retarded
Short/Stubby fingers

Imprinting diseases: Prader-Willi and Angelman
Prayer to an Angel:

Prader-Willi and Angelman are the 2 classic imprinting diseases.

Which disease results, depends on whether 15q deletion is maternal or paternal. Keep them straight by:

Paternal is Prader-Willi.

See diagram for cardinal symptom of each disease.

Knowledge Level 3, System: Other/Miscellaneous

Robert O'Connor  University College Dublin

Marfan syndrome features

MARFAN'S:
Mitrail valve prolapse
Aortic Aneurysm
Retinal detachment
Fibrillin
Arachnodactyly
Negative Nitroprusside test (differentiates from homocystinuria)
Sulubxated lens
Knowledge Level 2, System: Other/Miscellaneous
Rinku Uberoi and Wabbas Mahmud  UNIBE and Punjab Medical College Faisalabad, Pakistan

Nucleotides: class having the single ring

"Pyrimadines are CUT from purines"

Cytosine
Uracil
Thiamine
They are cut from purines so the pyrimadines must be smaller (one ring).

Knowledge Level 1, System: Other/Miscellaneous
Anonymous Contributor

Nucleotides: double vs. triple bonded basepairs

"TU bonds" (two bonds):
T-A and U-A have Two bonds.
G-C therefore has the three bonds.
Knowledge Level 2, System: Other/Miscellaneous
Robert O'Connor  University College Dublin

Nucleotides: which are purines

"Pure Silver":

Chemical formula of Pure silver is Ag.
Therefore, Purines are Adenine and Guanine.
Knowledge Level 1, System: Other/Miscellaneous
Jason Mounts  Medical College of Georgia

Pedigree symbols: gender and affected

Gender: The cIRle is a gIRI [so boys are squares].
Affected: Black plague was a disease, so black-filled symbol means an affected/diseased person [so non-filled-in is unaffected].
Knowledge Level 1, System: Other/Miscellaneous
Robert O'Connor  University College Dublin

HISTOLOGY

Taste buds: vallate vs. fungiform distribution
Cross sectional shape of the top of the bud tells their distribution.

Vallate: has a shallow 'V' at the top, so has a 'V' distribution at the back of the tongue.

Fungiform: top is round so it is towards the round end of the tongue.

See diagram.

Note vallate is also sometimes called circumvallate.

Knowledge Level 6, System: Alimentary

Robert O'Connor  University College Dublin

Vascular endothelium: simplified cross-section

LIMA:
- Lumen
- Intima
- Media
- Adventitia

Knowledge Level 1, System: Cardiovascular

Anonymous Contributor

Leukocytes: granulated and agranulated

"BEN Loves Money":
- Granulocytes:
  - Basophil
  - Eosinophil
  - Neutrophil
- Agranulocytes:
  - Lymphocytes
  - Monocytes

Alternatively: Granpa BEN... to keep the granulated group straight.

Knowledge Level 2, System: Lymphoid

Priya and Abe  UNIBE

Mast cell primary granule contents

"Master, His Hephes Causes Choking & Gagging!":
- Mast = Mast cell
- His = Histamine
- Hec = Heparin
- Ch = Chymase
- Gag = GAGase

Knowledge Level 5, System: Lymphoid

Ms Sushi  UCLA Medicine

Neutrophil's 2 distinctive physical features

1: There's up to 5 lobes of the nucleus joined by thin appendages. Tie this to it being a neutrophil nucleus by arranging the 5 lobes into a capital N for Neutrophil.
2: the chicken leg (Barr Body) sticking out. Say it out loud: chick-N. The chick-N leg is for Neutrophil.

Knowledge Level 2, System: Lymphoid

Robert O'Connor  University College Dublin

Muscle cells: cardiac vs. skeletal's nuclei location/number

Nuclei location mirrors where the muscle is located in human body.

Heart muscle is in the middle of body, so heart muscle has nucleus in middle.

Skeletal muscles are at periphery of body, so nuclei are at periphery.

Also, you have 1 heart, so usually only 1 nucleus per heart muscle cell, but have many skeletal muscles, so have many nuclei per long fibre.

See diagram.

Knowledge Level 1, System: Muscle

Robert O'Connor  University College Dublin

Muscle sarcomere: A vs. I as light or dark
There is only one vowel in "dark" and one vowel in "light".
These one vowels match up to their one letter names:
DArk band is the A band.
LIght band is the I band.
Knowledge Level 2, System: Muscle
Robert O'Connor  University College Dublin

**Muscle sarcomere: H line vs. Z disc location**

HAZI (Hazy):
H line is in A-band.
Z disc is in the I band.
Knowledge Level 1, System: Muscle
Sujay Patel  University College Dublin

**IMMUNOLOGY**

**Graves disease: etiology**

In Graves disease, the thyroid-stimulating immunoglobulins are of the IgG class.
Knowledge Level 5, System: Endocrine
Anonymous Contributor

**Lupus signs and symptoms**

SOAP BRAIN:
Serositis [pleuritis, pericarditis]
Oral ulcers
Arthritis
Photosensitivity
Blood [all are low - anemia, leukopenia, thrombocytopenia]
Renal [protein]
ANA
Immunologic [DS DNA, etc.]
Neurologic [psych, seizures]
Knowledge Level 4, System: Integumental
Ken Evans  Saskatchewan Health, Acute and Emergency Services

**Celiac sprue features**

CELIAC:
Cell-mediated autoimmune disease
European descent
Lymphocytes in Lamina propria/ Lymphoma risk
Intolerance of gluten (wheat)
Atrophy of villi in small intestine/ Abnormal D-xylene test
Childhood presentation
Atrophied villi cause less absorption, so diarrhea, weight loss, less energy.
Knowledge Level 3, System: Lymphoid
Robert O’Connor  University College Dublin

**Complement cascade initiating items: alternative vs classic**

Classic: Combined Complexes.
Alternative: Activators Alone, or IgA.
Complexes are made of Ab and Ag combined together.
Examples of activators: endotoxin, microbial surface.
Knowledge Level 2, System: Lymphoid
Robert O’Connor  University College Dublin

**Complement: function of C3a versus C3b**

C3a: Activates Acute [inflammation].
C3b: Bonds Bacteria [to macrophages--easier digestion].
If wish to know more than just C3:
C3a, C4a, C5a activate acute.
C3b, C4b bind bacteria.
Knowledge Level 2, System: Lymphoid
Robert O’Connor and Marcus Fidel  University College Dublin and UNM
**DiGeorge Syndrome: features**

The disease of T's:
- Third and 4th pharyngeal pouch absent.
- Twenty-Two chromosome T-cells absent
- Tetany: hypocalcemia

Knowledge Level 2, System: Lymphoid
Anonymous Contributor

**Goodpasture's Syndrome components**

GoodPasture is Glomerulonephritis and Pnemonitis.
- From autoantibodies attacking Glomerular and Pulmonary basement membranes.

Knowledge Level 3, System: Lymphoid
Robert O'Connor  University College Dublin

**Hypersensitivity reactions: Gell and Goombs nomenclature**

ACID
- Anaphylactic type: type I
- Cytotoxic type: type II
- Immune complex disease: type III
- Delayed hypersensitivity (cell mediated): type IV

Knowledge Level 1, System: Lymphoid
Anonymous Contributor

**Hypersensitivity: type IV example**

Poison IVy causes type IV hypersensitivity.
Knowledge Level 4, System: Lymphoid
Anonymous Contributor

**Immunoglobulin (Ig) types: the important ones worth remembering, in order of appearance**

MAGDElaine (a girl's name):
- IgM
- IgA
- IgG
- IgD
- IgE

Magdelaine tells you the order they usually appear: M first, then A or G.
Alternatively: IgM is IMMEDIATE.
Knowledge Level 1, System: Lymphoid
Magdelaine Deeby and Anonymous Contributor  University College Dublin and University of Aberdeen

**Immunoglobulins, and order B cells present them**

MADGE (character from the old dishwashing liquid commercial):
- IgM
- IgA
- IgD
- IgG
- IgE

Order of presentation by B cells (which is made first, IgD or IgM?) B cells present IgM primarily, and then IgD.
Just remember why all of us are going through this pain...to become M.D's. For a B cell to be competent, it must get its MD.
Finally, by the same rule, B cells must first release M then G immunoglobulin on primary exposure.
Knowledge Level 1, System: Lymphoid
Tevis Anthony Verrett  Creighton University School of Medicine

**Immunoglobulins: which crosses the placenta**

IgG crosses the placenta during G-station.
Knowledge Level 2, System: Lymphoid
Anonymous Contributor

**Interferon gamma: action on macrophages**

Knowledge Level 2, System: Lymphoid
Anonymous Contributor
"Th1nk BIG Mac Attack":
Th1 and NK cells Build Interferon Gamma.
Causes Macrophages to have an augmented Attack [by better lysosome function and increasing reactive oxygen metabolites, nitric oxide and defensins].
Knowledge Level 4, System: Lymphoid
Lior Greenberg  Technion Faculty of Medicine, Haifa, Israel

| MHC I vs. MHC II properties |

| "Imunity helps to exterminate fun for bacteria" |
See attached chart.
Knowledge Level 3, System: Lymphoid
Robert O'Connor  University College Dublin

| Sjogren syndrome: morphology |

| "Jog through the MAPLES": |
Sjogren is:
Mouth dry
Arthritis
Parotid enlarged
Lymphoma
Eyes dry
Sicca (primary) or Secondary
See diagram.
Knowledge Level 2, System: Lymphoid
Robert O'Connor  University College Dublin

| T and B cells: types |

| When bacteria enter body, T-cell says to B: "Help Me Catch Some!" B-cell replies: "My Pleasure!": |
T-cell types:
Helper
Memory
Cytotoxic
Suppressor
B-cell types:
Memory cell
Plasma cell
Knowledge Level 1, System: Lymphoid
Dr. Harsh Sharma  BJMC, Pune, India

| INTERNAL MEDICINE / FAMILY PRACTICE |

| ACEI: contraindications |

| PARK: |
Pregnancy
Allergy
Renal artery stenosis
K increase (hyperkalemia)
Knowledge Level 4, System: Cardiovascular
Anthony Chan

| Anion gap metabolic acidosis: causes |


A MUDPILE CAT:
Alcohol
Methanol
Uremia
Diabetic ketoacidosis
Paraldehyde
Iron/ Isoniazid
Lactic acidosis
Ethylene glycol
Carbamazepine
Aspirin
Toluene
Knowledge Level 5, System: Cardiovascular
Mohamed Azim MD Pediatric Surgeon, Alexandria University, Egypt

<table>
<thead>
<tr>
<th>Haematology: key numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 and 4 are key in in haematology:</td>
</tr>
<tr>
<td>1.34 cm³ of oxygen is carried by a gram of hemoglobin.</td>
</tr>
<tr>
<td>There's 3.4 mg of iron in each gram of hemoglobin.</td>
</tr>
<tr>
<td>There's an average of 3.4 lobes per neutrophil.</td>
</tr>
<tr>
<td>There's 34 mg bilirubin from each gram of hemoglobin.</td>
</tr>
</tbody>
</table>
Knowledge Level 5, System: Cardiovascular
Anonymous Contributor

<table>
<thead>
<tr>
<th>Macrocytic anemia: causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABCDEF:</td>
</tr>
<tr>
<td>Alcohol + liver disease</td>
</tr>
<tr>
<td>B12 deficiency</td>
</tr>
<tr>
<td>Compensatory reticulocytosis (blood loss and hemolysis)</td>
</tr>
<tr>
<td>Drug (cytotoxic and AZT)/ Dysplasia (marrow problems)</td>
</tr>
<tr>
<td>Endocrine (hypothyroidism)</td>
</tr>
<tr>
<td>Folate deficiency/ Fetus (pregnancy)</td>
</tr>
</tbody>
</table>
Knowledge Level 2, System: Cardiovascular
Anthony Chan

<table>
<thead>
<tr>
<th>Metabolic acidosis: causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>KUSSMAL:</td>
</tr>
<tr>
<td>Ketoacidosis</td>
</tr>
<tr>
<td>Uraemia</td>
</tr>
<tr>
<td>Sepsis</td>
</tr>
<tr>
<td>Salicylates</td>
</tr>
<tr>
<td>Methanol</td>
</tr>
<tr>
<td>Alcohol</td>
</tr>
<tr>
<td>Lactic acidosis</td>
</tr>
</tbody>
</table>
Knowledge Level 6, System: Cardiovascular
Steve Gust  Gove District Hospital, NT Australia

<table>
<thead>
<tr>
<th>Non-gap acidosis: causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>HARD UP:</td>
</tr>
<tr>
<td>Hyperalimentation</td>
</tr>
<tr>
<td>Acetazolamide (carbonic anhydrase inhibitors)</td>
</tr>
<tr>
<td>RTA</td>
</tr>
<tr>
<td>Diarrhea</td>
</tr>
<tr>
<td>Uretersigmoidostomy</td>
</tr>
<tr>
<td>Pancreatic fistula</td>
</tr>
</tbody>
</table>
Knowledge Level 5, System: Cardiovascular
James Reeves  Emory University School of Medicine

<table>
<thead>
<tr>
<th>Pancytopenia differential</th>
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</thead>
</table>

Knowledge Level 6, System: Cardiovascular
Steve Gust  Gove District Hospital, NT Australia
"All Of My Blood Has Taken Some Poison":
Aplastic anaemias
Overwhelming sepsis
Megaloblastic anaemias
Bone marrow infiltration
Hypersplenism
TB
SLE
Paroxysmal nocturnal haemoglobinuria
Knowledge Level 5, System: Cardiovascular
Dr. Trisan W. Graham

Raynaud's disease: causes

BAD CT:
Blood disorders (eg polycythaemia)
Arterial (eg atherosclerosis, Buerger's)
Drugs (eg beta-blockers)
Connective tissue disorders (rheumatoid arthritis, SLE)
Traumatic (eg vibration injury)
Knowledge Level 3, System: Cardiovascular
Gajan Rajeswaran  Final Year Medical Student, Imperial College School Of Medicine, London

Ulcers: types

VAN:
Venous/ Vasculitic
Arterial
Neuropathic
Knowledge Level 1, System: Cardiovascular
Anonymous Contributor  University of Sydney, Australia

Acromegaly symptoms

ABCDEF:
Arthralgia/ Arthritis
Blood pressure raised
Carpal tunnel syndrome
Diabetes
Enlarged organs
Field defect
Knowledge Level 1, System: Endocrine
Anonymous Contributor

Gynecomastia: common causes

GYNECOMASTIA:
Genetic  Gender disorder (Klinefelter)
Young boy (pubertal)*
Neonate*
Estrogen*
Cirrhosis/ Cimetidine/ Ca Channel blockers
Old age*
Marijuana
Alcoholism
Spirinolactone
Tumors (Testicular & adrenal)
Isoniazid/ Inhibition of testosterone
Antineoplastics (Alkylating Agents)/ Antifungal(ketoconazole)
* Asterisk indicates physiologic cause.
Knowledge Level 5, System: Endocrine
Rinku S. Uberoi  UNIBE

Hypercalcemia causes
MD PIMPS ME:
Malignancy
Diuretics (thiazide the main culprit)
Parathyroid (hyperparathyroidism)
Immobilization/ Idiopathic
Megadoses of vitamins A,D
Paget's disease
Sarcoidosis
Milk alkali syndrome
Endocrine (Addison's disease, thyrotoxicosis)
Knowledge Level 2, System: Endocrine
Anonymous Contributor

Hypercalcemia: causes

GRIM FED:
Granulomas (sarcoid, TB),
Renal failure
Immobility (esp. long term)
Malignancy
Familial (eg familial hypocalciuric hypercalcemia)
Endocrine (see below for subtypes)
Drugs (esp. thiazide diuretics, lithium)
Endocrine causes are PATH:
Phaeochromocytoma
Addison's disease
Thyrotoxicosis
Hyperparathyroidism
Knowledge Level 4, System: Endocrine
Steve London, England

Hypercalcemia: differential

VITAMIN TRAPS:
Vitamin A and D intoxication
Immobilization
Thyrotoxicosis
Addison's disease/ Acidosis
Milk-alkali syndrome
Inflammatory disorders
Neoplastic disease
Thiazides, other drugs
Rhabdomyolysis
AIDS
Paget's disease/ Parenteral nutrition/ Parathyroid disease
Sarcoidosis
Knowledge Level 2, System: Endocrine
Anonymous Contributor

Pressure Sore: Norton Score

MAGIC:
Mobility
ADL
General condition
Incontinence
Conscious level
Knowledge Level 4, System: Integumental
Anthony Chan

Pruritus without rash: DDx
**ITCHING DX:**
Infections (scabies, toxocariasis, etc)
Thyroidal and other endocrinopathies (eg diabetes mellitus)
Cancer
Hematologic diseases (eg iron deficiency)/ Hepatopathies/ HIV
Idiopathic
Neurotic
Gravid (pruritus of pregnancy)
Drugs
cXcretory dysfunctions (eg uremia)

Knowledge Level 4, System: Integumental
Anonymous Contributor

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**Rashes: time of appearance after fever onset**

"Really Sick Children Must Take No Exercise":
Number of days after fever onset that a rash will appear:

1 Day: Rubella
2 Days: Scarlet fever/ Smallpox
3 Days: Chickenpox
4 Days: Measles (and see the Koplik spots one day prior to rash)
5 Days: Typhus & rickettsia (this is variable)
6 Days: Nothing
7 Days: Enteric fever (salmonella)

Knowledge Level 4, System: Integumental
Anonymous Contributor  Rivka Zieff Hospital Dept. of Pediatrics, Tzfat, Israel

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**Alkalosis: metabolic changes in alkalosis**

"Al-K-loss, Al-Ca-loss":
There is loss of K+ (hypokalemia) and Ca++ (hypocalcemia) in state of alkalosis.

Knowledge Level 2, System: Kidney/Urine
Ibrahim Mansoor  King Edward Medical College

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**Allopurinol: indications**

STORE:
Stones (history of renal stones)
Tophaceous gout (chronic)
Over-producers of urate
Renal disease
Elderly
  Bonus: Probenecid indications are basically the opposite of STORE (no renal stone history, etc.).

Knowledge Level 7, System: Kidney/Urine
Hugo M. Rodriguez, MD  University of Virginia Roanoke-Salem Program

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**Dialysis indications**

HAVE PEE:
Hyperkalemia (refractory)
Acidosis (refractory)
Volume overload
Elevated BUN (> 36 mM)
Pericarditis
Encephalopathy
Edema (pulmonary)

Knowledge Level 1, System: Kidney/Urine
Tim Welke and Darren Yuen  University of Toronto Medical School

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**Renal failure (acute): management**

Hi Yield  [ID 1128]
Hi Yield  [ID 2642]
Hi Yield  [ID 1893]
Hi Yield  [ID 2242]
Hi Yield  [ID 1778]
Manage AEIOU:
Anemia/ Acidosis
Electrolyte and fluids
Infections
Other measures (eg nutrition, nausea, vomiting
Uremia
Knowledge Level 2, System: Kidney/Urine
Malik Tariq Rahim King Edward Medical College, Lahore, Pakistan

**SIADH: causes**

**SIADH:**
Surgery
Intracranial: infection, head injury, CVA
Alveolar: Ca, pus
Drugs: opiates, antiepileptics, cytotoxics, anti-psychotics
Hormonal: hypothyroid, low corticosteroid level
Knowledge Level 5, System: Kidney/Urine
Steve Gust Gove District Hospital, NT, Australia

**SIADH: diagnostic sign**

Syndrome of INAPPropriate Anti-Diuretic Hormone:
Increased
Na (sodium)
PP (urine)

SIADH is characterized by increased urinary sodium.
Knowledge Level 5, System: Kidney/Urine
Rinku Uberoi New York Hospital

**SIADH: major signs and symptoms**

**SIADH:**
Spasms
Isn’t any pitting edema (key DDx)
Anorexia
Disorientation (and other psychoses)
Hyponatremia
Knowledge Level 5, System: Kidney/Urine
Dr. Harsh Sharma BJMC

**Eosinophilia: differential**

**NAACP:**
Neoplasm
Allergy/Asthma
Addison’s disease
Collagen vascular diseases
Parasites
Knowledge Level 5, System: Lymphoid
Anonymous Contributor

**Polycythemia Rubra Vera (PRV): common symptoms**

**PRV:**
Plethora/Pruritis
Ringing in ears
Visual blurriness
Knowledge Level 4, System: Lymphoid
Rinku S. Uberoi UNIBE

**SLE: factors that make SLE active**

Knowledge Level 5, System: Lymphoid
Rinku S. Uberoi UNIBE
UV PRISM:
UV (sunshine)
Pregnancy
Reduced drug (eg steroid)
Infection
Stress
More drug
Knowledge Level 2, System: Lymphoid
Anonymous Contributor

Splenomegaly: causes

CHICAGO:
Cancer
Hem, onc
Infection
Congestion (portal hypertension)
Autoimmune (RA, SLE)
Glycogen storage disorders
Other (amyloidosis)
Knowledge Level 4, System: Lymphoid
Gerard Dang Chicago Medical School

Horner’s syndrome: components

SAMPLE:
Sympathetic chain injury
Anhidrosis
Miosis
Ptosis
Loss of ciliospinal reflex
Enophthalmos
Knowledge Level 5, System: Nervous
Harsh Sharma BJMC, Pune, India

Lethargy, malaise causes

FATIGUED:
Fat/ Food (poor diet)
Anemia
Tumor
Infection (HIV, endocarditis)
General joint or liver disease
Uremia
Endocrine (Addison’s, myxedema)
Diabetes/ Depression/ Drugs
Knowledge Level 3, System: Nervous
The Cashman University of Queensland, Australia

Back pain causes

DISK MASS (since near vertebral disc):
Degeneration (DJD, osteoporosis, spondylosis)
Infection (UTI, PID, Pott’s disease, osteomyelitis, prostatitis)/ Injury, fracture or compression fracture
Spondylitis (ankylosing spondyloarthropathies such as rheumatoid arthritis, Reiters, SLE)
Kidney (stones, infarction, infection)
Multiple myeloma/ Metastasis (from cancers of breast, kidney, lung, prostate, thyroid)
Abdominal pain (referred to the back)/ Aneurysm
Skin (herpes zoster)/ Strain/ Scoliosis and lordosis
Slipped disk/ Spondyloolisthesis
Knowledge Level 3, System: Other/Miscellaneous
Anonymous Contributor

Behcet’s syndrome: diagnostic criteria

[IDs and knowledge levels are not fully transcribed due to the nature of the text and the limits of the transcription process.]
Pathergy test (i/d saline injection)
Recurrent genital ulceration
Oral ulceration (recurrent)
Skin lesions
Eye lesions
  Oral ulceration is central criteria, plus any 2 others.
Knowledge Level 7, System: Other/Miscellaneous
Dr. Harsh Sharma  BJMC, Pune, India

ICU management: A to Z

A: Asepsis/ Airway
B: Bed sore/ Encourage Breathing/ Blood pressure
C: Circulation/ Encourage Coughing/ Consciousness
D: Drains
E: ECG
F: Fluid status
G: GI losses/ Gag reflex
H: Head positioning/ Height
I: Insensible losses
J: Jugular venous pulse
K: Kindness
L: Limb care/ Label
M: Mouth care
N: Nociception/ Nutrition
O: Oxygenation/ Orient the patient
P: Pulse/ Peristalsis/ Physiotherapy
Q: Quiet surroundings
R: Respiratory rate/ Restraint
S: Stress ulcer/ Suctioning
T: Temperature
U: Urine
V: Ventilator
W: Wounds/ Weight
X: Xerosis
Y: whY
Z: Zestful care of the patient
Knowledge Level 9, System: Other/Miscellaneous
Dr. Sonali Vadi

Left iliac fossa: causes of pain

SUPER CLOT:
Sigmoid diverticulitis
Uteric colic
PID
Ectopic pregnancy
Rectus sheath haematoma
Colorectal carcinoma
Left sided lower love pneumonia
Ovarian cyst (rupture, torture)
Threatened abortion/ Testicular torsion
Knowledge Level 3, System: Other/Miscellaneous
Sushant Varma  Medical student, University of Sheffield, UK

Acute stridor: differential

ABCDEF GH:
With fever:
Abscess
Bacterial tracheitis
Croup
Diphtheria
Epiglottitis
  Without fever:
Foreign body
Gas (Toxic Gas)
Hypersensitivity
Knowledge Level 2, System: Pulmonary
Anthony Chan  Chinese University of Hong Kong

**Bronchiectasis: causes**

**A SICK AIRWAY:**
- Airway lesion, chronic obstruction
- Sequestration
- Infection, inflammation
- Cystic fibrosis
- Kartagners syndrome
- Allergic bronchopulmonary aspergillosis
- Immunodeficiencies (hypogammaglobinaemia, myeloma, lymphoma)
- Reflux, inhalation injury
- William Campbell syndrome (and other congenitals)
- Aspiration
- Yellow nail syndrome/ Young syndrome

Knowledge Level 3, System: Pulmonary
Mr. LW Mason  4th Year Medical Student

**Bronchiectasis: differential**

**BRONCHIECTASIS:**
- Bronchial cyst
- Repeated gastric acid aspiration
- Or due to foreign bodies
- Necrotizing pneumonia
- Chemical corrosive substances
- Hypogammaglobulinemia
- Immotile cilia syndrome
- Eosinophilia (pulmonary)
- Cystic fibrosis
- Tuberculosis (primary)
- Atopic bronchial asthma
- Streptococcal pneumonia
- In Young’s syndrome
- Staphylococcal pneumonia

Knowledge Level 4, System: Pulmonary
Benson Moses Benjamin  JSS Medical College Mysore India

**Hemoptysis: causes**

**HEMOPTYSIS:**
- Haemorrhagic diathesis
- Edema [LVF due to mitral stenosis]
- Malignancy
- Others [eg: vasculitis]
- Pulmonary vascular abnormalities
- Trauma
- Your treatment [anticoagulants]
- SLE
- Infarction in lungs
- Septic

Knowledge Level 9, System: Pulmonary
Dr. Sonali Vadi

**Pleural effusion: investigations**

**PLEURA:**
- Pleural fluid (thoracentesis)
- Lung, pleural biopsy
- ESR
- Ultrasound
- Radiogram
- Analysis of blood

Knowledge Level 2, System: Pulmonary
Huiquan Zhao  Children Hospital, Cincinnati
**Pulmonary edema: treatment**

**LMNOP:**
- Lasix
- Morphine
- Nitrates (NTG)
- Oxygen
- Position (upright vs. flat)

*Knowledge Level 3, System: Pulmonary*
*Jeff Gilfor, M.D.*

**Pulmonary edema: treatments**

**MAD DOG:**
- Morphine
- Aminophylline
- Digitalis
- Diuretics
- Oxygen
- Gases in blood (ABG's)

*Knowledge Level 4, System: Pulmonary*
*Anonymous Contributor*

**Pulmonary fibrosis: causes**

**SCAR:**
- **Upper lobe:**
  - Silicosis/Sarcoidosis
  - Coal worker pneumoconiosis
  - Ankylosing spondylitis
- Radiation
  - **Lower lobe:**
  - Systemic sclerosis
  - Cryptogenic fibrosing alveolitis
  - Asbestosis
  - Rheumatoid arthritis

*Knowledge Level 4, System: Pulmonary*
*Anthony Chan*

**Wheezing: causes**

**ASTHMA:**
- Asthma
- Small airways disease
- Tracheal obstruction
- Heart failure
- Mastocytosis or carcinoid
- Anaphylaxis or allergy

*Knowledge Level 3, System: Pulmonary*
*Anonymous Contributor*

**Back trouble causes**

**O, VERSALIUS** (Versalius was the name of a famous physician):
- Osteomyelitis
- Vertebral fracture
- Extraspinal tumour
- Spondylolisthesis
- Ankylosing spondylitis
- Lumbar disk increase
- Intraspinal tumor
- Unhappiness
- Stress

*Knowledge Level 5, System: Skeletal*
*Anonymous Contributor*

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**INTERVIEWING / PHYSICAL EXAM**

**Abdomen assessment**

*Knowledge Level 5, System: Skeletal*
*Anonymous Contributor*
To assess abdomen, palpate all 4 quadrants for DR. GERM:
- Distension: liver problems, bowel obstruction
- Rigidity (board like): bleeding
- Guarding: muscular tension when touched
- Eviseration/Ecchymosis
- Rebound tenderness: infection

Masses

Knowledge Level 2, System: Alimentary
Lyssa Lenske Mount Saint Mary's College BSN Program

### Vomiting: non-GIT differential

**ABCDEFGHIJKLMNOPQRSTUVWXYZ**
- Acute renal failure
- Brain [increased ICP]
- Cardiac [inferior MI]
- DKA
- Ears [labyrinthitis]
- Foreign substances [Tylenol, theo, etc.]
- Glaucoma
- Hyperemesis gravidarum
- Infection [pyelonephritis, meningitis]

Knowledge Level 3, System: Alimentary
Ken Evans Saskatchewan Health, Acute and Emergency Services

### Heart valve auscultation sites

"All Patients Take Meds":
  Reading from top left:
  - Aortic
  - Pulmonary
  - Tricuspid
  - Mitral
  - See diagram.
  - Alternatively: All Prostitutes Take Money.
  - Alternatively: APc To Man.

Knowledge Level 1, System: Cardiovascular
Anonymous Contributor and Raarsi and Dana M. Not specified and University of Birmingham Medical School and MCC Michigan

### Glasgow coma scale: components and numbers

- Scale types is 3 Vs:
  - Visual response
  - Verbal response
  - Vibratory (motor) response
    - Scale scores are 4,5,6:
    - Scale of 4: see so much more
    - Scale of 5: talking jive
    - Scale of 6: feels the pricks (if testing motor by pain withdraw)

Knowledge Level 1, System: Nervous
Rinku Uberoi and Robert O'Connor

### Mental state examination: stages in order

"Assessed Mental State To Be Positively Clinically Unremarkable":
- Appearance and behaviour [observe state, clothing...]
- Mood [recent spirit]
- Speech [rate, form, content]
- Thinking [thoughts, perceptions]
- Behavioural abnormalities
- Perception abnormalities
- Cognition [time, place, age...]
- Understanding of condition [ideas, expectations, concerns]

Knowledge Level 5, System: Nervous
Hafizur Rahman MRI-Manchester Med School

### Pain history checklist

[ID 501]
SOCRATES:
Site
Onset
Character
Radiation
Alleviating factors/ Associated symptoms
Timing (duration, frequency)
Exacerbating factors
Severity
Alternatively, Signs and Symptoms with the 'S'.
Knowledge Level 1, System: Nervous
Piyush and Shirish Toshniwal and Jonathan Round and Neil McKeon Cambridge and Smt. NHL Medical College, Ahmedabad and RFUCMS

### Abdominal swelling causes

9 F's:
- Fat
- Feces
- Fluid
- Flatus
- Fetus
- Full-sized tumors
- Full bladder
- Fibroids
- False pregnancy

Knowledge Level 1, System: Other/Miscellaneous
Richard Thompson and Alex Queens University, Belfast, NI and Not Specified

### Clinical examination: initial Inspection of patient from end of bed

ABC:
- Appearance (SOB, pain, etc)
- Behaviour
- Connections (drips, inhalers, etc connected to patient)

Knowledge Level 2, System: Other/Miscellaneous
Jamal Khan Birmingham University Medical Student

### Differential diagnosis checklist

"A VITAMIN C"
- A and C stand for Acquired and Congenital
- VITAMIN stands for:
  - Vascular
  - Inflammatory (Infectious and non-Infectious)
  - Trauma/Toxins
  - Autoimmune
  - Metabolic
  - Idiopathic
  - Neoplastic

Example usage: List causes of decreased vision: Central retinal artery occlusion, Retinitis pigmentosa, Perforation to gobe, Chronic Gentamycin use, Ruematoid arthritis, Diabetes, Idiopathic, Any eye tumor, Myopia.
Knowledge Level 1, System: Other/Miscellaneous
Nizaar Lilla University Of Cape Town Medical School

### Differential diagnosis checklist

"I VINDICATE AID"
- Idiopathic
- Vascular
- Infectious
- Neoplastic
- Degenerative
- Inflammatory
- Congenital
- Autoimmune
- Traumatic
- Endocrinial and metabolic
- Allergic
Family history (FH)

BALD CHASM:
Blood pressure (high)
Arthritis
Lung disease
Diabetes
Cancer
Heart disease
Alcoholism
Stroke

Mental health disorders (depression, etc.)

Four point physical assessment of a disease

"I'm A People Person":
Inspection
Auscultation
Percussion
Pulpation

Medical history: disease checklist

MJ THREADS:
Myocardial infarction
Jaundice
Tuberculosis
Hypertension
Rheumatic fever/ Rheumatoid arthritis
Epilepsy
Asthma
Diabetes
Strokes

Aside: "History" album was by Michael Jackson (MJ).

Past medical history (PMH)

VAMP THIS:
Vices (tobacco, alcohol, other drugs, sexual risks)
Allergies
Medications
Preexisting medical conditions
Trauma
Hospitalizations
Immunizations
Surgeries

Patient examination organization

SOAP:
Subjective: what the patient says.
Objective: what the examiner observes.
Assessment: what the examiner thinks is going on.
Plan: what they intend to do about it.
Patient profile (PP)

LADDERS:
Living situation/ Lifestyle
Anxiety
Depression
Daily activities (describe a typical day)
Environmental risks/ Exposure
Relationships
Support system/ Stress
Knowledge Level 2, System: Other/Miscellaneous
Michael Waddell  University of Wisconsin Medical School

Physical exam for 'lumps and bumps'

"6 Students and 3 Teachers go for CAMPFIRE":
Site, Size, Shape, Surface, Skin, Scar
Tenderness, Temperature, Transillumination
Consistency
Attachment
Mobility
Pulsation
Fluctuation
Irreducibility
Regional lymph nodes
Edge
Knowledge Level 5, System: Other/Miscellaneous
Lau Yue Young Geoffrey

Physical examination - correct order

"I Palpate People's Abdomens":
Inspection
Palpation
Percussion
Auscultation
Knowledge Level 1, System: Other/Miscellaneous
Jim McHugh  St George's, London

Short statue causes

RETARD HEIGHT:
Rickets
Endocrine (cretinism, hypopituitarism, Cushing's)
Turner syndrome
Achondroplasia
Respiratory(suppurative lung disease)
Down syndrome
Hereditary
Environmental (postirradiation, postinfectious)
IUGR
GI (malabsorption)
Heart (congenital heart disease)
Tilted backbone (scoliosis)
Knowledge Level 9, System: Other/Miscellaneous
Lau Yue Young Geoffrey  Medical Student '03, Hong Kong University

Sign vs. symptom

Sign: something I can detect even if patient is unconscious.
Symptom is something only h YM knows about.
Knowledge Level 1, System: Other/Miscellaneous
Anonymous Contributor

Surgical sieve for diagnostic categories
INVESTIGATIONS:
Iatrogenic
Neoplastic
Vascular
Endocrine
Structural/Mechanical
Traumatic
Inflammatory
Genetic/Congenital
Autoimmune
Toxic
Infective
Old age/Degenerative
Nutritional
Spontaneous/Idiopathic
Knowledge Level 1, System: Other/Miscellaneous
Neil Curran Medical Student, Otago University New Zealand

Breast history checklist
LMNOP:
Lump
Mammary changes
Nipple changes
Other symptoms
Patient risk factors
Knowledge Level 1, System: Reproductive
Gajan Rajeswaran Final Year Medical Student, Imperial College School Of Medicine, London

MICROBIOLOGY

E. coli: major subtypes, key point of each
"HIT by E. coli outbreak":
EnteroHemorrhagic:
HUS from Hamburgers
Enteroinvasive:
Immune-mediated Inflammation
Enterotoxigenic:
Traveller's diarrhea
Knowledge Level 1, System: Alimentary
Robert O'Connor University College Dublin

Entameoba histolytica: disease caused, action
Entamoeba causes Amoebic dysEntery.
Action: histo (cell) lytic (burst), so it bursts cells.
Knowledge Level 2, System: Alimentary
Robert O'Connor University College Dublin

Hepatitis: oral-fecal transmitted types
"ASS Eaters":
Types A and E by oral-fecal route.
Knowledge Level 4, System: Alimentary
Anonymous Contributor

Vibrio: motility
"Vibrio Vibrates":
Vibrio is a genus of actively motile bacteria.
Knowledge Level 5, System: Alimentary
Anonymous Contributor

Endocarditis: indications for surgery
**PUS RIVER:**
Prosthetic valve endocarditis (most cases)
Uncontrolled infection
Suppurative local complications with conduction abnormalities
Resection of mycotic aneurysm
Ineffective antimicrobial therapy (eg Vs fungi)
Valvular damage (significant)
Embolization (repeated systemic)
Refractory congestive heart failure
Knowledge Level 5, System: Cardiovascular
David Lucey  University College Dublin

**Endocarditis: lab results suggesting it**

"High Tech Lab Results Point At Endocarditis":
Hematuria
Thrombocytopenia
Leukocytosis, -penia
Red blood cell casta
Proteinuria
Anemia
Elevated ESR
Knowledge Level 5, System: Cardiovascular
David Lucey  University College Dublin

**Psedomonas aeruginosa: features**

AERUGINOSA:
Acobic
Exotoxin A
Rod/ Resistance
UTIs, burns, injuries
Green-blue dressings
Iron-containing lesions
Negative gram
Odor of grapes
S Lime capsule sometimes (in CF pt)
Adherin pili
Knowledge Level 1, System: Integumental
Joyce Egbe

**Acute post-streptococcal glomerulonephritis: classic presentation**

"Sore throat, Face bloat, Pi$$ coke":
Sore throat: 1 week ago
Face bloat: facial edema
Pi$$ coke: coke-coloured urine
Alternatively, short version: "Throat, bloat and coke".
Knowledge Level 4, System: Kidney/Urine
Robert O'Connor  University College Dublin

**Proteus: disease caused**

Firstly, "PROTeus hates PROTons":
So what does it do to fight the protons? It has a urease that raises the pH.
Urea is in urine, so Proteus causes UTIs.
Knowledge Level 3, System: Kidney/Urine
James Meltzer  MSII, Albert Einstein College of Medicine

**UTI-causing microorganisms**
**KEEPS:**
Klebsiella
Enterococcus faecalis/ Enterobacter cloacae
E. coli
Pseudomonas aeruginosa/ Proteus mirabilis
Staphylococcus saprophyticus/ Serratia marcescens

Knowledge Level 2, System: Kidney/Urine
Kok Fai Kong  University of Auckland

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**Endotoxin features**

**ENDOTOXIN:**
Endothelial cells/ Edema
Negative (gram- bacteria)
DIC/ Death
Outer membrane
TNF
O-antigen
X-tremely heat stable
IL-1
Nitric oxide/ Neutrophil chemotaxis

Knowledge Level 3, System: Lymphoid
Rinku Uberoi  UNIBE

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**IgA protease-producing bacteria**

"Nice Strip of Ham":
Neisseria
Strep tonicoccus pneumonia
Haemophilus influenza

Knowledge Level 7, System: Lymphoid
Marc Miller  Sackler School of Medicine

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**Meningitis: risk factors**

"Can Induce Severe Attacks Of Head PAINS":
Cancer
Immunocompromised state
Sinusitis
Otitis
Head trauma
Parameningeal infection
Alcoholism
Infections (systemic, esp. respiratory)
Neurosurgical procedures
Splenectomy

Knowledge Level 2, System: Nervous
David Lucey  University College Dublin

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**Chlamydia: elementary vs. initial body location**

Elementary: Extracellular
Initial: Intracellular

Knowledge Level 2, System: Other/Miscellaneous
Anonymous Contributor

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**Common cold: viral causes**

"Common cold (acute infectious rhinitis, coryza) is PRIMAry caused by":
Paramyxoviruses
Rhinoviruses
Influenza viruses
Myxoviruses
Adenoviruses

Knowledge Level 3, System: Other/Miscellaneous
Anonymous Contributor

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**DNA viruses: morphology rule of thumb**

Anonymous Contributor
DNA:
Double-stranded
Nuclear replication
'Anhedral symmetry
Rule breakers: pox (cytoplasmic), parvo (single-stranded).
Knowledge Level 1, System: Other/Miscellaneous
Robert O'Connor University College Dublin

**Gram+: bacterial cell wall**

Gram+ has:
*hick peptidoglycan layer.
+eichoic acid in wall.
Knowledge Level 1, System: Other/Miscellaneous
Gilvano Amorim Oliveira Universidade de santo Amaro- São Paulo Brasil.

**Neisseria: fermentation of N. gonorrhoeae vs. N. meningitidis**

Gonorrhoeae: Glucose fermenter only.
MeninGditis: Maltose and Glucose fermenter.
Maltose fermentation is a useful property to know, since it's the classic test to distinguish the Neisseria types.
Knowledge Level 2, System: Other/Miscellaneous
Anonymous Contributor

**Obligate anaerobes: members worth knowing**

ABC:
Actinomyces
Bacteroides
Clostridium
Knowledge Level 1, System: Other/Miscellaneous
Sung Hoon Kim El Paso, TX

**Picornavirus: features**

PICORNAvirus:
Positive sense
ICOsaahedral
RNA virus
Knowledge Level 2, System: Other/Miscellaneous
Dr. Khawaja Atif Farooq Rawalpindi Medical College, Pakistan, Gujranwala

**RNA viruses: negative stranded**

"Orthodox Rhabbi's Party Around Fine Bunnies":
Orthomyxo
Rhabdo
Paramyxo
Arena
Filo
Bunya
Knowledge Level 1, System: Other/Miscellaneous
Rodolfo Chirinos Universidad Central del Caribe, PR

**RNA viruses: positive stranded**

"Pico Called Flavio To Return Renzo's Corona":
Picornavirus
Calicivirus
Flavi
Togavirus
Reovirus
Corona
Knowledge Level 1, System: Other/Miscellaneous
Rodolfo Chirinos Universidad Central del Caribe, PR

**Staphylococcus aureus: diseases caused**
SOFT PAINS:
Skin infections
Osteomyelitis
Food poisoning
Toxic shock syndrome
Pneumonia
Acute endocarditis
Infective arthritis
Necrotizing fasciitis
Sepsis
Knowledge Level 7, System: Other/Miscellaneous
Marc Miller  Sackler School of Medicine

Streptococci: classification by hemolytic ability
[ID 857]
Gamma: Garbage (no hemolytic activity).
Alpha: Almost (almost lyses, but incomplete).
Beta: Best (complete lysis).
Knowledge Level 1, System: Other/Miscellaneous
Robert O’Connor  University College Dublin

Streptococcus pyogenes: diseases caused
[ID 1816]
NIPPLES:
Necrotising fasciitis and myositis
Impetigo
Pharyngitis
Pneumonia
Lymphangitis
Erysipelas and cellulitis
Scarlet fever/ Streptococcal TSS
Knowledge Level 2, System: Other/Miscellaneous
Dr. Harsh Sharma

Streptococcus pyogenes: virulence factors
[ID 1640]
SMASHED:
Streptolysins
M protein
Anti-C5a peptidase
Streptokinase
Hyaluronidase
Exotoxin
DNAses
Knowledge Level 4, System: Other/Miscellaneous
Anonymous Contributor

Urease positive organisms
[ID 2235]
PUNCH:
Proteus (leads to alkaline urine)
Ureaplasma (renal calculi)
Nocardia
Cryptococcus (the fungus)
Helicobacter pylori
Knowledge Level 8, System: Other/Miscellaneous
Dr. Enrique Cifuentes  Universidad Autonoma de Guadalajara

Influenza infection: clinical manifestations
[ID 1955]
"Having Flu Symptoms Can Make Moaning Children A Nightmare":
Headache
Fever
Sore throat
Chills
Myalgias
Malaise
Cough
Anorexia
Nasal congestion
Knowledge Level 2, System: Pulmonary
David Lucey  University College Dublin

<table>
<thead>
<tr>
<th>Klebsiella details</th>
</tr>
</thead>
<tbody>
<tr>
<td>You tell the patient: &quot;Get UPS you fat alcoholic&quot;:</td>
</tr>
<tr>
<td>UTI</td>
</tr>
<tr>
<td>Pneumonia</td>
</tr>
<tr>
<td>Sepsis</td>
</tr>
<tr>
<td>Fat capsule</td>
</tr>
<tr>
<td>Get up=nonmotile since no flagella.</td>
</tr>
<tr>
<td>Alcoholic=commonly seen in alcoholic and nosocomial patients.</td>
</tr>
<tr>
<td>Knowledge Level 3, System: Pulmonary</td>
</tr>
<tr>
<td>Anonymous Contributor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pneumonia: acute pneumonia infiltrates from different causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Pyrogenic=PMN, Miscellaneous=Mononuclear&quot;:</td>
</tr>
<tr>
<td>Acute pneumonia caused by Pyogenic bacteria: PMN infiltrate.</td>
</tr>
<tr>
<td>Acute pneumonia caused by Miscellaneous microbes: Mononuclear infiltrate.</td>
</tr>
<tr>
<td>Knowledge Level 6, System: Pulmonary</td>
</tr>
<tr>
<td>Anonymous Contributor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Streptococci: Quellung reaction: positive sign, Strep type confirmed</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Quell-lung&quot;:</td>
</tr>
<tr>
<td>Quell: Capsules swell [+ve test].</td>
</tr>
<tr>
<td>Lung: S. pneumonia [type confirmed].</td>
</tr>
<tr>
<td>You get pneumonia in your lung.</td>
</tr>
<tr>
<td>Knowledge Level 3, System: Pulmonary</td>
</tr>
<tr>
<td>Robert O'Connor  University College Dublin</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gardnerella and Vaginalis vaginal infection diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Take a whiff and get a clue for fishy bacteria&quot;:</td>
</tr>
<tr>
<td>Smells like fish (whiff test); clue cells seen under microscope.</td>
</tr>
<tr>
<td>Gardnerella= Gram negative.</td>
</tr>
<tr>
<td>Vaginalis= Variable.</td>
</tr>
<tr>
<td>Knowledge Level 3, System: Reproductive</td>
</tr>
<tr>
<td>Rinku S Uberoi  UNIBE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teratogens: placenta-crossing organisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>ToRCHES:</td>
</tr>
<tr>
<td>Toxoplasma</td>
</tr>
<tr>
<td>Rubella</td>
</tr>
<tr>
<td>CMV</td>
</tr>
<tr>
<td>Herpes simplex, Herpes zoster (varicella), Hepatitis B,C,E</td>
</tr>
<tr>
<td>Syphilis</td>
</tr>
<tr>
<td>Alternatively: TORCHES: with Others (parvo, listeria), add HIV to H's, Enteroviruses.</td>
</tr>
<tr>
<td>Knowledge Level 1, System: Reproductive</td>
</tr>
<tr>
<td>Andrew J. Vasil  UMD School of Medicine, Duluth, MN</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trichomaniasis: features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hi Yield [ID 2631]</td>
</tr>
</tbody>
</table>
5 F’s:
Flagella
Frothy discharge
Fishy odor (sometimes)
Fornication (STD)
Flagyl (metronidazole) Rx
Knowledge Level 4, System: Reproductive
Rinku Uberoi

**NEUROLOGY**

**Stroke risk factors**

**HEADS:**
Hypertension/ Hyperlipidemia
Elderly
Atrial fib
Diabetes mellitus/ Drugs (cocaine)
Smoking/ Sex (male)
Knowledge Level 3, System: Cardiovascular
Rinku S. Uberoi UNIBE

**Chorea: common causes**

St. VITUS’S DANCE:
Sydenhams
Vascular
Increased RBC’s (polycythemia)
Toxins: CO, Mg, Hg
Uremia
SLE
Senile chorea
Drugs
APLA syndrome
Neurodegenerative conditions: HD, neuroacanthocytosis, DRPLA
Conception related: pregnancy, OCP’s
Endocrine: hyperthyroidism, hypo-, hyperglycemia
Knowledge Level 9, System: Nervous
Bobby Varkey SCTIMST

**Congenital myopathy: features**

**DREAMS:**
Dominantly inherited, mostly
Reflexes decreased
Enzymes normal
Apathetic floppy baby
Milestones delayed
Skeletal abnormalities
Knowledge Level 7, System: Nervous
Bobby Varkey SCTIMST

**Dementia: reversible dementia causes**

**DEMENTIA:**
Drugs/ Depression
Elderly
Multi-infarct/ Medication
Environmental
Nutritional
Toxins
Ischemia
Alcohol
Knowledge Level 1, System: Nervous
Mohamed Azim Assistant lecturer of Pediatric Surgery, Alexandria University, Egypt

**Dementia: some common causes**
DEMENTIA:
Diabetes
Ethanol
Medication
Environmental (eg CO poisoning)
Nutritional
Trauma
Infection
Alzheimer's
Knowledge Level 1, System: Nervous
Anonymous Contributor

Dementia: treatable causes

DEMENTIA:
Drug toxicity
Emotional (depression, anxiety, OCD, etc.)
Metabolic (electrolytes, liver dz, kidney dz, COPD)
Eyes/ Ears (peripheral sensory restrictions)
Nutrition (vitamin, iron deficiencies/ NPH [Normal Pressure Hydrocephalus])
Tumors/ Trauma (including chronic subdural hematoma)
Infection (meningitis, encephalitis, pneumonia, syphilis)
Arteriosclerosis and other vascular disease
Knowledge Level 3, System: Nervous
Dr. Bill Lynch, originated by Dr. Jerome Yesavage  Palo Alto Veterans Affairs Medical Center

Encephalitis: differential

He's Latin American:
Herpesviridae
Enteroviridae (esp. Polio)
Slow viruses (esp. JC, prions)
Syphilis
Legionella/ Lyme disease/ Lymphocytic meningoencephalitis
Aspergillus
Toxoplasmosis
Intracranial pressure
Neisseria meningitidis
Arboviridae
Measles/ Mumps/ Mycobacterium tuberculosis/ Mucor
E coli
Rubies/ Rubella
Idiopathic
Cryptococcus/ Candida
Abscess
Neoplasm/ Neurocysticercosis
Neurocysticercosis should be assumed with recent Latin American immigrant patient unless proven otherwise.
Knowledge Level 3, System: Nervous
Samuel Atom Baek-Kim  Tuckahoe, NY

Head trauma: rapid neuro exam

12 P's:
Psychological (mental) status
Pupils: size, symmetry, reaction
Paired ocular movements
Papilloedema
Pressure (BP, increased ICP)
Pulse and rate
Paralysis, Parese
Pyramidal signs
Pin prick sensory response
Pee (incontinent)
Patellar relex (and others)
Potosis
Reevaluate patient every 8 hrs.
Knowledge Level 3, System: Nervous
Ernest Boiselier, MD and Sung Kim  Attending physician, ISSSTE, Juarez, Mexico
Neurofibromatosis: diagnostic criteria

ROLANDO:
Relative (1st degree)
Osseous fibromas
Lisch nodules in eyes
Axillary freckling
Neurofibromas
Dime size café au lait spots
Optic gliomas
Knowledge Level 3, System: Nervous
Balraj Jhawar The University of Western Ontario

Neuropathy: diagnosis confirmation

NEuropathy:
Nerve conduction velocity
Electromyography
Knowledge Level 6, System: Nervous
Rinku S. Uberoi

Ocular bobbing vs. dipping

"Breakfast is fast, Dinner is slow, both go down":
Bobbing is fast.
Dipping is slow.
In both, the initial movement is down.
Knowledge Level 2, System: Nervous
Parameswaran Doctor

Peripheral neuropathies: differential

DANG THERAPIST:
Diabetes
Amyloid
Nutritional (eg B12 deficiency)
Guillain-Barre
Toxic (eg amiodarone)
Hereditary
Endocrine
Recurring (10% of G-B) Alcohol
Pb (lead)
Idiopathic
Sarcoid
Thyroid
Knowledge Level 3, System: Nervous
Ben Campbell University of Otago Medical School, Dunedin, New Zealand

Ramsay-Hunt syndrome: cause and common feature

"Ramsay Hunt":
Etiology:
Reactivated
Herpes zoster
Complication:
Reduced
Hearing
Knowledge Level 4, System: Nervous
Rinku S. Uberoi UNIBE

Status epilepticus: treatment
“Thank Goodness All Cerebral Bursts Dissipate”:
Thiamine
Glucose
Ativan
Cerebyx
Barbiturate
Diprivan
Knowledge Level 2, System: Nervous
J.D. Broughton, MD

<table>
<thead>
<tr>
<th>Vertigo: differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOMITS:</td>
</tr>
<tr>
<td>Vestibulitis</td>
</tr>
<tr>
<td>Ototoxic drugs</td>
</tr>
<tr>
<td>Meniere's disease</td>
</tr>
<tr>
<td>Injury</td>
</tr>
<tr>
<td>Tumor</td>
</tr>
</tbody>
</table>
Spin (benign positional vertigo)
Knowledge Level 6, System: Nervous
Dr. J.G. Norris

**NEUROSCIENCES**

<table>
<thead>
<tr>
<th>Argyll-Robertson Pupil features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argyll Robertson Pupil (ARP)</td>
</tr>
<tr>
<td>Read it from front to back: it is ARP, standing for Accomodation Reflex Present.</td>
</tr>
<tr>
<td>Read it from back to front: it is PRA, standing for Pupillary Reflex Absent.</td>
</tr>
</tbody>
</table>
Knowledge Level 1, System: Nervous
Anonymous Contributor

<table>
<thead>
<tr>
<th>Auditory pathway: mandatory stops</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Come In My Baritone&quot;:</td>
</tr>
<tr>
<td>Cochlear nucleus</td>
</tr>
<tr>
<td>Inferior colliculus</td>
</tr>
<tr>
<td>Medial geniculate nucleus</td>
</tr>
<tr>
<td>Brodmann's 41 (cortex)</td>
</tr>
</tbody>
</table>
Knowledge Level 4, System: Nervous
Anonymous Contributor Baylor College of Medicine, Houston, TX

<table>
<thead>
<tr>
<th>Basal ganglia: indirect vs. direct pathway</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Indirect pathway Inhibits.</td>
</tr>
<tr>
<td>Direct pathway is hence the excitatory one.</td>
</tr>
</tbody>
</table>
Knowledge Level 1, System: Nervous
Robert O'Connor University College Dublin

<table>
<thead>
<tr>
<th>Branchial arches: cranial nerve innervation</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Sensory/Motor/Both mnemonic 'Some Say Marry Money But My Brother Says Big Boobs Matter More', the B's also give Brancial arch nerves in order:</td>
</tr>
<tr>
<td>But (CN 5): 1st arch</td>
</tr>
<tr>
<td>Brother (CN7): 2nd arch</td>
</tr>
<tr>
<td>Big (CN9): 3rd arch</td>
</tr>
<tr>
<td>Boobs (CN 10): 4th arch</td>
</tr>
</tbody>
</table>
Knowledge Level 3, System: Nervous
Robert O'Connor University College Dublin

<table>
<thead>
<tr>
<th>Broca's vs. Wernick's area: effect of damage to speech center</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Broca&quot;: your speech machinery is Broken.</td>
</tr>
<tr>
<td>Broca is wanting to speak, but articulation doesn't work, and very slow.</td>
</tr>
<tr>
<td>&quot;Wer-nick&quot;: &quot;were&quot; and &quot;nick&quot; are both words of English language, but together they are nonsensical.</td>
</tr>
<tr>
<td>Wernick is having good articulation, but saying words that don't make sense together.</td>
</tr>
</tbody>
</table>
Knowledge Level 1, System: Nervous
Robert O'Connor University College Dublin
Cerebellar damage symptoms

VANISH-D:
Vertigo
Ataxia
Nystagmus
Intention tremor
Slurred speech
Hypotonic reflexes
Dysdiadochokinesia.
Knowledge Level 3, System: Nervous
Anonymous Contributor

Cerebellar deep nuclei

"Ladies Demand Exceptional Generosity From Men":

[Latera]l
Dentate
Emboliiform
Globose
Fastigial

[Media]l
Knowledge Level 1, System: Nervous
Nick Loman St. Bart's/Royal London

Cerebellar functional areas

Anatomical shape/location of cerebellar areas is a key to their function and related tract.

Vermis = Spinocerebellar = Axial equilibrium.

Vermis: right down the axis of cerebellum, and vertically segmented like a spinal column.

Flocculonodular lobe = Vestibulocerebellar = Ear, eye, body coordination.

Flocculonodular lobe: flares out to the edges, just like ears.

Hemispheres of cerebellum = Cerebrocerebellar = Peripheral coordination.

Hemispheres: around periphery of cerebellum, and tract to cerebral hemispheres.
Knowledge Level 3, System: Nervous
Neil Bratney, M1 U. Nebraska Med Ctr

Coronal section of brain: structures

"In Extreme Conditions Eat People's Guts Instead of Their Hearts":
From insula to midline:

Insula
Extreme capsule
Claustrum
External capsule
Putamen
Globus pallidus
Internal capsule
Thalamus
Hypothalamus
Knowledge Level 4, System: Nervous
Anonymous Contributor

Cranial nerves

"On Old Olympus Towering Tops, A Finn And German Viewed Some Hops":

In order from 1 to 12:

Olfactory
Optic
Occulomotor
Trochlear
Trigeminal
Abducens
Facial
Auditory [or Vestibulocochlear]
Glossopharyngeal
Vagus
Accessory [or Spinal root of the accessory]
Hypoglossal

Alternatively: "Oh! Oh! Oh! To Touch And Feel A Girls Vagina, Ah! Heaven!"

Alternatively: "Oh, Oh, Oh, To Touch And Feel Virgin Girls Vaginas And Hymens".
Knowledge Level 1, System: Nervous
Anurag Gupta Dept of Surgery, Royal Adelaide Hospital, Australia

Cranial nerves: olfactory and optic numbers

"You have two eyes and one nose":
Optic nerve is cranial nerve two.
Olfactory nerve is cranial nerve one.

Alternatively, note alphabetical order: oLfactory, and oPtic.
Knowledge Level 1, System: Nervous
Rajael Somaskanthan Medical student, Royal Free and UCL Medical School

Cranial nerves: sensory, motor or both

"Some Say Marry Money But My Brother Says Big Brains Matter More":
From I to XII:
Sensory
Sensory
Motor
Motor
Both
Both
Both
Both
Sensory
Both
Motor
Motor

Alternatives for "Brains": Boobs, Buns, Bras.
Knowledge Level 1, System: Nervous
Michael Nawfal

CSF circulation: function of choroid vs. arachnoid granules

Choroid Creates CSF.
Arachnoid granules Absorb CSF.
Knowledge Level 1, System: Nervous
Jason Galarneau Flinders University, Australia

Dysphagia vs. dysphasia

DysphaSia is for Speech
DysphaGia is for your Gut [swallowing].
Knowledge Level 6, System: Nervous
Anonymous Contributor

GABA vs. Glu: the excitatory vs. inhibitory transmitter in brain (eg in basal ganglia)

When you Glue two things together, you add (+) those things together, therefore Glu is the excitatory one (+).
GABA is therefore the negative one.
Knowledge Level 2, System: Nervous
Robert O'Connor University College Dublin

Geniculate bodies: medial vs. lateral system

MALE:
Medial=Auditory. Lateral=Eye.
Medial geniculate body is for auditory system, lateral geniculate body is for visual system.
Can expand to MALES to remember Lateral=Eye=Superior colliculus (thus medial is inferior colliculus by default).
Knowledge Level 1, System: Nervous
Robert O'Connor University College Dublin

Hypothalamus: feeding vs. satiety center

Knowledge Level 1, System: Nervous
Robert O'Connor University College Dublin
"Stim the lat, get fat":
Stimulating lateral increases hunger.
"Stim the ven, get thin":
Stimulating ventromedial increases satiety.

Knowledge Level 1, System: Nervous
Ryan Hendren  University of Arkansas for Medical Sciences

Lower vs. upper motor neuron lesion effects

1. "STORM, Baby"
2. 'In a Lower motor neuron lesion, everything goes Down:
   STORM Baby tells you effects:
   Strength
   Tone
   Other
   Reflexes
   Muscle mass
   Babinski's sign
   In Lower all things go down: strength, tone, reflexes, muscle mass, and the big toe down in plantar reflex (Babinski's sign is big toe up: toe up = UMNL).
   See attached chart.

Knowledge Level 1, System: Nervous
Robert O'Connor  University College Dublin

Meninges: layers in order

PAD:
Piamater
Arachnoid
Dura
Knowledge Level 1, System: Nervous
Mohammed Azizuddin Ahmed  Indian Medical Council

Olivary nuclei: ear vs. eye roles

Superior Olivary nucleus: SOund localization.
   Inferior olivary nucleus is therefore the one for sight [tactile, proprioception also].
Knowledge Level 3, System: Nervous
Miruna Segarceanu  UMF Carol Davila, Bucharest, Romania

Precentral vs. postcentral gyrus: motor vs. sensory

Just an extension of the rule that anterior = ventral = efferent = motor.
The precentral gyrus is on the anterior side of the brain, so is therefore motor.
Knowledge Level 1, System: Nervous
Robert O'Connor  University College Dublin

Purkinje cells in cerebellum are inhibitory to deep nuclei

Shape of a purkinje cell in 3 dimensions is same as a policeman's hand saying "Stop".
Therefore, purkinje cells are inhibitory.
   See diagram.

Knowledge Level 3, System: Nervous
Robert O'Connor  University College Dublin

Spinal cord: converting ventral/ anterior/ motor/ efferent and dorsal/ posterior/ sensory/ afferent

A limousine:
The motor of limo is ventral and anterior on the car.
The Aerial is sensory and on the dorsal and posterior of the limo.
   Note 1: 'A' is Afferent, and also, in a limo, the aerial on the top of the trunk has a capital 'A' shape.
   Note 2: An aerial is a sensory thing: picks up radio waves.
   Note 3: If picked a limo up in your hand, can only see motor on ventral, since dorsal is covered by the hood/bonnet.
Knowledge Level 2, System: Nervous
Robert O'Connor  University College Dublin
Spinal tracts: Gracilus vs. Cuneatus: origin from upper vs. lower limbs

Gracilus is the name of a muscle in the legs, so Fasciculus Gracilus is for the lower limbs. By default, Fasciculus Cuneatus must be for upper limbs.

Knowledge Level 4, System: Nervous
Jason Galarneau Flinders University

Spinal tracts: simplified geography

2 posterior: cross at the medulla.
2 lateral: ipsilateral (same side).
2 anterior: cross at the spinal level.
See diagram.
Note 1: Descending tracts on left of figure, ascending tracts on right.
Note 2: For ipsilaterals: one never crosses, one crosses at the level then doubles back farther up. The ipsilateral that crosses at the level (ventral spinocerebellar) is the ipsilateral closest to the 2 anterior ones, which also cross at the level.
Tract names in each group:
Knowledge Level 3, System: Nervous
Robert O'Connor University College Dublin

Thirst/water balance control centre: location in hypothalamus

"You look up (supra...optic) at the clouds, to check if it's going to rain (water)":
Therefore, water balance is in supraoptic nucleus.
Knowledge Level 6, System: Nervous
Zeiad Fakhouri

Ventricle aperatures: converting the two nomenclature types

Magendie foramen is the Medial aperture.
Luschka foramen is the Lateral aperture.
Knowledge Level 4, System: Nervous
Anonymous Contributor

OBSTETRICS / GYNECOLOGY

Preeclampsia: classic triad

PRe eclampsia:
Proteinuria
Rising blood pressure
Edema
Knowledge Level 4, System: Cardiovascular
Anonymous Contributor

RLQ pain: brief female differential

AEIOU:
Appendicitis/ Abscess
Ectopic pregnancy/ Endometriosis
Inflammatory disease (pelvic)/ IBD
Ovarian cyst (rupture, torsion)
Uteric colic/ Urinary stones
Knowledge Level 1, System: Other/Miscellaneous
Sushant Varma University of Sheffield, UK

Abdominal pain: causes during pregnancy

Hi Yield [ID 474]
LARA CROFT:
Labour
Abruption of placenta
Rupture (eg. ectopic/ uterus)
Abortion
Cholestasis
Rectus sheath haematoma
Ovarian tumour
Fibroids
Torsion of uterus
Knowledge Level 5, System: Reproductive
Graeme Little  University College London

Alpha-fetoprotein: causes for increased maternal serum AFP during pregnancy
"Increased Maternal Serum Alpha Feto Protein":
Intestinal obstruction
Multiple gestation/ Miscalculation of gestational age/ Myeloschisis
Spina bifida cystica
Anencephaly/ Abdominal wall defect
Fetal death
Placental abruption
Knowledge Level 4, System: Reproductive
Rinku Uberoi  UNIBE

APGAR score components
SHIRT:
Skin color: blue or pink
Heart rate: below 100 or over 100
Irritability (response to stimulation): none, grimace or cry
Respirations: irregular or good
Tone (muscle): some flexion or active
Knowledge Level 3, System: Reproductive
Kimberly Scott  Medical College of Virginia

Asherman syndrome features
ASHERMAN:
Acquired Anomaly
Secondary to Surgery
Hysterosalpingography confirms diagnosis
Endometrial damage/ Euronadotropic
Repeated uterine trauma
Missed Menses
Adhesions
Normal estrogen and progesterone
Knowledge Level 8, System: Reproductive
Rinku Uberoi  UNIBE

B-agonist tocolytic (C/I or warning)
ABCDE:
Angina (Heart disease)
BP high
Chorioamnionitis
Diabetes
Excessive bleeding
Knowledge Level 2, System: Reproductive
Lum

CVS and amniocentesis: when performed
"Chorionic" has 9 letters and Chorionic villus sampling performed at 9 weeks gestation.
"AlphaFetoProtein" has 16 letters and it's measured at 16 weeks gestation.
Knowledge Level 3, System: Reproductive
Anonymous Contributor

Delivery: instrumental delivery prerequisites
Dysfunctional uterine bleeding (DUB): 3 major causes

DUB:
- Don’t ovulate (anovulation: 90% of cases)
- Unusual corpus leuteum activity (prolonged or insufficient)
- Birth control pills (since increases progesterone-estrogen ratio)

Early cord clamping: indications

RAPID CS:
- Rh incompatibility
- Asphyxia
- Premature delivery
- Infections
- Diabetic mother

CS (caesarian section) previously, so the funda is RAPID CS

Forceps: indications for use

FORCEPS:
- Fully dilated cervix
- 0 ["Zero"] CPD
- Ruptured membranes
- Cephalic or at least deliverable presentation/ Contracting uterus
- Episiotomy done/ Epidural done
- P’ss and S#t (bladder and bowel empty)

IUD: side effects
PAINS:
Period that is late
Abdominal cramps
Increase in body temperature
Noticeable vaginal discharge
Spotting
Knowledge Level 3, System: Reproductive
Anonymous Contributor

**IUGR: causes**

- Inherited: chromosomal and genetic disorders
- Uterus: placental insufficiency
- General: maternal malnutrition, smoking
- Rubella and other congenital infecton
Knowledge Level 4, System: Reproductive
Anthony Chan

**Labour: preterm labor causes**

- Dehydration
- Infection
- Sex
- Exercise (strenuous)
- Activities
- Stress
- Environmental factor (job, etc)
Knowledge Level 4, System: Reproductive
Alycia Ernst  Banner Health AZ

**Multiple pregnancy complications**

- Hydramnios (Poly)
- IUGR
- Preterm labour
- Antepartum haemorrhage
- Pre-eclampsia
- Abortion
Knowledge Level 3, System: Reproductive
Ashley Liew  University of Glasgow, UK

**Omental caking: likeliest cause**

"Omental caking" is term for ascities, plus a fixed upper abdominal and pelvic mass. Almost always signifies ovarian cancer.
Knowledge Level 2, System: Reproductive
Anonymous Contributor

**Oral contraceptive complications: warning signs**

- Abdominal pain
- Chest pain
- Headache (severe)
- Eye (blurred vision)
- Sharp leg pain
Knowledge Level 4, System: Reproductive
Carrie Davis, RNC, MSN, WHNP  Obici Health System

**Oral contraceptives: side effects**
CONTRACEPTIVES:
Cholestatic jaundice
Oedema (corneal)
Nasal congestion
Thyroid dysfunction
Raised BP
Acne/ Alopeia/ Anaemia
Cerebrovascular disease
Elevated blood sugar
Porphyria/ Pigmentation/ Pancreatitis
Thromboembolism
Intracranial hypertension
Vomiting (progesterone only)
Erythema nodosum/ Extrapyramidal effects
Sensitivity to light
Knowledge Level 6, System: Reproductive
Dr. Harsh Sharma  BJMC, Pune, India

Parity abbreviations (ie: G 3, P 2012)
“T o Peace And Love”:
T: of Term pregnancies
P: of Premature births
A: of Abortions (spontaneous or elective)
L: of Live births
Describes the outcomes of the total number of pregnancies (Gravida).
Knowledge Level 1, System: Reproductive
Megan Duffy  Medical student, AZCOM

Pelvic Inflammatory Disease (PID): causes, effects
“PID CAN be EPIC”:
Causes:
Chlamydia trachomatis
Actinomycetes
Neisseria gonorrhoeae
Effects:
Ectopic
Pregnancy
Infertility
Chronic pain
Knowledge Level 2, System: Reproductive
Scott Alexander  Loma Linda University SOM

Pelvic Inflammatory Disease (PID): complications
IFACE PID:
Infertility
Fitz-Hugh-Curitis syndrome
Abscesses
Chronic pelvic pain
Ectopic pregnancy
Peritonitis
Intestinal obstruction
Disseminated: sepsis, endocarditis, arthritis, meningitis
Knowledge Level 2, System: Reproductive
Lum

Postpartum collapse: causes

Knowledge Level 1, System: Reproductive
Megan Duffy  Medical student, AZCOM
HEPARINS:
- Hemorrhage
- Eclampsia
- Pulmonary embolism
- Amniotic fluid embolism
- Regional anaesthetic complications
- Infarction (MI)
- Neurogenic shock
- Septic shock

Knowledge Level 6, System: Reproductive
Hossam Elzeiny  Trainee, Royal Womens Hospital, Victoria, Australia

Post-partum hemorrhage (PPH): risk factors

PARTUM:
- Polyhydroamnios
- Prolonged labour
- Previous cesarean
- Recent bleeding history
- Twins
- Uterine fibroids
- Multiparity

Knowledge Level 3, System: Reproductive
Nathan Sachdev  University of New South Wales, Sydney

Prenatal care questions

ABCDEF:
- Amniotic fluid leakage?
- Bleeding vaginally?
- Contractions?
- Dysuria?
- Edema?
- Fetal movement?

Knowledge Level 3, System: Reproductive
Jason Bermak  UC Irvine

Secondary amenorrhea: causes

SOAP:
- Stress
- OCP
- Anorexia
- Pregnancy

Knowledge Level 2, System: Reproductive
Nathan Sachdev  University of New South Wales, Sydney

Female pelvis: shapes

GAP:
- In order from most to least common:
  - Gynecoid
  - Android
  - Platypelloid

Knowledge Level 4, System: Skeletal
Anonymous Contributor

OPHTHAMOLOGY / OPTOMETRY

Red eye causes

Knowledge Level 6, System: Reproductive
Anonymous Contributor
GO SUCK:
Glucoma
Orbital disease
Scleritis
Uveitis
Conjunctivitis
Keratitis
Knowledge Level 2, System: Cardiovascular
Anonymous Contributor

<table>
<thead>
<tr>
<th>Cataracts: causes</th>
<th>Hi Yield [ID 1973]</th>
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<tbody>
<tr>
<td>ABCDE:</td>
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<tr>
<td>Aging</td>
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<tr>
<td>Bang: trauma, other injuries (eg infrared)</td>
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<tr>
<td>Congenital</td>
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<td>Diabetes and other metabolic disturbances (eg steroids)</td>
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<td>Eye diseases: glaucoma, uveitis</td>
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<tr>
<td>Knowledge Level 4, System: Nervous</td>
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<tr>
<td>Anthony Chan</td>
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<thead>
<tr>
<th>Cataracts: causes</th>
<th>Hi Yield [ID 2845]</th>
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<tr>
<td>CATARAct:</td>
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<tr>
<td>Congenital</td>
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<tr>
<td>Aging</td>
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<tr>
<td>Toxicity (steroids, etc)</td>
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<tr>
<td>Accidents</td>
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<tr>
<td>Radiation</td>
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<tr>
<td>Abnormal metabolism (diabetes mellitus, Wilson's)</td>
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<tr>
<td>Knowledge Level 2, System: Nervous</td>
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<tr>
<td>Anonymous Contributor</td>
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<tr>
<th>Cataracts: differential</th>
<th>Hi Yield [ID 2808]</th>
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<td>CATARAct:</td>
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<td>Congenital</td>
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<td>Aging</td>
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<td>Toxicity (steroids, etc)</td>
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<td>Accidents</td>
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<td>Radiation</td>
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<tr>
<td>Abnormal metabolism (DM, Wilsons, etc)</td>
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<tr>
<td>Knowledge Level 2, System: Nervous</td>
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<tr>
<td>Robert O'Connor University College Dublin</td>
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<tr>
<th>Diplopia (uniocular): causes</th>
<th>Hi Yield [ID 1974]</th>
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<tr>
<td>ABCD:</td>
<td></td>
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<tr>
<td>Astigmatism</td>
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<td>Behavioral: psychogenic</td>
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<tr>
<td>Cataract</td>
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<tr>
<td>Dislocated lens</td>
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<tr>
<td>Knowledge Level 4, System: Nervous</td>
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<tr>
<td>Anthony Chan</td>
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<tr>
<th>Optic atrophy causes</th>
<th>[ID 214]</th>
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<tr>
<td>ICING:</td>
<td></td>
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<tr>
<td>Ischaemia</td>
<td></td>
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<tr>
<td>Compressed nerve</td>
<td></td>
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<tr>
<td>Intracranial pressure [raised]</td>
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<tr>
<td>Neuritis history</td>
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<tr>
<td>Glaucoma</td>
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<tr>
<td>Knowledge Level 4, System: Nervous</td>
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<td>Anonymous Contributor</td>
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<thead>
<tr>
<th>Periorbital cellulitis: etiology</th>
<th>[ID 3284]</th>
</tr>
</thead>
</table>
SIGHT:
Sinusitis
Insect Bite
Globular/Glandular Spread
Heme Spread
Trauma
Knowledge Level 5, System: Other/Miscellaneous
Gregory Gulick Nova Southeastern University College of Osteopathic Medicine

ORTHOPEDICS

Carpal tunnel syndrome: treatment
Hi Yield [ID 2070]

WRIST:
Wear splints at night
Rest
Inject steroid
Surgical decompression
Take diuretics
Knowledge Level 4, System: Nervous
Sushant Varma University of Sheffield, UK

Fracture: how to describe
[ID 544]

PLASTER OF PARIS:
Plane
Location
Articular cartilage involvement
Simple or comminuted
Type (eg Colles')
Extent
Reason
Open or closed
Foreign bodies
disPlacement
Angulation
Rotation
Impaction
Shortening
Knowledge Level 3, System: Other/Miscellaneous
Fletcher Davies Adelaide Medical School

Bone fracture types [for Star Wars fans]
[ID 181]

GO C3PO:
Greenstick
Open
Complete/ Closed/ Comminuted
Partial
Others
Note: C3PO is droid in the Star-Wars movies.
Knowledge Level 1, System: Skeletal
Anonymous Contributor

Bryant's traction: position
Hi Yield [ID 2119]

Bryant's traction:
Bent Y.
Patient’s body is the stem of the Y laying on the bed, and legs are the ends of the Y up in the air.
Knowledge Level 1, System: Skeletal
Kayle Luther

Monoarthritis differential
Hi Yield [ID 2082]
**GHOST:**
Gout
Haemarthrosis
Osteoarthritis
Sepsis
Trauma
Knowledge Level 1, System: Skeletal
Polly Weston  Bristol University Med School

**Osteosarcoma: risk factors**

**PRIMARY:**
Paget's
Radiation
Infaction of bone
Male
Alcohol, poor diet, sedentary lifestyle [adults only]
Retinoblastoma, Li-Fraumeni syndrome
Young [10-20 yrs]
Osteosarcoma is the most common primary malignant tumor of bone.
Knowledge Level 4, System: Skeletal
Robert O'Connor  University College Dublin

**Pagets disease of bone: signs and symptoms**

**PANICS:**
Pain
Arthralgia
Nerve compression / Neural deafness
Increased bone density
Cardiac failure
Skull / Sclerotic vertebrae
Knowledge Level 3, System: Skeletal
Andrew Young  UMDS

**PATHOLOGY**

**Achalasia: 1 possible cause, 1 treatment**

aCHAlasia:
1 possible cause: CHAgas' disease
1 treatment: Ca++ CHAnnel blockers
Knowledge Level 5, System: Alimentary
Anonymous Contributor

**Carcinoid syndrome: components**

CARCinoid:
Cutaneous flushing
Asthmatic wheezing
Right sided valvular heart lesions
Cramping and diarrhea
Knowledge Level 2, System: Alimentary
Robert O'Connor  University College Dublin

**Gallstones: risk factors**

5 F's:
Fat
Female
Family history
Fertile
Forty
Knowledge Level 4, System: Alimentary
Anonymous Contributor

**Haemochromatosis definition, classic triad**
"Iron man triathlon":
*Iron man*: deposition of iron in many body tissues.

**Triathlon** has 3 components, which match triad:
- **Swimming**: Skin pigmentation
- **Biking**: Bronze diabetes
- **Marathon**: Micronodular pigment cirrhosis

See diagram for visual equivalent.

Robert O'Connor, University College Dublin

---

**Hepatomegaly: 3 common causes, 3 rarer causes**

Common are 3 Cs:
- Cirrhosis
- Carcinoma
- Cardiac failure

Rarer are 3 Cs:
- Cholestasis
- Cysts
- Cellular infiltration

Knowledge Level 2, System: Alimentary

Anonymous Contributor and Jamal Khan, Not Specified, Birmingham University Medical Student

---

**IBD: extraintestinal manifestations**

"Left intestine to sail the SEAS of the rest of the body":
- Skin manifestations: erythema nodosum, pyoderma gangrenosum
- Eye inflammation: iritis, episcleritis
- Arthritis
- Sclerosing cholangitis

Knowledge Level 3, System: Alimentary

Anonymous Contributor

---

**Inflammatory Bowel Disease: which has cobblestones**

Crohn's has Cobblestones on endoscopy.

Knowledge Level 1, System: Alimentary

Anonymous Contributor

---

**Kwashiorkor: distinguishing from Marasmus**

**FLAME**:
- Fatty Liver
- Anemia
- Malabsorption
- Edema

Knowledge Level 2, System: Alimentary

Chris, UMF Bucharest

---

**Pancreatitis: causes**

**PANCREATITIS**:
- Posterior
- Alcohol
- Neoplasm
- Cholelithiasis
- Rx (laxix, AZT)
- ERCP
- Abdominal surgery
- Trauma
- Infection (mumps)
- Triglycerides elevated
- Idiopathic
- Scorpion bite

Knowledge Level 4, System: Alimentary

Anonymous Contributor

---

**PKU findings**

Hi Yield [ID 821]
**PKU:**
Pale hair, skin
Krazy (neurological abnormalities)
Unpleasant smell
Knowledge Level 1, System: Alimentary
Robert O'Connor and Lior Greenberg

**Ulcerative colitis: features**

**ULCERATIONS:**
Ulcers
Large intestine
Carcinoma [risk]
Extraintestinal manifestations
Remnants of old ulcers [pseudopolyps]
Abscesses in crypts
Toxic megacolon [risk]
Inflamed, red, granular mucosa
Originates at rectum
Neutrophil invasion
Stools bloody
Knowledge Level 2, System: Alimentary
Samuel Atom Baek-Kim

**Acute ischemia: signs [especially limbs]**

6 P’s:
Pain
Pallor
Pulselessness
Paralysis
Paraesthesia
Perishingly cold
Knowledge Level 5, System: Cardiovascular
Shebrain Cairo University

**Anemia (normocytic): causes**

**ABCD:**
Acute blood loss
Bone marrow failure
Chronic disease
Destruction (hemolysis)
Knowledge Level 2, System: Cardiovascular
Anthony Chan

**Anemia causes (simplified)**

**ANEMIA:**
Anemia of chronic disease
No folate or B12
Ethanol
Marrow failure & hemoglobinopathies
Iron deficient
Acute & chronic blood loss
Knowledge Level 2, System: Cardiovascular
The Cashman University of Queensland, Australia

**Aneurysm types**
MAD SCAB:
Mycotic
Atherosclerotic
Dissecting
Syphilitic
Capillary microaneurysm
Arteriovenous fistula
Berry
Knowledge Level 3, System: Cardiovascular
Sushant Varma  Medical student, University of Sheffield, UK

Atherosclerosis risk factors

"You're a SAD BET with these risk factors":
Sex: male
Age: middle-aged, elderly
Diabetes mellitus
BP high: hypertension
Elevated cholesterol
Tobacco
Knowledge Level 2, System: Cardiovascular

Blood disorders: commoner sex

HE (male) gets:
HEmophilia (X-linked)
HEinz bodies (G6PD deficiency, causing HEmolytic anemia: X-linked)
HEmochromatosis (male predominance)
HEart attacks (male predominance)
HENoch-Schonlein purpura (male predominance)
SHE (female) gets:
SHEhan's syndrome
Knowledge Level 5, System: Cardiovascular
Anonymous Contributor

Buerger's disease features

"burger SCRAPs":
Segmenting thrombosing vasculitis
Claudication (intermittent)
Raynaud’s phenomenon
Associated with smoking
Pain, even at rest
Superficial nodular phlebitis
Alternatively, if hungry for more detail [sic], "CRISP PIG burgers":
Chronic ulceration
Raynaud’s phenomenon
Intermittent claudication
Segmenting, thrombosing vasculitis
Pain, even at rest
Phlebitis (superficial nodular)
Idiopathic
Gangrene
Knowledge Level 2, System: Cardiovascular
Robert O’Connor  University College Dublin

Cardiovascular risk factors

FLASH BODIES:
Family history
Lipids
Age
Sex
Homocystinaemia
Blood pressure
Obesity
Diabetes mellitus
**Inflammation (raised CRP)**/ Increased thrombosis

**Exercise**

**Smoking**

Knowledge Level 1, System: Cardiovascular

Hamish Mace  Dunedin School of Medicine, New Zealand

<table>
<thead>
<tr>
<th><strong>Deep venous thrombosis: diagnosis</strong></th>
<th>Hi Yield  [ID 896]</th>
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<tbody>
<tr>
<td><strong>DVT:</strong></td>
<td></td>
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<tr>
<td>Dilated superficial veins/ Discoloration/ Doppler ultrasound</td>
<td></td>
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<tr>
<td>Venography is gold standard</td>
<td></td>
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<tr>
<td>Tenderness of Thigh and calf</td>
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<tr>
<td>Knowledge Level 3, System: Cardiovascular</td>
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<tr>
<td>Rinku Uberoi  UNIBE</td>
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<tr>
<th><strong>Disseminated Intravascular Cogulation: causes</strong></th>
<th>Hi Yield  [ID 1529]</th>
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<tbody>
<tr>
<td><strong>DIC:</strong></td>
<td></td>
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<tr>
<td>Delivery TEAR (obstetric complications)</td>
<td></td>
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<tr>
<td>Infections (gram negative)/ Immunological</td>
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<tr>
<td>Cancer (prostate, pancreas, lung, stomach)</td>
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<tr>
<td>Obstetrical complications are <strong>TEAR:</strong></td>
<td></td>
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<tr>
<td>Toxemia of pregnancy</td>
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<tr>
<td>Emboli (amniotic)</td>
<td></td>
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<tr>
<td>Abrutio placentae</td>
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<td>Retain fetus products</td>
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<td>Knowledge Level 5, System: Cardiovascular</td>
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<tr>
<td>Khawaja Atif Farooq  Rawalpindi Medical College, Islamabad, Pakistan (Gujranwala)</td>
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<tr>
<th><strong>Fat embolism: findings</strong></th>
<th>Hi Yield  [ID 1224]</th>
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<tbody>
<tr>
<td>&quot;Fat, Bat, Fract&quot;:</td>
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<tr>
<td>Fat in urine, sputum</td>
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<tr>
<td>Bat-wing lung x-ray</td>
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<tr>
<td>Fracture history</td>
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<tr>
<td>Also, fracture of FEmar causes Fat EMboli.</td>
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<tr>
<td>Knowledge Level 3, System: Cardiovascular</td>
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<tr>
<td>Robert O'Connor &amp; Rinku Uberoi</td>
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<tr>
<th><strong>Heart failure causes</strong></th>
<th>Hi Yield  [ID 1079]</th>
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<tbody>
<tr>
<td>&quot;HEART MAy DIE&quot;&quot;:</td>
<td></td>
</tr>
<tr>
<td>Hypertension</td>
<td></td>
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<tr>
<td>Embolism</td>
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<tr>
<td>Anemia</td>
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<tr>
<td>Rheumatic heart disease</td>
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<td>Thyrotoxicosis (incl. pregnancy)</td>
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<td>Myocardial infarct</td>
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<tr>
<td>Arrythmia</td>
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<td>Y</td>
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<tr>
<td>Diet &amp; lifestyle</td>
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<tr>
<td>Infection</td>
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<tr>
<td>Endocarditis</td>
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<td>Knowledge Level 3, System: Cardiovascular</td>
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<tr>
<td>The Cashman University of Queensland, Australia</td>
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<tr>
<th><strong>Hypertension: secondary hypertension causes</strong></th>
<th>[ID 200]</th>
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<tr>
<td><strong>CHAPS:</strong></td>
<td></td>
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<tr>
<td>Cushing's syndrome</td>
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<td>Hyperaldosteronism [aka Conn's syndrome]</td>
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<tr>
<td>Aorta coarctation</td>
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<tr>
<td>Phaeochromocytoma</td>
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<tr>
<td>Stenosis of renal arteries</td>
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<td>Note: only 5% of hypertension cases are secondary, rest are primary.</td>
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<td>Knowledge Level 6, System: Cardiovascular</td>
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<td>Anonymous Contributor</td>
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<tr>
<th><strong>Kawasaki disease: diagnostic criteria</strong></th>
<th>Hi Yield  [ID 1586]</th>
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</table>
**Kawasaki disease: features**


Knowledge Level 3, System: Cardiovascular

Robert O'Connor  University College Dublin

**MI: complications**

HAS CRAPPED:
Heart failure/ Hypertension
Arrhythmia
Shock
Cardiac Rupture
Aneurysm
Pericarditis
Pulmonary Emboli
DVT

Knowledge Level 5, System: Cardiovascular
Leo  University College London

**MI: post-MI complications**

ACT RAPID:
Arrhythmias (SVT, VT, VF)
Congestive cardiac failure
Tamponade/ Thromboembolic disorders
Rupture (ventricle, septum, papillary muscle)
Aneurysm (ventricle)
Pericarditis
Infection (a second one)
Death/ Dressler's syndrome

Knowledge Level 2, System: Cardiovascular
Dr. Huw Davies

**MI: sequence of elevated enzymes after MI**

"Time to CALL 911":
From first to appear to last:
Troponin
CK-MB
AST
LDH1

Knowledge Level 2, System: Cardiovascular
Marco Foramiglio  Centro de Ciências Médicas e Biológicas - PUC/SP- Sorocaba/SP - Brazil

**Pericarditis: findings**
PERICarditis:
Pulsus paradoxus
ECG changes
Rub
Increased JVP
Chest pain [worse on inspiration, better when lean forward]
Knowledge Level 3, System: Cardiovascular
Robert O'Connor  University College Dublin

Pick's disease: location, action, epidemiology

See figure.
Pick axes are Picking away at the old woman's cerebral cortex, causing cortical atrophy.
2 pick axes on her brain: frontal lobe and anterior 1/3 of temporal.
An old woman, since epidemiology is elderly & more common in women.
Knowledge Level 1, System: Cardiovascular
Robert O'Connor  University College Dublin

Takayasu's disease is Pulseless disease

"Can't Tak'a ya pulse" (Can't take your pulse):
Takayasu's disease known as Pulseless disease, since pulse is weakened in the upper extremities.
Knowledge Level 2, System: Cardiovascular
Anonymous Contributor

Thrombotic thrombocytopenic purpura: signs

FAT RN:
Fever
Anemia
Thrombocytopenia
Renal problems
Neurologic dysfunction
Knowledge Level 3, System: Cardiovascular
Anonymous Contributor

TTP: clinical features

Thrombosis and thrombocytopenia PARTNER together:
Platelet count low
Anemia (microangiopathic hemolytic)
Renal failure
Temperature rise
Neurological deficits
ER admission (as it is an emergency)
Knowledge Level 2, System: Cardiovascular
Anthony Chan

Virchow's triad (venous thrombosis)

"VIRchow":
Vascular trauma
Increased coagulability
Reduced blood flow (stasis)
Knowledge Level 2, System: Cardiovascular
Rinku Uberoi  UNIBE

Von Hippel-Lindau: signs and symptoms
HIPPEL:
Hemanigoblastomas
Increased renal cancer
Pheochromocytoma
Port-wine stains
Eye dysfunction
Liver, pancreas, kidney cysts
  Bare bones version: Hippel-Lindau, with H and L as above.
Knowledge Level 4, System: Cardiovascular
Robert O’Connor  University College Dublin

Addison’s disease: features
ADDISON:
Autoimmune
DIC (meningococcus)
 Destruction by cancer, infection, vascular insufficiency
Iatrogenic
Sarcoidosis, granulomatous such as TB histiomycesis
hypOension/ hypOanetemia
Nelson’s syndrome [post adrelectomy, increased ACTH]
Knowledge Level 3, System: Endocrine
Samuel Atom Baek-Kim

Cushing syndrome
CUSHING:
Central obesity/ Cervical fat pads/ Collagen fiber weakness/ Comedones (acne)
Urinary free corisol and glucose increase
Striae/ Suppressed immunity
Hypercortisolism/ Hypertension/ Hyperglycemia/ Hirsutism
Iatrogenic (Increased administration of corticosteroids)
Noniatrogenic (Neoplasms)
Glucose intolerance/ Growth retardation
Knowledge Level 2, System: Endocrine
Rinku Uberoi

Goitre: differential
GOITRE:
Goitrogens
Onset of puberty
Iodine deficiency
Thyrotoxicosis/ Tumor/ Thyroiditis [Hashimoto’s]
Reproduction [pregnancy]
Enzyme deficiencies
Knowledge Level 3, System: Endocrine
Robert O’Connor  University College Dublin

Hirsutism vs. virilism
Hirsutism: Hair on body like a male.
Virilism: Voice and rest of secondary sexual characteristics like a male.
Knowledge Level 1, System: Endocrine
Anonymous Contributor

Hypercalcemia: symptoms of elevated serum levels
"Bones, Stones, Groans, Moans":
  Bones: pain in bones
  Stones: renal
  Groans: pain
Psychic moans/ Psychological overtones: confused state
Knowledge Level 3, System: Endocrine
Anonymous Contributor

Multiple endocrine neoplasia III: components
MEN III is a disease of 3 M's:
Medullary thyroid carcinoma
Medulla of adrenal (pheochromocytoma)
Mucosal neuroma
Knowledge Level 4, System: Endocrine
Anonymous Contributor

**Pheochromocytoma: 3 most common symptoms**

"PH*E*ochromocytoma*":
- Palpitations
- Headache
- Edisodic sweating (diaphoresis)
Knowledge Level 4, System: Endocrine
Anonymous Contributor

**Thyroid carcinoma: features, prognosis of most popular**

Most Popular is Papillary.
- Clinical features:
  - Papillae (branching)
  - Palpable lymph nodes
  - "Pupil" nuclei (Orphan Annie)
  - Psammoma bodies within lesion (often)
- Also, has a Positive Prognosis (10 year survival rate: 98%)
Knowledge Level 4, System: Endocrine
Anonymous Contributor

**Thyroid storm characteristics**

"Storm HITS girls cAMP":
- Thyroid storm due to:
  - Hyperthyroidism
  - Infection or Illness at childbirth
  - Trauma
  - Surgery
  - girls: Thyroid storm more common in females.
- Alternatively: "ShIT storm": Surgery, Hyperthyroidism, Infection/ Illness, Trauma.
Knowledge Level 4, System: Endocrine
Sung H. Kim & Lior Greenberg

**Baldness risk factors**

"Daddy Doesn't Deny Getting Hair Implants":
- Diet
- Disease
- Drugs
- Genes
- Hormones
- Injury to the scalp
Knowledge Level 4, System: Integumental
Anonymous Contributor

**Diabetic ketoacidosis: I vs. II**

ketONE bodies are seen in type ONE diabetes.
Knowledge Level 2, System: Integumental
Anonymous Contributor

**Lichen planus characteristics**

Planus has 4 P's:
- Peripheral
- Polygonal
- Pruritus
- Purple
Knowledge Level 3, System: Integumental
Anonymous Contributor
APKD: signs, complications, accelerators

11 B's:

Signs:
Bloody urine
Bilateral pain [vs. stones, which are usually unilateral pain]
Blood pressure up
Bigger kidneys
Bumps palpable

Complications:
Berry aneurysm
Biliary cysts
Bicuspid valve [prolapase and other problems]

Accelerators:
Boys
Blacks
Blood pressure high
Knowledge Level 5, System: Kidney/Urine
Robert O'Connor  University College Dublin

Gout vs. pseudogout: crystal lab findings

Pseudogout crystals are:
Positive birefringent
Polygon shaped
Gout therefore is the negative needle shaped crystals.
Also, gout classically strikes great Toe, and its hallmark is Tophi.
Knowledge Level 1, System: Kidney/Urine
Robert O'Connor  University College Dublin

Gout: factors that can precipitate an attack of acute gouty arthritis

DARK:
Diuretics
Alcohol
Renal disease
Kicked (trauma)
And, the attack occurs most often at night [thus “dark”].
Knowledge Level 4, System: Kidney/Urine
Marc Miller  Sackler School of Medicine

Gout: major features

GOUT:
Great toe
One joint (75% monoarticular)
Uric acid increased (hence urolithiasis)
Tophi
Knowledge Level 1, System: Kidney/Urine
Dr. Harsh Sharma  BJ Medical College

Hematuria: urethral causes

NUTS:
Neoplasm
Urethritis
Tumour
Stone
Knowledge Level 2, System: Kidney/Urine
Sushant Varma  University of Sheffield, UK

Nephritic syndrome: glomerular diseases commonly presenting as nephritic syndrome
PARIS:
Post-streptococcal
Alport's
RPGN
IgA nephropathy
SLE

Alternatively: PIG ARMS to include Goodpasture's [one cause of RPGN]. Membranoproliferative [only sometimes included in the classic nephritic list].
Knowledge Level 3, System: Kidney/Urine
Knightmare  Howard University College of Medicine

Nephrotic syndrome: hallmark findings

"Protein LEAC":
Proteinuria
Lipid up
Edema
Albumin down
Cholesterol up

In nephrotic, the proteins leak out.
Knowledge Level 2, System: Kidney/Urine
Anonymous Contributor

Renal failure (chronic): consequences

ABCDEF:
Anemia
- due to less EPO
Bone alterations
- osteomalacia
- osteoporosis
- von Recklinghausen
Cardiopulmonary
- atherosclerosis
- CHF
- hypertension
- pericarditis
D vitamin loss
Electrolyte imbalance
- sodium loss/gain
- metabolic acidosis
- hyperkalemia
Feverous infections
- due to leukocyte abnormalities and dialysis hazards
GI disturbances
- haemorrhagic gastritis
- peptic ulcer disease
- intractable hiccups
Knowledge Level 3, System: Kidney/Urine
Plussind  Siriraj Medical University, Thailand

Renal failure: causes

AVID GUT:
Acute tubular necrosis
Vascular obstruction
Infection
Diffuse intravascular coagulation
Glomerular disease
Urinary obstruction
Tubulointerstitial nephritis
Knowledge Level 3, System: Kidney/Urine
Daniel Clarke  University of Queensland

Anemia: TIBC finding to differentiate iron deficiency vs. chronic disease

Knowledge Level 3, System: Kidney/Urine
Knightmare  Howard University College of Medicine
TIBC levels at the:
Top=Iron deficiency.
Bottom=Chronic disease.
Knowledge Level 3, System: Lymphoid
Robert O'Connor  University College Dublin

Hemophilia: type A factor
Hemophilia A: problems with VIII factor (number V as an inverted A).
Knowledge Level 2, System: Lymphoid
Julio M. De Peña, M.D.  UNIBE Med School

Leukemias: acute vs. chronic rules of thumb
ABCDE:
Acute is:
Blasts predominate
Children
Drastic course
Elderly
Few WBC’s (so Fevers)
  Chronic is all the opposites:
Mature cells predominate
Middle aged
Less debilitating course
Elevated WBC’s, so not a history of fevers and infections
Knowledge Level 2, System: Lymphoid
Anonymous Contributor

Megaloblastic anemia: vitamin B12 deficiency vs. folate deficiency
Vitamin B12 deficiency also affects Brain (optic neuropathy, subacute combined degeneration, paresthesia).
Folate deficiency is not associated with neurological symptoms.
Knowledge Level 1, System: Lymphoid
Glen Davis  Cornell University Medical College

Sarcoidosis summarized
SARCOIDOISIS:
Schaumann calcifications
Asteroid bodies/ [ACE] increase/ Anergy
Respiratory complications/ Renal calculi/ Restrictive lung disease/ Restrictive cardiomyopathy
Calcium increase in serum and urine/ CD4 helper cells
Ocular lesions
Immune mediated noncaseating granulomas/ [Ig] increase
Diabetes insipidus/ [D vit.] increase/ Dyspnea
Osteopathy
Skin (Subcutaneous nodules, erythema nodosum)
Interstitial lung fibrosis/ IL-1
Seventh CN palsy
Knowledge Level 4, System: Lymphoid
Rinku Uberoi  UNIBE

Wiskott-Aldrich syndrome: symptom triad
"PET WASP":
Pyrogenic infections
Eczema
Thrombocytopenia
  WASP is the name of the causitive agent: Wiskott-Aldrich Syndrome Protein.
  Alternatively: Wiskott=Hot, Aldrich=Itch, Syndrom=Throm.
Knowledge Level 2, System: Lymphoid
Robert O'Connor  University College Dublin

Duchenne vs. Becker Muscular Dystrophy
**Duchenne Muscular Dystrophy (DMD):** Doesn't Make Dystrophin.
**Becker Muscular Dystrophy (BMD):** Badly Made Dystrophin (a truncated protein).

Knowledge Level 4, System: Muscle
Robert O'Connor  University College Dublin

**McArdle's syndrome**

**MCARDLES:**
- Myoglobinuria
- Cramping after exercise
- Accumulated glycogen
- Recessive inheritance
- Deficiency of muscle phosphorylase
- Lactate levels fail to rise
- Elevated creatine kinase
- Skeletal muscle only

Knowledge Level 5, System: Muscle
Samuel Atom Baek-Kim

**Alzheimer’s disease (AD): associations, findings**

**AD:**
- Associations:
  - Aluminum toxicity
  - Acetylcholine deficiencies
  - Amyloid B
  - Apolipoprotein gene E
  - Altered nucleus basalis of Meynert
- Down’s
- Findings:
  - Actin inclusions (Hirano bodies)
  - Atrophy of brain
  - Amyloid plaques
  - Aphasia, Apraxia, Agitation
  - DNA-coiled tangles
  - Dementia, Disoriented, Depressed

Knowledge Level 6, System: Nervous
Dr. Atif Farooq Khawaja  Rawalpindi Medical College, Gujranwala, Pakistan

**Cerebral palsy: general features**

**PALSY:**
- Paresis
- Ataxia
- Lagging motor development
- Spasticity
- Young

Knowledge Level 2, System: Nervous
Robert O'Connor  University College Dublin

**Lou Gehrig’s is both upper and lower motor neuron signs**

LoU = Lower & Upper.
Knowledge Level 1, System: Nervous
Robert O'Connor  University College Dublin

**Parkinsonism: essential features**

**TRAPS:**
- Tremor (resting tremor)
- Rigidity
- Akinesia
- Postural changes (stooped)
- Stare (serpentine stare)

To remember what kind of tremor and postural change, can look at letter that follows in TRAPS: Tremor is Resting, Posture is Stood.

Knowledge Level 1, System: Nervous
Anonymous Contributor

**Pyrogenic meningitis: likeliest bug in age group**

Hi Yield [ID 1014]
"Explaining Hot Neck Stiffness":
In order from birth to death:
E. coli [infants]
Haemophilus influenzae [older infants, kids]
Neisseria meningitis [young adults]
Streptococcus pneumoniae [old folks]
Knowledge Level 4, System: Nervous
Robert O’Connor University College Dublin

<table>
<thead>
<tr>
<th>Tabses Dorsalis morphology</th>
<th>Hi Yield [ID 797]</th>
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</thead>
<tbody>
<tr>
<td>DORSALIS:</td>
<td></td>
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<tr>
<td>Dorsal column degeneration</td>
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<td>Orthopedic pain (Charcot joints)</td>
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<td>Reflexes decreased (deep tendon)</td>
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<tr>
<td>Shooting pain</td>
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<td>Argyll-Robertson pupils</td>
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<tr>
<td>Locomotor ataxia</td>
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<tr>
<td>Impaired proprioception</td>
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<tr>
<td>Syphilis</td>
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<td>Knowledge Level 2, System: Nervous</td>
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<tr>
<td>Robert O’Connor University College Dublin</td>
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<thead>
<tr>
<th>Tuberous sclerosis: presenting features</th>
<th>Hi Yield [ID 826]</th>
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<tbody>
<tr>
<td>“Zits, Fits, Deficits”:</td>
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<tr>
<td>Fits: seizures</td>
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<td>Deficits: neurological deficits</td>
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<tr>
<td>Knowledge Level 4, System: Nervous</td>
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<tr>
<td>Lior Greenberg Technion Faculty of Medicine, Haifa, Israel</td>
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<thead>
<tr>
<th>Wernicke-Korsakoff’s psychosis: findings</th>
<th>Hi Yield [ID 400]</th>
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</thead>
<tbody>
<tr>
<td>COAT RACK:</td>
<td></td>
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<tr>
<td>Wernicke’s encephalopathy (acute phase):</td>
<td></td>
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<tr>
<td>Confusion</td>
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<tr>
<td>Ophthalmoplegia</td>
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<td>Ataxia</td>
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<td>Thiamine tx.</td>
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<td>Korsakoff’s psychosis (chronic phase):</td>
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<tr>
<td>Retrograde amnesia</td>
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<tr>
<td>Anterograde amnesia</td>
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<tr>
<td>Confabulation</td>
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<tr>
<td>Korsakoff’s psychosis</td>
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<td>Knowledge Level 2, System: Nervous</td>
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<tr>
<td>HBV Morehouse School of Medicine</td>
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<thead>
<tr>
<th>Edwards’ syndrome: characteristics</th>
<th>Hi Yield [ID 2146]</th>
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</thead>
<tbody>
<tr>
<td>EDWARDS:</td>
<td></td>
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<tr>
<td>Eighteen (trisomy)</td>
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<tr>
<td>Digit overlapping flexion</td>
<td></td>
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<tr>
<td>Wide head</td>
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<td>Absent intellect (mentally retarded)</td>
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<tr>
<td>Rocker-bottom feet</td>
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<tr>
<td>Diseased heart</td>
<td></td>
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<tr>
<td>Small lower jaw</td>
<td></td>
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<tr>
<td>Knowledge Level 2, System: Other/Miscellaneous</td>
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<tr>
<td>Monika Kiripolsky Vanderbilt University School of Medicine</td>
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<thead>
<tr>
<th>Fragile X syndrome: features</th>
<th>Hi Yield [ID 2151]</th>
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</table>
FEMALES
FMR1 gene
Exhibits anticipation
Macro-orchidism
Autism
Long face with large jaw
Everted eyes
Second most common cause of genetic mental retardation

Knowledge Level 1, System: Other/Miscellaneous
Sung Hoon Kim  El Paso, TX

Fragile-X syndrome: features

DSM-4:
Discontinued chromosome staining
Shows anticipation
Male (male more affected)
Mental retardation (2nd most common genetic cause)
Macrogamnathia
Macrorchidism
Knowledge Level 4, System: Other/Miscellaneous
Hugo M. Rodriguez, MD  University of Virginia Roanoke-Salem Program

Turner syndrome: components

CLOWNS:
Cardiac abnormalities (specifically Coarctation)
Lymphoedema
Ovaries underdeveloped (causing sterility, amenorrhea)
Webbed neck
Nipples widely spaced
Short
Knowledge Level 1, System: Other/Miscellaneous
Robert O’Connor  University College Dublin

Bronchial obstruction: consequences

APPLE BABE:
Atelectasis
Pleural adhesions
Pleuritis
Lipid pneumonia
Effusion->organisation->fibrosis
Bronchiectasis
Abscess
Broncho and lobar pneumonia
Emphysema
Knowledge Level 6, System: Pulmonary
BB  University of Queensland, Australia

COPD: 4 types and hallmark

ABCDE:
Asthma
Bronchiectasis
Chronic bronchitis
Dyspnea [hallmark of group]
Emphysema
  Alternatively: replace Dyspnea with Decreased FEV1/FVC ratio.
Knowledge Level 1, System: Pulmonary
Robert O’Connor  University College Dublin

COPD: blue bloater vs. pink puffer diseases

emPhysema has letter P (and not B) so Pink Puffer.
chronic Bronchitis has letter B (and not P) so Blue Bloater.
Knowledge Level 1, System: Pulmonary
Harsh Sharma  BJMC, Pune, India
Emphysema: types, most important feature of each

“Cigarettes Is Primary Problem”:

- Types:
  - Centrilobular
  - Irregular
  - Pancinar
  - Paraseptal

  Most important feature for each type (in order as above):
  - Cigarettes
  - Inflammation healed to scar
  - Protease inhibitor deficiency (a1-antitrypsin)
  - Pneumothorax

"Cigarettes is primary problem" used since cigarettes is most common cause of emphysema.

Keeping P’s straight: Pan is antitrypsin.

Knowledge Level 4, System: Pulmonary
Robert O'Connor University College Dublin

Interstitial lung disease: causes

SARCOID:
- Sarcoidosis
- Allergic reaction
- Radiation
- Connective tissue disease
- Occupational exposure
- Infection
- Drugs
- Idiopathic

Knowledge Level 6, System: Pulmonary
Will Herrington UCL Hospital

Nasopharyngeal malignant cancers

NASOPharyngeal:
- Nasopharyngeal
- Adenocarcinoma
- Squamous cell carcinoma
- Olfactory neuroblastoma
- Plasmacytoma

Knowledge Level 5, System: Pulmonary
Robert O'Connor University College Dublin

Pancoast tumor: relationship with Horner’s syndrome

“Horner has a MAP of the Coast”:

A PanCoast tumor is a cancer of the lung apex that compresses the cervical sympathetic plexus, causing Horner’s syndrome, which is MAP:
- Miosis
- Anhidrosis
- Ptosis

Knowledge Level 1, System: Pulmonary
Derek Obayashi Chicago Medical School

Pneumothorax: presentation

P-THORAX:
- Pleuretic pain
- Trachea deviation
- Hyperresonance
- Onset sudden
- Reduced breath sounds (& dypsnea)
- Absent fremitus
- X-ray shows collapse

Knowledge Level 3, System: Pulmonary
Robert O'Connor University College Dublin

Pulmonary embolism: risk factors
TOM SCHREPFER:
Trauma
Obesity
Malignancy
Surgery
Cardiac disease
Hospitalization
Rest [bed-ridden]
Elderly
Past history
Fracture
Estrogen [pregnancy, post-partum]
Road trip
Knowledge Level 2, System: Pulmonary
Anonymous Contributor

Respiratory distress syndrome in infants: major risk factors

PCD (Primary Ciliary Dyskinesia, a cause of Respiratory distress syndrome):
Prematurity
Cesarean section
Diabetic mother
Knowledge Level 4, System: Pulmonary
Shebrain Cairo University

TB: features

TB is characterised by 4 C's:
Caseation
Calcification
Cavitation
Cicatrization
Knowledge Level 3, System: Pulmonary
Sameh Shehata Asst. Prof of Surgery, Faculty of Medicine, University of Alexandria, Egypt

Breast cancer: risk assessment

"Risk can be assessed by History ALONE":
History (family, previous episode)
Abortion/ Age (old)
Late menopause
Obesity
Nulliparity
Early menarche
Knowledge Level 3, System: Reproductive
Lau Yue Young Geoffrey Hong Kong University

Endometrial carcinoma: risk factors

ENDOMET:
Elderly
Nulliparity
Diabetes
Obesity
Menstrual irregularity
Estrogen therapy
hyperTension
Knowledge Level 5, System: Reproductive
Robert O'Connor University College Dublin

Polycystic ovary: morphology, presentation
Morphology is **poly-C**:
- Cysts
- Capsule thickened
- Cortical stromal fibrosis
  - Clinical presentation is **OVARY**:
  - Obese
  - Virilism or hirsutism
  - Amenorrhea
  - Reproductive problem [infertile]
  - Young woman

Knowledge Level 3, System: Reproductive
Robert O'Connor University College Dublin

### Scrotum masses

**SHOVE IT:**
- Spermatocele
- Hydrocele/ Hæmatocele
- Orchitis
- Varicocele
- Epidymal cyst
- Indirect inguinal hernia
- Torsion/ Tumor

Knowledge Level 3, System: Reproductive
Sushant Varma Medical student, University of Sheffield, UK

### Carcinomas having tendency to metastasize to bone

"Kinds Of Tumors Leaping Primarily To Bone":
- Kidneys
- Ovaries
- Testes
- Lungs
- Prostate
- Thyroid
- Breasts
  - Alternatively: "Promptly" instead of "Primarily".
  - Alternatively: "BLT2 with a Kosher Pickle".

Knowledge Level 3, System: Skeletal
Anonymous Contributor

### Histiocytosis X: hallmark finding

"Birbeck’s rackets is X":
- Tennis rackets under electron microscope is Histiocystosis X.
  - Consider 2 tennis rackets in an X formation.
  - See diagram.

Knowledge Level 1, System: Skeletal
Robert O'Connor University College Dublin

### Marble bone disease: signs and symptoms

**MARBLES**:
- Multiple fractures
- Anemia
- Restricted cranial nerves
- Blind & deaf
- Liver enlarged
- Erlenmeyer flask deformity
- Splenomegaly
  - Eponymous name: Marbles = Albers-Schonberg (anagram).

Knowledge Level 3, System: Skeletal
Robert O'Connor University College Dublin

### Paget’s disease of bone: signs and symptoms
Four L's:
- Larger hat size
- Loss of hearing: due to compression of nerve
- Leontiasis ossea (lion-like face)
- Light-headed (Paget's steal)

Knowledge Level 2, System: Skeletal
Marc Miller  Sackler School of Medicine

Duodenal atresia vs. Pyloric stenosis: site of obstruction

Duodenal Atresia: Distal to Ampulla of Vater.
Pyloric stenosis: Proximal to it.
Knowledge Level 5, System: Alimentary
Rinku Uberoi

Pyloric stenosis (congenital): presentation

Pyloric stenosis is 3 P's:
- Palpable mass
- Parastalsis visible
- Projectile vomiting (2-4 weeks after birth)

Knowledge Level 3, System: Alimentary
Dr. Atif Farooq Khawaja  Rawalpindi Medical College, Pakistan

Vitamin toxicities: neonatal

Excess vitamin A: Anomalies (teratogenic)
Excess vitamin E: Enterocolitis (necrotizing enterocolitis)
Excess vitamin K: Kernicterus (hemolysis)

Knowledge Level 7, System: Alimentary
Anonymous Contributor

Cyanotic congenital heart diseases

5 T's:
- Truncus arterialis
- Transposition of the great arteries
- Tricuspid atresia
- Tetralogy of Fallot
- Total anomalous pulmonary venous return

Knowledge Level 5, System: Cardiovascular
Vince Yamashiroya

Cyanotic heart diseases: 5 types

Use your five fingers:
1 finger up: Truncus Arteriosus (1 vessel)
2 fingers up: Dextroposition of the Great Arteries (2 vessels transposed)
3 fingers up: Tricuspid Atresia (3=Tri)
4 fingers up: Tetralogy of Fallot (4=Tetra)
5 fingers up: Total Anomalous Pulmonary Venous Return (5=5 words)

Knowledge Level 3, System: Cardiovascular
Jeff Simmons  University of Alabama School Of Medicine

Hemolytic-Uremic Syndrome (HUS): components

"Remember to decrease the RATE of IV fluids in these patients":
- Renal failure
- Anemia (microangiopathic, hemolytic)
- Thrombocytopenia
- Encephalopathy (TTP)

Knowledge Level 6, System: Cardiovascular
Vince Yamashiroya

Haematuria: differential in children

Knowledge Level 6, System: Cardiovascular
Vince Yamashiroya
ABCDEF

Anatomy (cysts, etc)
Bladder (cystitis)
Cancer (Wilm's tumour)
Drug related (cyclophosphamide)
Exercise induced
Factitious (Munchausen by proxy)
Glomerulonephritis
Haematology (bleeding disorder, sickle cell)
Infection (UTI)
Injury (trauma)
Kidney stones (hypercalciuria)
Knowledge Level 4, System: Kidney/Urine
S. Jibodh University College Dublin

Perez reflex
Hi Yield [ID 2073]

Eliciting the Perez reflex will make the baby pee.
Knowledge Level 7, System: Kidney/Urine
Anonymous Contributor

Cerebral palsy (CP): most likely cause
Hi Yield [ID 2821]

CP: Cerebral Palsy
Child Premature
The premature brain is more prone to all the possible insults.
Knowledge Level 1, System: Nervous
Anonymous Contributor

Pediatric milestones in development
Hi Yield [ID 2345]

1 year:
- single words
2 years:
- 2 word sentences
- understands 2 step commands
3 years:
- 3 word combos
- repeats 3 digits
- rides tricycle
4 years:
- draws square
- counts 4 objects
Knowledge Level 4, System: Nervous
Rinku Uberoi

Sturge-Weber syndrome: hallmark features
Hi Yield [ID 575]

Sturge-Weber:
1. Seizures
2. Port Wine stain
Knowledge Level 4, System: Nervous
Ramon Salazar

Guthrie card: diseases identified with it
[ID 836]

"Guthrie Cards Can Help Predict Bad Metabolism":
Galactosaemia
Cystic fibrosis
Congenital adrenal hyperplasia
Hypothyroidism
Phenylketonuria
Biotinidase deficiency
Maple syrup urine disease
Knowledge Level 4, System: Other/Miscellaneous
Logan Mitchell Dunedin Medical School, New Zealand

Measles: complications
Hi Yield [ID 476]
“MEASLES COMP” (complications):
Myocarditis
Encephalitis
Appendicitis
Subacute sclerosing panencephalitis
Laryngitis
Early death
Shfits (diarrhoea)
Corneal ulcer
Otis media
Mesenteric lymphadenitis
Pneumonia and related (bronchiolitis-bronchitis-croup)
Knowledge Level 4, System: Other/Miscellaneous
Joshua Goh Unimas: Universiti Malaysia Sarawak

Russell Silver syndrome: features

ABCDEF:
Asymmetric limb (hemihypertrophy)
Bossing (frontal)
Clinodactyly/ Cafe au lait spots
Dwarf (short stature)
Excretion (GU malformation)
Face (triangular face, micrognathia)
Knowledge Level 6, System: Other/Miscellaneous
Anthony Chan Chinese University of Hong Kong

Williams syndrome: features

WILLIAMS:
Weight (low at birth, slow to gain)
Iris (stellate iris)
Long philtrum
Large mouth
Increased Ca++
Aortic stenosis (and other stenoses)
Mental retardation
Swelling around eyes (periorbital puffiness)
Knowledge Level 7, System: Other/Miscellaneous
Anthony Chan Chinese University of Hong Kong

Cough (chronic): differential

When cough in nursery, rock the "CRADLE":
Cystic fibrosis
Rings, slings, and airway things (tracheal rings)/ Respiratory infections
Aspiration (swallowing dysfunction, TE fistula, gastroesophageal reflux)
Dyskinetic cilia
Lung, airway, and vascular malformations (tracheomalacia, vocal cord dysfunction)
Edema (heart failure)
Knowledge Level 6, System: Pulmonary
Vince Yamashiroya

Croup: symptoms

3 S’s:
Stridor
Subglottic swelling
Seal-bark cough
Knowledge Level 1, System: Pulmonary
Robert O’Connor University College Dublin

Cystic fibrosis: exacerbation of pulmonary infection
CF PANCREAS:
Cough (increase in intensity and frequent spells)
Fever (usually low grade, unless severe bronchopneumonia is present)
Pulmonary function deterioration
Appetite decrease
Nutrition, weight loss
CBC (leukocytosis with left shift)
Radiograph (increase overaeration, peribronchial thickening, mucus plugging)
Exam (rales or wheezing in previously clear areas, tachypnea, retractions)
Activity (decreased, impaired exercise intolerance, increased absenteeism)
Sputum (becomes darker, thicker, and more abundant, forming plugs)
Knowledge Level 7, System: Pulmonary
Vince Yamashiroya

**Cystic fibrosis: presenting signs**

CF PANCREAS:
Chronic cough and wheezing
Failure to thrive
Pancreatic insufficiency (symptoms of malabsorption like steatorrhea)
Alkalosis and hypotonic dehydration
Neonatal intestinal obstruction (meconium ileus)/ Nasal polyps
Clubbing of fingers/ Chest radiograph with characteristic changes
Rectal prolapse
Electrolyte elevation in sweat, salty skin
Absence or congenital atresia of vas deferens
Sputum with Staph or Pseudomonas (mucoid)
Knowledge Level 7, System: Pulmonary
Vince Yamashiroya

**Breast feeding: benefits**

ABCDEFGH:
Infant:
Allergic condition reduced
Best food for infant
Close relationship with mother
Development of IQ, jaws, mouth
Mother:
Economical
Fitness: quick return to pre-pregnancy body shape
Guards against cancer: breast, ovary, uterus
Hemorrhage (postpartum) reduced
Knowledge Level 3, System: Reproductive
Anthony Chan

**Septic Arthritis: most common cause**

Staphylococcus Aureus is the most common cause of
Septic Arthritis in the pediatric population.
Knowledge Level 5, System: Skeletal
Anonymous Contributor

**PHARMACOLOGY**

**Hepatic necrosis: drugs causing focal to massive necrosis**

"Very Angry Hepatocytes":
Valproic acid
Acetaminophen
Halothane
Knowledge Level 6, System: Alimentary
Calvin Sy University of Pittsburgh School of Medicine

**Adrenoceptors: vasomotor function of alpha vs. beta**
ABCD:
Alpha = Constrict.
Beta = Dilate.
Knowledge Level 1, System: Cardiovascular
Anonymous Contributor

<table>
<thead>
<tr>
<th>Antiarrhythmics: class III members</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BIAS:</strong></td>
</tr>
<tr>
<td>Bretylium</td>
</tr>
<tr>
<td>Ibutilide</td>
</tr>
<tr>
<td>Amiodarone</td>
</tr>
<tr>
<td>Sotalol</td>
</tr>
<tr>
<td>Knowledge Level 1, System: Cardiovascular</td>
</tr>
</tbody>
</table>
| Dr. Harsh Sharma and Robert O'Connor
BJMC, Pune, India and University College Dublin |

<table>
<thead>
<tr>
<th>Beta blockers with intrinsic sympathomimetic activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picture diabetic and asthmatic kids riding away on a cart that rolls on pinwheels.</td>
</tr>
<tr>
<td>Pindolol and Carteolol have high and moderate ISA respectively, making them acceptable for use in some diabetics or asthmatics despite the fact that they are non-selective beta blockers.</td>
</tr>
<tr>
<td>Knowledge Level 7, System: Cardiovascular</td>
</tr>
<tr>
<td>David Shprecher Lake Erie College of Osteopathic Medicine</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Beta-blockers: main contraindications, cautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABCDE: Wind/Atmosphere/Disorders</td>
</tr>
<tr>
<td>Asthma</td>
</tr>
<tr>
<td>Block (heart block)</td>
</tr>
<tr>
<td>COPD</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
</tr>
<tr>
<td>Electrolyte (hyperkalemia)</td>
</tr>
<tr>
<td>Knowledge Level 4, System: Cardiovascular</td>
</tr>
<tr>
<td>Anonymous Contributor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Beta-blockers: nonselective beta-blockers</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Tim Pinches His Nasal Problem” (because he has a runny nose...):</td>
</tr>
<tr>
<td>Timolol</td>
</tr>
<tr>
<td>Pindolol</td>
</tr>
<tr>
<td>Hismolol</td>
</tr>
<tr>
<td>Nalidolol</td>
</tr>
<tr>
<td>Propranolol</td>
</tr>
<tr>
<td>Knowledge Level 2, System: Cardiovascular</td>
</tr>
<tr>
<td>Hugo M. Rodriguez, MD University of Virginia Roanoke-Salem Program</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Captopril (an ACE inhibitor): side effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPTOPRIL:</td>
</tr>
<tr>
<td>Cough</td>
</tr>
<tr>
<td>Angioedema/ Agranulocystosis</td>
</tr>
<tr>
<td>Proteinuria/ Potassium excess</td>
</tr>
<tr>
<td>Taste changes</td>
</tr>
<tr>
<td>Orthostatic hypotension</td>
</tr>
<tr>
<td>Pregnancy contraindication/ Pancreatitis/ Pressure drop (first dose hypertension)</td>
</tr>
<tr>
<td>Renal failure (and renal artery stenosis contraindication)/ Rash</td>
</tr>
<tr>
<td>Indomethacin inhibition</td>
</tr>
<tr>
<td>Leukopenia/ Liver toxicity</td>
</tr>
<tr>
<td>Knowledge Level 2, System: Cardiovascular</td>
</tr>
<tr>
<td>Dr. Chetan Wasekar MBBS KEM Hospital</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enoxaprin (prototype low molecular weight heparin): action, monitoring</th>
</tr>
</thead>
</table>
Enoxaprin only acts on factor Xa. Monitor Xa concentration, rather than APTT.

Knowledge Level 7, System: Cardiovascular
Dr. Atif Farooq Khawaja Rawalpindi Medical College, Pakistan, Gujranwala

**HMG-CoA reductase inhibitors (statins): side effects, contraindications, interactions**

**HMG-CoA:**
- Side effects:
- Hepatotoxicity
- Myositis [aka rhabdomyolysis]
- Contraindications:
- Girl during pregnancy/ Growing children
- Interactions:
- Coumarin/ Cyclosporine

Knowledge Level 4, System: Cardiovascular
Dr. Atif Farooq Khawaja Rawalpindi Medical College, Pakistan, Gujranwala

**Hypertension: treatment**

**ABCD:**
- ACE inhibitors/ AngII antagonists (sometimes Alpha agonists also)
- Beta blockers
- Calcium antagonists
- Diuretics

Knowledge Level 1, System: Cardiovascular
Mr. LW Mason 4th Year Medical Student

**Patent ductus arteriosus: treatment**

"Come In and Close the door":
- Indomethacin is used to Close PDA.

Knowledge Level 2, System: Cardiovascular
Milixa Fortuna UAG Medical Student

**Propranolol and related ‘-olol’ drugs: usage**

"olol" is just two backwards lower case b’s.
Backward b’s stand for "beta blocker".
- Beta blockers include acebutolol, betaxolol, bisoprolol, oxprenolol, propranolol.

Knowledge Level 1, System: Cardiovascular
Robert O’Connor University College Dublin

**Thrombolytic agents**

USA:
- Urokinase
- Streptokinase
- Alteplase (tPA)

Knowledge Level 2, System: Cardiovascular
Dr. Harsh Sharma BJMC, Pune, India

**Warfarin: action, monitoring**

WePT:
- Warfarin works on the extrinsic pathway and is monitored by PT.

Knowledge Level 3, System: Cardiovascular
Marcus James Fidel Medical Student, University of New Mexico

**Warfarin: metabolism**

SLOW:
- Has a slow onset of action.
- A quick Vitamin K antagonist, though.
- Small lipid-soluble molecule
- Liver: site of action
- Oral route of administration.
- Warfarin

Knowledge Level 2, System: Cardiovascular
Samuel Atom Baek-Kim
Gynaecomastia-causing drugs

DISCOS:
- Digoxin
- Isoniazid
- Spironolactone
- Cimetidine
- Oestrogens
- Stilboestrol

Knowledge Level 4, System: Endocrine
Nasser University of Sheffield

K+ increasing agents

K-BANK:
- K-sparing diuretic
- Beta blocker
- ACEI
- NSAID
- K supplement

Knowledge Level 3, System: Endocrine
Anthony Chan

Propythiouracil (PTU): mechanism

It inhibits PTU:
- Peroxidase/ Peripheral deiodination
- Tyrosine iodination
- Union (coupling)

Knowledge Level 4, System: Endocrine
Dr. Atif Farooq Khawaja and Mediha Farooq Rawalpindi Medical College, Pakistan/ Gujranwala

Steroid side effects

CUSHINGOID:
- Cataracts
- Ulcers
- Skin: striae, thinning, bruising
- Hypertension/ Hirsutism/ Hyperglycemia
- Infections
- Necrosis, avascular necrosis of the femoral head
- Glycosuria
- Osteoporosis, obesity
- Immunosuppression
- Diabetes

Knowledge Level 2, System: Endocrine
Anonymous Contributor

Steroids: side effects

BECLOMETHASONE:
- Buffalo hump
- Easy bruising
- Cataracts
- Larger appetite
- Obesity
- Moonface
- Euphoria
- Thin arms & legs
- Hypertension/ Hyperglycaemia
- Avascular necrosis of femoral head
- Skin thinning
- Osteoporosis
- Negative nitrogen balance
- Emotional liability

Knowledge Level 4, System: Endocrine
Rob Cambridge University

Lupus: drugs inducing it
HIP:
Hydralazine
INH
Procanimide
Knowledge Level 6, System: Integumental
Hodge/Gupta LSU Medicine Firm

Diuretics: thiazides: indications

“CHIC to use thiazides”:
CHF
Hypertension
Insipidous
Calcium calculi
Knowledge Level 3, System: Kidney/Urine
Anonymous Contributor

Nitrofurantoin: major side effects

NitroFurAntoin:
Neuropathy (peripheral neuropathy)
Fibrosis (pulmonary fibrosis)
Anemia (hemolytic anemia)
Knowledge Level 4, System: Kidney/Urine
Joshua Goh Unimas: University Malaysia Sarawak

Osmotic diuretics: members

GUM:
Glycerol
Urea
Mannitol
Knowledge Level 4, System: Kidney/Urine
Robert O'Connor University College Dublin

SIADH-inducing drugs

ABCD:
Analgesics: opioids, NSAIDs
Barbiturates
Cyclophosphamide/Chlorpromazine/Carbamazepine
Diuretic (thiazide)
Knowledge Level 3, System: Kidney/Urine
Anthony Chan

Sulfonamide: major side effects

Sulfonamide side effects:
Steven-Johnson syndrome
Skin rash
Solubility low (causes crystalluria)
Serum albumin displaced (causes newborn kernicterus and potentiation of other serum albumin-binders like warfarin)
Knowledge Level 3, System: Lymphoid
Robert O'Connor University College Dublin

Vir-named drugs: use

"-vir at start, middle or end means for virus”:
Knowledge Level 1, System: Lymphoid
Robert O'Connor University College Dublin

4-Aminopyradine (4-AP) use

"4-AP is For AP”:
For AP (action potential) propagation in Multiple Sclerosis.
Knowledge Level 7, System: Nervous
Robert O'Connor University College Dublin

Anticholinergic side effects
"Know the **ABCD'S** of anticholinergic side effects":

- Anorexia
- Blurry vision
- Constipation/Confusion
- Dry Mouth
- Sedation/Stasis of urine

Knowledge Level 1, System: Nervous
Youngrin Kim University of Rochester School of Medicine and Dentistry

---

### Antimuscarinics: members, action

**Hi Yield [ID 1187]**

"**Inhibits Parasympathetic And Sweat**":

- Ipratropium
- Pirenzepine
- Atropine
- Scopolamine

Muscarinic receptors at all parasympathetic endings sweat glands in sympathetic.
Knowledge Level 3, System: Nervous
Derek Obayashi Chicago Medical School

---

### Aspirin: side effects

**Hi Yield [ID 1349]**

**ASPIRIN:**

- Asthma
- Salicyalism
- Peptic ulcer disease/Phosphorylation-oxidation uncoupling/PPH/Platelet disaggregation/Premature closure of PDA
- Intestinal blood loss
- Raye's syndrome
- Idiosyncracy
- Noise (tinnitus)

Knowledge Level 4, System: Nervous
Dr. Chetan Wasekar MBBS KEM Hospital

---

### Benzodiazepines: ones not metabolized by the liver (safe to use in liver failure)

**Hi Yield [ID 1566]**

**LOT:**

- Lorazepam
- Oxazepam
- Temazepam

Knowledge Level 3, System: Nervous
Lorne Basskin Butler University College of Pharmacy and Health Sciences

---

### Benzodiazepenes: antidote

**Hi Yield [ID 776]**

"**Ben is off with the flu**":

Benzodiazepine effects off with Flumazenil.
Knowledge Level 1, System: Nervous
Robert O'Connor University College Dublin

---

### Benzodiazepenes: drugs which decrease their metabolism

**Hi Yield [ID 875]**

"**I'm Overly Calm**":

- Isoniazid
- Oral contraceptive pills
- Cimetidine

These drugs increase calming effect of BZDs by retarding metabolism.
Knowledge Level 3, System: Nervous
Anonymous Contributor

---

### Benzodiazepines: actions

**Hi Yield [ID 464]**

"**Ben SCAMs Pam into seduction not by brain but by muscle**":

- Sedation
- Anti-Convulsant
- Anti-Anxiety
- Muscle relaxant

Not by brain: No antipsychotic activity.
Knowledge Level 2, System: Nervous
Sung H. Kim
**Beta 1 selective blockers**

“BEAM ONE up, Scotty”:
- Beta 1 blockers:
  - Esmolol
  - Atenolol
  - Metoprolol

Knowledge Level 1, System: Nervous
Anonymous Contributor

**Botulism toxin: action, related bungarotoxin**

Action: "Botulism Bottles up the Ach so it can't be the released"
Related bungarotoxin: "Botulism is related to Beta Bungarotoxin (beta-, not alpha-bungarotoxin--alpha has different mechanism).

Knowledge Level 3, System: Nervous
Robert O’Connor University College Dublin

**Cholinergics (eg organophosphates): effects**

If you know these, you will be "LESS DUMB”:
- Lacrimation
- Excitation of nicotinic synapses
- Salivation
- Sweating
- Diarrhea
- Urination
- Micturition
- Bronchoconstriction

Knowledge Level 4, System: Nervous
Anonymous Contributor

**Delerium-causing drugs**

**ACUTE CHANGE IN MS:**
- Antibiotics (biaxin, penicillin, ciprofloxacin)
- Cardiac drugs (digoxin, lidocaine)
- Urinary incontinence drugs (anticholinergics)
- Theophylline
- Ethanol
- Corticosteroids
- H2 blockers
- Antiparkinsonian drugs
- Narcotics (esp. mepridine)
- Geriatric psychiatric drugs
- ENT drugs
- Insomnia drugs
- NSAIDs (eg indomethacin, naproxin)
- Muscle relaxants
- Seizure medicines

Knowledge Level 7, System: Nervous
Muhammad Asif Iqbal Resident, SLU, MO

**Direct sympathomimetic catecholamines**

**DINED:**
- Dopamine
- Isoproterenol
- Norepinephrine
- Epinephrine
- Dobutamine

Knowledge Level 2, System: Nervous
Robert O’Connor University College Dublin

**Inhalation anesthetics**

知能レベル 1, システム: 神経系
匿名貢献者

Botulism toxin: action, related bungarotoxin

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-relat botulism is related to Beta Bungarotoxin (beta-, not alpha-bungarotoxin--alpha has different mechanism).

Knowledge Level 3, System: Nervous
Robert O’Connor University College Dublin

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Knowledge Level 4, System: Nervous
Anonymous Contributor

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Knowledge Level 7, System: Nervous
Muhammad Asif Iqbal Resident, SLU, MO

Direct sympathomimetic catecholamines

**DINED:**
- Dopamine
- Isoproterenol
- Norepinephrine
- Epinephrine
- Dobutamine

Knowledge Level 2, System: Nervous
Robert O’Connor University College Dublin
SHINE:
Sevoflurane
Halothane
Isoflurane
Nitrous oxide
Enflurane

If want the defunct Methoxyflurane too, make it MoonSHINE.
Knowledge Level 2, System: Nervous
Robert O’Connor  University College Dublin

Ipratropium: action
Atropine is buried in the middle: iprAtropium, so it behaves like Atropine.
Knowledge Level 4, System: Nervous
Robert O’Connor  University College Dublin

Lead poisoning: presentation
ABCDEFG:
Anemia
Basophilic stripping
Colicky pain
Diarhhea
Encephalopathy
Foot drop
Gum (lead line)
Knowledge Level 8, System: Nervous
Anonymous Contributor

Lithium: side effects
LITH:
Leukocytosis
Insipidus [diabetes insipidus, tied to polyuria]
Tremor/ Teratogenesis
Hypothyroidism
Knowledge Level 3, System: Nervous
Robert O’Connor and Rinku Uberoi

MAOIs: indications
MAOIs:
Melancholic [classic name for atypical depression]
Anxiety
Obesity disorders [anorexia, bulimia]
Imagined illnesses [hypochondria]
Social phobias
  Listed in decreasing order of importance.
  Note MAOI is inside MelanchOIlk.
Knowledge Level 2, System: Nervous
Robert O’Connor  University College Dublin

Methyldopa: side effects
METHYLDOPA:
Mental retardation
Electrolyte imbalance
Tolerance
Headache/ Hepatotoxicity
psYcological upset
Lactation in female
Dry mouth
Oedema
Parkinsonism
Anaemia (haemolytic)
Knowledge Level 5, System: Nervous
Yazeed A. Oqaili  King Saud University Medical College

Monoamine oxidase inhibitors: members
‘PIT of despair’:
Phenelzine
Isocarboxazid
Tranylcypromine
A pit of despair, since MAOs treat depression.
Knowledge Level 3, System: Nervous
Derek Obayashi  Chicago Medical School

**Morphine: effects**

**MORPHINES:**
Miosis
Orthostatic hypotension
Respiratory depression
Pain suppression
Histamine release/ Hormonal alterations
Increased ICT
Nausea
Euphoria
Sedation
Knowledge Level 6, System: Nervous
Dr. Chetan Wasekar, MBBS  KEM Hospital

**Morphine: effects at mu receptor**

**PEAR:**
Physical dependence
Euphoria
Analgesia
Respiratory depression
Knowledge Level 2, System: Nervous
Robert Copeland  Howard University College of Medicine

**Narcotic antagonists**
The Narcotic Antagonists are NAloxone and NAltrexone.
Important clinically to treat narcotic overdose.
Knowledge Level 2, System: Nervous
Robert O’Connor  University College Dublin

**Parkinsonism: drugs**

**SALAD:**
Selegiline
Anticholinergics (trihexyphenidyl, benzhexol, ophenadrine)
L-Dopa + peripheral decarboxylase inhibitor (carbidopa, benserazide)
Amantadine
Dopamine postsynaptic receptor agonists (bromocriptine, lisuride, pergolide)
Knowledge Level 3, System: Nervous
Dr. Harsh Sharma

**Phenytoin: adverse effects**

**PHENYTIN:**
P-450 interactions
Hirsutism
Enlarged gums
Nystagmus
Yellow-browning of skin
Teratogenicity
Osteomalacia
Interference with B12 metabolism (hence anemia)
Neuropathies: vertigo, ataxia, headache
Knowledge Level 6, System: Nervous
Ram Mohan  SVRR Hospital Tirupathi, India

**Physostigmine vs. neostigmine**
Lipid soluble
Miotic
Natural
Orally absorbed well
Phyostigmine
   Neostigmine, on the contrary, is:
   Water soluble
   Used in myasthenia gravis
   Synthetic
   Poor oral absorption
Knowledge Level 3, System: Nervous
Manpreet Saini  GMC Amritsar

**Pupils in overdose: morphine vs. amphetamine**

"MorPHINE: Fine. AmPHETamine: Fat";
Morphine overdose: pupils constricted (fine).
Amphetamine overdose: pupils dilated (fat).
Knowledge Level 2, System: Nervous
Anonymous Contributor

**Serotonin syndrome: components**

Causes HARM:
Hyperthermia
Autonomic instability (delirium)
Rigidity
Myoclonus
Knowledge Level 4, System: Nervous
Anonymous Contributor

**Sodium valproate: side effects**

VALPROATE:
Vomiting
Alopecia
Liver toxicity
Pancreatitis/ Pancytopenia
Retention of fats (weight gain)
Oedema (peripheral oedema)
Appetite increase
Tremor
Enzyme inducer (liver)
Knowledge Level 4, System: Nervous
Joshua Goh  Unimas: University Malaysia Sarawak

**SSRIs: side effects**

SSRI:
Serotonin syndrome
Stimulate CNS
Reproductive disfunctions in male
Insomnia
Knowledge Level 2, System: Nervous
Robert O’Connor  University College Dublin

**Succinylcholine: action, use**

Succinylcholine gets Stuck to Ach receptor, then Sucks ions in through open pore.
You Suck stuff in through a mouth-tube, and drug is used for intubation.
Knowledge Level 4, System: Nervous
Anonymous Contributor

**Tricyclic antidepressants: members worth knowing**
"I have to hide, the CIA is after me":
Clomipramine
Imipramine
Amitriptyline

If want the next 3 worth knowing, the DND is also after me:
Desipramine
Nortriptiline
Doxepin

Knowledge Level 5, System: Nervous
Dr. Enrique Cifuentes  University Autonomus of Guadalajara

---

**Tricyclic antidepressents (TCA): side effects**

**TCA’S:**
Thrombocytopenia
Cardiac (arrhythmia, MI, stroke)
Anticholinergic (tachycardia, urinary retention, etc)
Seizures
Knowledge Level 2, System: Nervous
Anonymous Contributors

---

**Vigabatrin: mechanism**

Vi-GABA-Tr-In:
Via GABA Transferase Inhibition
Knowledge Level 2, System: Nervous
Anonymous Contributor

---

**Antibiotics contraindicated during pregnancy**

MCAT:
Metronidazole
Chloramphenicol
Aminoglycoside
Tetracycline
Knowledge Level 1, System: Other/Miscellaneous
Kyongbin Baek

---

**Busulfan: features**

**ABCDEF:**
Alkylating agent
Bone marrow suppression s/e
CML indication
Dark skin (hyperpigmentation) s/e
Endocrine insufficiency (adrenal) s/e
Fibrosis (pulmonary) s/e
Knowledge Level 3, System: Other/Miscellaneous
Sung Hoon Kim  El Paso, TX

---

**Cancer drugs: time of action between DNA->mRNA**

**ABCDEF:**
Alkylating agents
Bleomycin
Cisplatin
Dactinomycin/ Doxorubicin
Etoposide
Flutamide and other steroids or their antagonists (eg tamoxifen, leuprolide)
Knowledge Level 2, System: Other/Miscellaneous
Sung Hoon Kim  El Paso, TX

---

**Etoposide: action, indications, side effect**
"cTOPoside":
Action:
Inhibits TOPoisomerase II
Indications:
Testicular carcinoma
Oat cell carcinoma of lung
Prostate carcinoma
Side effect:
Affects TOP of your head, causing alopecia
Knowledge Level 5, System: Other/Miscellaneous
Milixa Fortuna  UAG Medical Student

Metabolism enzyme inducers
"Randy's Black Car Goes Putt Putt and Smokes":
Rifampin
Barbiturates
Carbamazepine
Grisofulvin
Phenytoin
Phenobarb
Smoking cigarettes
Knowledge Level 4, System: Other/Miscellaneous
Brad

Morphine: side-effects
MORPHINE:
Myosis
Out of it (sedation)
Respiratory depression
Pneumonia (aspiration)
Hypotension
Infrequency (constipation, urinary retention)
Nausea
Emesis
Knowledge Level 1, System: Other/Miscellaneous
Tony Duffy  Medical Student Glasgow

Therapeutic index: formula
TILE:
TI = LD50 / ED50
Knowledge Level 1, System: Other/Miscellaneous
Robert O'Connor  University College Dublin

Torsades de Pointes: drugs causing
APACHE:
Amiodarone
Procainamid
Arsenium
Cisapride
Haloperidol
Eritromycin
Knowledge Level 7, System: Other/Miscellaneous
Flavio Nacul  Federal University of Rio de Janeiro

Zero order kinetics drugs (most common ones)
"PEAZ (sounds like pees) out a constant amount":
Phenytoin
Ethanol
Aspirin
Zero order
Someone that pees out a constant amount describes zero order kinetics (always the same amount out)
Knowledge Level 3, System: Other/Miscellaneous
Anonymous Contributor  UHS-COM
Asthma drugs: leukotriene inhibitor action

**zAfirlukast**: Antagonist of lipoxygenase  
**zMontelukast**: Inhibitor of LT receptor  
Knowledge Level 3, System: Pulmonary  
Mumtaz Ali Shah 2000 graduate, Khyber Medical College, Pakistan

**Beta-1 vs Beta-2 receptor location**

"You have **1 heart** and **2 lungs**":  
Beta-1 are therefore primarily on heart.  
Beta-2 primarily on lungs.  
Knowledge Level 1, System: Pulmonary  
Anonymous Contributor

**Respiratory depression inducing drugs**

"**STOP breathing**":  
Sedatives and hypnotics  
Trimethoprim  
Opiates  
Polymyxins  
Knowledge Level 2, System: Pulmonary  
Dr. Harsh Sharma BJMC, Pune, India

**Ribavirin: indications**

**RibA**virin:  
**RSV**  
Influenza B  
Arenaviruses (Lassa, Bolivian, etc.)  
Knowledge Level 1, System: Pulmonary  
Robert O’Connor University College Dublin

**TB: antibiotics used**

**STRIPE**:  
STreptomycin  
Rifampicin  
Isoniazid  
Pyrizinamide  
Ethambutol  
Knowledge Level 2, System: Pulmonary  
Sushant Varma Medical student, University of Sheffield, UK

**Zafirlukast, Montelukast, Cinalukast: mechanism, usage**

"Zafir-**luk-ast**, Monte-**luk-ast**, Cena-**luk-ast**":  
Anti-Lukotrienes for Asthma.  
Dazzle your oral examiner: Zafirlukast antagonizes leukotriene-4.  
Knowledge Level 3, System: Pulmonary  
Oisin and Robert O’Connor UCC and University College Dublin

**Teratogenic drugs: major non-antibiotics**

**TAP CAP**:  
Thalidomide  
Androgens  
Progestins  
Corticosteroids  
Aspirin & indomethacin  
Phenytoin  
Knowledge Level 2, System: Reproductive  
Manpreet GMC Amritsar

**Tetracycline: teratogenicity**

Hi Yield [ID 2241]

Hi Yield [ID 34]

Hi Yield [ID 1980]

Hi Yield [ID 2101]

Hi Yield [ID 1581]

Hi Yield [ID 648]

Hi Yield [ID 1433]

Hi Yield [ID 876]
Erythromycin is a 
etratogen that causes staining of
 Teeth in the newborn.
Knowledge Level 1, System: Reproductive

### Antirheumatic agents (disease modifying): members

**CHAMP:**
- Cyclophosphamide
- Hydroxychloroquine and chloroquine
- Auranofin and other gold compounds
- Methotrexate
- Penicillamine

Knowledge Level 2, System: Skeletal
Robert O’Connor  University College Dublin

### Auranofin, aurothioglucose: category and indication

Aurum is Latin for “gold” (gold’s chemical symbol is Au).
Generic Aur- drugs (Auranofin, Aurothioglucose) are gold compounds.
- If you didn’t learn yet that gold’s indication is rheumatoid arthritis, AUR- Acts Upon Rheumatoid.

Knowledge Level 2, System: Skeletal
Robert O’Connor  University College Dublin

### PHYSICS

#### Ideal gas law

“Pure Virgins Never Really Tire”:

\[ PV = nRT \]

Knowledge Level 1, System: Other/Miscellaneous
Anonymous Contributor

#### Ohm’s Law

“Virgins Are Rare”:

Volts = Amps x Resistance
- Note: can then rearrange to more common form Resistance = Volts / Amps.

Knowledge Level 2, System: Other/Miscellaneous
Anonymous Contributor

#### Work: formula

“Lots of Work gets me Mad!”:

\[ \text{Work} = \text{Mad} \]
- \( M = \text{Mass} \)
- \( a = \text{acceleration} \)
- \( d = \text{distance} \)

Knowledge Level 1, System: Other/Miscellaneous
Fox Man

### PHYSIOLOGY

#### Carotid sinus vs. carotid body function

carotid Sinus: measures preSSure.
carotid bO2dy measures O2.

Knowledge Level 2, System: Cardiovascular
Omar Boissard, MD  INTEC

#### Einthoven’s Triangle: organization

[Hi Yield  ID 2035]

[Hi Yield  ID 2036]

[Hi Yield  ID 190]

[Hi Yield  ID 169]

[Hi Yield  ID 2286]

[Hi Yield  ID 2615]

[Hi Yield  ID 287]
Corners are at RA (right arm), LA (left arm), LL (left leg).
Number of L’s at a corner tell how many + signs are at that corner [eg LL is ++].
Sum of number of L’s of any 2 corners tells the name of the lead [eg LL-LA is lead III].
For reference axes, the negative angle hemisphere is on the half of the triangle drawing that has all the negative signs; positive angle hemisphere contains only positive signs.
See diagram.
Knowledge Level 3, System: Cardiovascular
Robert O’Connor University College Dublin

Hb-oxygen dissociation curve shifts: effect, location

Left shift: causes Loading of O2 in Lungs.
Right shift: causes Release of O2 from Hb.
Knowledge Level 3, System: Cardiovascular
Dr. Khawaja Atif Farooq Rawalpindi Medical College, Horizon Medical Institute, Pakistan

Heart electrical conduction pathway

"If patient’s family are all having Heart attacks, you must SAVE HIS KIN!"

SA node --> AV node --> His (bundle of) --> PurKINje fibers
Knowledge Level 1, System: Cardiovascular
Carlo Adan, MPH University of Michigan

Intrinsic vs. extrinsic pathway tests

"PeT PiTTbull":
PeT: PT is for extrinsic pathway.
PiTTbull: PTT is for intrinsic pathway.
Knowledge Level 3, System: Cardiovascular
Marcus James Fidel Medical Student, University of New Mexico

PGI2 vs. TxA2 coagulation function

TxA2 Aggregates platelets.
PGI2 Inhibits aggregation.
Note: full name of PGI2 is prostaglandin I2 or prostacyclin, full name of TxA2 is thromboxane A2.
Knowledge Level 3, System: Cardiovascular
Robert O’Connor University College Dublin

Adrenal cortex layers and products

"Go Find Rex, Make Good Sex":
Layers:
Glomerulosa
Fasiculata
Reticulata
Respective products:
Mineralcorticoids
Glucocorticoids
Sex hormones
Alternatively for layers: GFR (Glomerular Filtration Rate, convenient since adrenal glands are atop kidney).
Knowledge Level 1, System: Endocrine
Anonymous Contributor

Adrenal gland: functions

ACTH:
Adrenergic functions
Catabolism of proteins/ Carbohydrate metabolism
T cell immunomodulation
Hyper/ Hypotension (blood pressure control)
Knowledge Level 1, System: Endocrine
The Cashman University of Queensland, Australia

Diabetes Insipidous: diagnosing subtypes

Knowledge Level 3, System: Cardiovascular
Robert O’Connor University College Dublin
After a desmopression injection:
Concentrated urine = Cranial.
No effect = Nephrogenic.
Knowledge Level 5, System: Endocrine
Robert O'Connor  University College Dublin

**Hyperthyroidism: signs and symptoms**

**THYROIDISM:**
- Tremor
- Heart rate up
- Yawning [fatigability]
- Restlessness
- Oligomenorrhea & amenorrhea
- Intolerance to heat
- Diarrhea
- Irritability
- Sweating
- Muscle wasting & weight loss
Knowledge Level 6, System: Endocrine
Robert O'Connor  University College Dublin

**Pituitary hormones**

**FLAGTOP:**
- Follicle stimulating hormone
- Lutinizing hormone
- Adrenocorticotropin hormone
- Growth hormone
- Thyroid stimulating hormone
- Oxytocin
- Prolactin
Alternatively: GOAT FLAP with the second ‘A’ for Anti-diuretic hormone/vasopressin
Note: there is also melanocyte secreting hormone and Lipotropin, but they are not well understood.
Knowledge Level 2, System: Endocrine
Anonymous Contributor

**Progesterone: actions**

**PROGESTE:**
- Produce cervical mucous
- Relax uterine smooth muscle
- Oxytocin sensitivity down
- Gonadotropin [FSH, LH] secretions down
- Endometrial spiral arteries and secretions up
- Sustain pregnancy
- Temperature up / Tit development
- Excitability of myometrium down
Knowledge Level 4, System: Endocrine
Robert O'Connor  University College Dublin

**Balance organs**

Uricle and Saccule keep US balanced.
Knowledge Level 2, System: Nervous
Anonymous Contributor

**Temperature control: cerebral regions**

"High Power Air Conditioner":
- Heating = Posterior hipothalamo [hypothalamus].
- Anterior hipothalamo [hypothalamus] = Cooling.
Knowledge Level 5, System: Nervous
Gilvano Amorim Oliveira  Universidade de Santo Amaro São Paulo/Brasil

**Urination: autonomic control**
"When you pee, it's PISs":
Parasympathetic Inhibits Sympathetic.
Knowledge Level 1, System: Nervous
Muhammad Asif Iqbal  Resident, SLU, MO

Alkalosis vs. acidosis: directions of pH and HCO3

**ROME:**
Respiratory= Opposite:
- pH is high, PCO₂ is down (Alkalosis).
- pH is low, PCO₂ is up (Acidosis).
Metabolic= Equal:
- pH is high, HCO₃ is high (Alkalosis).
- pH is low, HCO₃ is low (Acidosis).
Knowledge Level 5, System: Pulmonary
Anonymous Contributor

Compliance of lungs factors

**COMPLIANCE:**
- Collagen deposition (fibrosis)
- Ossification of costal cartilages
- Major obesity
- Pulmonary venous congestion
- Lung size
- Increased expanding pressure
- Age
- No surfactant
- Chest wall scarring
- Emphysema
  - All but L/A/E decrease compliance.
Knowledge Level 5, System: Pulmonary
Robert O’Connor  University College Dublin

V/Q gradient in lung

Infinity, a lung and a zero stack nicely.
V/Q is lowest at bottom, highest at top.
See diagram.
Knowledge Level 1, System: Pulmonary
Robert O’Connor  University College Dublin

Prolactin and oxytocin: functions

PROlactin stimulates the mammary glands to PROduce milk.
Oxytocin stimulates the mammary glands to Ooze (release) milk.
Knowledge Level 1, System: Reproductive
Rinku Uberoi  Willsey Institute

Osteoblast vs. osteoclast

OsteoBlast Builds bone.
OsteoClast Consumes bone.
Knowledge Level 1, System: Skeletal
Anonymous Contributor

PODIATRY

Blue toe (microembolic toe)
CAVEMAN:
Cholesterol embolizations
Atrial fibrillation with electricity or digitoxin
Valvular problems
Endocarditis
Mural thrombosis
Aneurysm/AV fistula
Nothing
Knowledge Level 3, System: Cardiovascular
Samuel Atom Baek-Kim

TIA: internal carotid vs. vertebrobasilar

MD vs. DPM
Internal carotid:
Monocular blindness (amaurosis fugax)
Dominant hemisphere (aphasia)
  The weakness or numbness is still less in the legs.
Vertebrobasilar:
Diplopia/Double blindness
Paralysis (quadriplegia)
Motor weakness (ipsilateral)
  Ataxia is characteristic in vertebrobasilar lesions.
Knowledge Level 1, System: Cardiovascular
Samuel Atom Baek-Kim Tuckahoe, New York

Diabetic neuropathy types

DPM:
Distal, symmetric, polyneuropathy
Proximal diabetic neuropathy
Mononeuritis multiplex
Knowledge Level 1, System: Endocrine
Samuel Atom Baek-Kim Tuckahoe, New York

Arthritides: the six classifications

"Round COINS":
Rheumatoid diseases (inflammation of synovium)
Crystall depositions (gout, pseudogout)
Osteoarthritis
Infections
Neuropathy
SLE, mixed scleroderma
Knowledge Level 1, System: Skeletal
Samuel Atom Baek-Kim

Charcot's joints: common disorders

"Come See A Handsome DPM":
Congenital insensitivity to pain
Syringomyelia/Spina bifida
Alcoholism
Hansen's disease
Diabetes mellitus
Peripheral nerve injury
Menigomyelocele
Knowledge Level 1, System: Skeletal
Samuel Mae Baek-Kim

PSYCHIATRY

Depression

[Hi Yield [ID 1400]
[ID 1407]
[ID 882]
[ID 881]
[ID 1888]
UNHAPPINESS:
Understandable (such as bereavement, major stresses)
Neurotic (high anxiety personalities, negative parental upbringing)
Hypochondriasis
Agitation (usually organic causes such as dementia)
Pseudodementia
Pain
Importunising (whingeing, complaining)
Nihilistic
Endogenous
Secondary (ie cancer at the head of the pancreas, bronchogenic cancer)
Syndromal
Knowledge Level 5, System: Nervous
Peter Loa Medical Student at Adelaide University

<table>
<thead>
<tr>
<th>Mania: cardinal symptoms</th>
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<tbody>
<tr>
<td>DIG FAST:</td>
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<tr>
<td>Distractibility</td>
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<tr>
<td>Indiscretion (DSM-IV's &quot;excessive involvement in pleasurable activities&quot;)</td>
</tr>
<tr>
<td>Grandiosity</td>
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<tr>
<td>Flight of ideas</td>
</tr>
<tr>
<td>Activity increase</td>
</tr>
<tr>
<td>Sleep deficit (decreased need for sleep)</td>
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<tr>
<td>Talkativeness (压ured speech)</td>
</tr>
<tr>
<td>Knowledge Level 1, System: Nervous</td>
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<td>Anonymous Contributor</td>
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<table>
<thead>
<tr>
<th>Mania: diagnostic criteria</th>
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<tbody>
<tr>
<td>Must have 3 of MANIAC:</td>
</tr>
<tr>
<td>Mouth (pressure of speech)/ Mood</td>
</tr>
<tr>
<td>Activity increased</td>
</tr>
<tr>
<td>Naughty (disinhibition)</td>
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<tr>
<td>Insomnia</td>
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<tr>
<td>Attention (distractability)</td>
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<tr>
<td>Confidence (grandiose ideas)</td>
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<tr>
<td>Knowledge Level 1, System: Nervous</td>
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<td>Waqar Ahmed Queens University, Belfast</td>
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<tr>
<th>Schizophrenia: negative features</th>
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<tbody>
<tr>
<td>4 A’s:</td>
</tr>
<tr>
<td>Ambivalence</td>
</tr>
<tr>
<td>Affective incongruence</td>
</tr>
<tr>
<td>Associative loosening</td>
</tr>
<tr>
<td>Autism</td>
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<tr>
<td>Knowledge Level 1, System: Nervous</td>
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<td>Anonymous Contributor</td>
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<tr>
<th>Substance dependence: features (DSM IV)</th>
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<tbody>
<tr>
<td>“WITHDRAW IT”:</td>
</tr>
<tr>
<td>3 of 7 within 12 month period:</td>
</tr>
<tr>
<td>Withdrawal</td>
</tr>
<tr>
<td>Interest or Important activities given up or reduced</td>
</tr>
<tr>
<td>Tolerance</td>
</tr>
<tr>
<td>Harm to physical and psychosocial known but continue to use</td>
</tr>
<tr>
<td>Desire to cut down, control</td>
</tr>
<tr>
<td>Intended time, amount exceeded</td>
</tr>
<tr>
<td>Time spent too much</td>
</tr>
<tr>
<td>Knowledge Level 3, System: Nervous</td>
</tr>
<tr>
<td>Anthony Chan</td>
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</tbody>
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<tr>
<th>Conduct disorder vs. Antisocial personality disorder</th>
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</table>

Hi Yield [ID 2456]
Hi Yield [ID 3029]
Hi Yield [ID 239]
Hi Yield [ID 2004]
Hi Yield [ID 1070]
Conduct disorder is seen in children. Antisocial personality disorder is seen in adults.

### Depression: symptoms and signs (DSM-IV criteria)

**AWESOME:**
- Affect flat
- Weight change (loss or gain)
- Energy, loss of
- Sad feelings/ Suicide thoughts or plans or attempts/ Sexual inhibition/ Sleep change (loss or excess)/ Social withdrawal
- Others (guilt, loss of pleasure, hopeless)
- Memory loss
- Emotional blunting

Knowledge Level 3, System: Other/Miscellaneous
Anonymous Contributor

### Erikson’s developmental stages

"The sad tale of Erikson Motors": The stages in order by age group:

Mr. Trust and MsTrust had an auto they were ashamed of. She took the initiative to find the guilty party. She found the industry was inferior. They were making cars with dents [identity] and rolling fuses [role confusion]. Mr. N.T. Macy [intimacy] isolated the problem, General TVT absorbed the cost.

In the end, they found the tires were just gritty and the should have used de-spare!

Knowledge Level 1, System: Other/Miscellaneous
Muhammad Firdaus, MD Private Practice

### Parasomnias: time of onset

Sleep terrors and Sleepwalking occur during Slow-wave sleep (stages 3 & 4).
Nightmare occurs during REM sleep (and is REMembered).

Knowledge Level 4, System: Other/Miscellaneous
Anonymous Contributor

### Psychiatric review of symptoms

"Depressed Patients Seem Anxious, So Claim Psychiatrists":
- Depression and other mood disorders (major depression, bipolar disorder, dysthymia)
- Personality disorders (primarily borderline personality disorder)
- Substance abuse disorders
- Anxiety disorders (panic disorder with agoraphobia, obsessive-compulsive disorder)
- Somatization disorder, eating disorders (these two disorders are combined because both involve disorders of bodily perception)
- Cognitive disorders (dementia, delirium)
- Psychotic disorders (schizophrenia, delusional disorder and psychosis accompanying depression, substance abuse or dementia)

Knowledge Level 3, System: Other/Miscellaneous
Michael Waddell University of Wisconsin Medical School

### Esophageal cancer: risk factors

ABCDEF:
- Achalasia
- Barret’s esophagus
- Corrosive esophagitis
- Diverticulitis
- Esophageal web
- Familial

Knowledge Level 6, System: Alimentary
Lau Yue Young Geoffrey HKU

### Pituitary endocrine functions often affected by pituitary-associated tumor

Knowledge Level 1, System: Other/Miscellaneous
Anonymous Contributor
"Go Look For the Adenoma Please":
Tropic hormones affected by growth tumor are:
GnRH
LH
FSH
ACTH
Prolactin function
Knowledge Level 5, System: Endocrine
Anonymous Contributor

Anterior mediastinal masses

4 T’s:
Teratoma
Thymoma
Testicular-type
T-cell / Hodgkin’s lymphoma
Knowledge Level 4, System: Lymphoid
Anonymous Contributor

Head CT scan: evaluation checklist

"Blood Can Be Very Bad":
Blood
Cistern
Brain
Ventricles
Bone
Knowledge Level 2, System: Nervous
Anonymous Contributor

Dermatomyositis or polymyositis: risk of underlying malignancy

Risk is 30% at age 30.
Risk is 40% at age 40, and so on.
Knowledge Level 6, System: Other/Miscellaneous
Anonymous Contributor

Prognostic factors for cancer: general

PROGNOSIS:
Presentation (time & course)
Response to treatment
OId (bad prog.)
Good intervention (i.e. early)
Non-compliance with treatment
Order of differentiation (>1 cell type)
Stage of disease
IlI health
Spread (diffuse)
Knowledge Level 2, System: Other/Miscellaneous
Cashman, Reidy, Motty, BB University of Queensland, Australia

T2 vs. T1 MRI scan

"WW 2" (World War II):
Water is White in a T2 scan.
Conversely, a T1 scan shows fat as being whiter.
Knowledge Level 2, System: Other/Miscellaneous
Jason Galarneau Flinders University School of Medicine, South Australia

Chest radiograph: checklist to examine

Knowledge Level 2, System: Other/Miscellaneous
Cashman, Reidy, Motty, BB University of Queensland, Australia
“Pamela Found Our Rotation Particularly Exciting; Very Highly Commended Mainly 'Cus She Arouses’:

Patient details
Film details
Objects (eg. lines, electrodes)
Rotation
Penetration
Expansion
Vessels
Hila
Costophrenic angles
Mediastinum
Cardiothoracic Ratio
Soft tissues and bones
Air (diaphragm, pneumothorax, subcut. emphysema)

Knowledge Level 4, System: Pulmonary
Andrew Booshan

---

**Chest X-ray interpretation**

Preliminary is **ABCDEF**:
- AP or PA
- Body position
- Confirm name
- Date
- Exposure
- Films for comparison

Analysis is **ABCDEF**:
- Airways (hilar adenopathy or enlargement)
- Breast shadows/ Bones (rib fractures, lytic bone lesions)
- Cardiac silhouette (cardiac enlargement)/ Costophrenic angles (pleural effusions)
- Diaphragm (evidence of free air)/ Digestive tract
- Edges (apices for fibrosis, pneumothorax, pleural thickening or plaques)/ Extrathoracic tissues
- Fields (evidence of alveolar filling)/ Failure (alveolar air space disease with prominent vascularity with or without pleural effusions)

Knowledge Level 6, System: Pulmonary
Fahed Al-Daour

---

**Chest X-ray: cavitating lesions differential**

"If you see **HOLES** on chest X-ray, they are **WEIRD**”:
- Wegener's syndrome
- Embolic (pulmonary, septic)
- Infection (anaerobes, pneumocystis, TB)
- Rheumatoid (necrobiotic nodules)
- Developmental cysts (sequestration)
- Histiocytosis
- Oncological
- Lymphangioleiomyomatosis
- Environmental, occupational
- Sarcoid

Alternatively: L=Left atrial myxoma

Knowledge Level 6, System: Pulmonary
LW Mason, and Anonymous Contributor 4th Year Medical Student and Not Specified

---

**Lung cancer: main sites for distant metastases**

**BLAB**:
- Bone
- Liver
- Adrenals
- Brain

Knowledge Level 1, System: Pulmonary
Ian Silver  Queen's University School of Medicine, Kingston, ON, Canada

---

**Lung cancer: notorious consequences**

Knowledge Level 6, System: Pulmonary
Hi Yield

---
SPEECH:
Superior vena cava syndrome
Paralysis of diaphragm (Phrenic nerve)
Ectopic hormones
Eaton-Lambert syndrome
Clubbing
Horner syndrome/ Hoarseness
Knowledge Level 1, System: Pulmonary
Rinku Uberoi

Upper lobe shadowing: causes

BREASTS:
Beryllium
Radiation
Extrinsic allergic alveolitis
Ankylosing spondylitis
Sarcoidosis
TB
Siliconiosis
Knowledge Level 4, System: Reproductive
A Bywaters

Elbow ossification centers, in sequence

CRITOE:
Capitellum
Radial head
Internal epicondyle
Trochlea
Olecranon
External epicondyle
In order: appear at 1, 3, 5, 7, 9, 11 years; each closes 2 years later.
Knowledge Level 4, System: Skeletal
Vince Yamashiroya

Mole: signs of trouble

ABCDE:
Asymmetry
Border irregular
Colour irregular
Diameter usually > 0.5cm
Elevation irregular
Knowledge Level 3, System: Skeletal
Oisin University College Cork

Neck sagittal x-ray: examination checklist

ABCD:
Anterior: look for swelling
Bones: examine each bone for fractures
Cartilage: look for slipped discs
Dark spots: ensure not abnormally big, or could mean excess blood
Knowledge Level 1, System: Skeletal
Robert O'Connor University College Dublin

Osteoarthritis: x-ray signs

LOSS:
Loss of joint space
Osteophytes
Subcondral sclerosis
Subchondral cysts
Knowledge Level 1, System: Skeletal
Gajan Rajeswaran Final Year Medical Student, Imperial College School Of Medicine, London

RHEUMATOLOGY / ALLERGY
**SLE (Systemic Lupus Erythematosus) diagnosis**

“MD SOAP ‘N HAIR”:
- Malar rash
- Discoid rash
- Serositis
- Oral ulcer
- Arthritis
- Photosensitivity
- Neurologic abnormality
- Hematologic abnormality
- ANA (+)
- Immunologic abnormality
- Renal involvement

Knowledge Level 3, System: Kidney/Urine
Anonymous Contributor

**Felty’s syndrome: components**

SANTA:
- Splenomegaly
- Anaemia
- Neutropenia
- Thrombocytopenia
- Arthritis (rheumatoid)

Knowledge Level 2, System: Lymphoid
Dr. Harsh Sharma  BJMC, Pune, India

**Carpal tunnel syndrome**

TINel’s sign:
- TINgling sensation after
- Tapping on
- Traumatized nerve in carpal

Knowledge Level 5, System: Nervous
Anonymous Contributor

**Henoch schonlein purpura: signs and symptoms**

NAPA:
- Nephritis
- Arthritis, arthralgias
- Purpura, palpable (especially on buttocks and lower extremities)
- Abdominal pain (need to rule out intussusception)

Knowledge Level 4, System: Other/Miscellaneous
Vince Yamashiroya

**Asthma: treatment**

ASTHMA:
- Adrenergics
- Steroids
- Theophylline
- Hydration
- Mask [O2 at 24%]
- Antibiotics

Knowledge Level 4, System: Pulmonary
Anonymous Contributor

**Arthritis: juvenile idiopathic: differential**

[ID 1777]
ARTHRITIS:
- Anxiety
- Rickets and metabolic
- Tumor
- Hematological
- Reactive arthritis
- Immunological (SLE)
- Trauma
- Injury
- Sepsis

Knowledge Level 4, System: Skeletal
Malik Tariq Rahim  King Edward Medical College, Pakistan

**Arthritis: seronegative spondyloarthropathies**

PEAR:
- Psoriatic arthritis
- Enteropathic arthritis
- Ankylosing spondylitis
- Reiter’s/ Reactive

Knowledge Level 1, System: Skeletal
Dave Hassan

**Joint pain causes**

**SOFTER TISSUE:**
- Sepsis
- Osteoarthritis
- Fractures
- Tendon/muscle
- Epiphyseal
- Referred
- Tumor
- Ischaemia
- Seropositive arthritides
- Seronegative arthritides
- Urate
- Extra-articular rheumatism (such as polymylagia)

Knowledge Level 4, System: Skeletal
Anonymous Contributor

**Osteoporosis risk factors**

ACCESS:
- Alcohol
- Corticosteroid
- Calcium low
- Estrogen low
- Smoking
- Sedentary lifestyle

Knowledge Level 1, System: Skeletal
Lum

**SURGERY**

**Fistulas: conditions preventing closure**

FRIEND:
- Foreign body
- Radiation
- Infection/ Inflammation (Crohn)
- Epithelialization
- Neoplasia
- Distal obstruction

Knowledge Level 4, System: Alimentary
Danny Rosin and Adam W. Beck, M.D.  Unspecified and UT-Southwestern Hospital Systems

**Oesophageal cancer risk factors**
PC BASTARDS:
Plummer-Vinson syndrome
Coeliac disease
Barrett’s
Alcohol
Smoking
Tylosis
Achalasia
Russia (geographical distribution)
Diet
Stricture
Knowledge Level 2, System: Alimentary
Dr. John Holme

Gl bleeding: causes

ABCDEFHGI:
Angiodysplasia
Bowel cancer
Colitis
Diverticulitis/ Duodenal ulcer
Epitaxis/ Esophageal (cancer, esophagitis, varices)
Fistula (anal, aortaenteric)
Gastric (cancer, ulcer, gastritis)
Hemorrhoids
Infectious diarrhoea/ IBD/ Ischemic bowel
Knowledge Level 9, System: Cardiovascular
Lau Yue Young Geoffrey HKU

Varicose veins: symptoms

AEIOU:
Aching
Eczema
Itching
Oedema
Ulceration/ Ugly (LDS, haemosiderin, varicosities)
Knowledge Level 2, System: Cardiovascular
Jamal Khan Birmingham University Medical Student

Melanoma sites

"Mel SEA" (Pronounced "Mel C" from the Spice Girls)
Melanoma sites, in order of frequency:
Skin
Eyes
Anus
Knowledge Level 3, System: Integumental
Lior Greenberg Technion Faculty of Medicine, Haifa, Israel

Post-operative fever causes

Six W’s:
Wind: pulmonary system is primary source of fever first 48 hours, may have pneumonia
Wound: infection at surgical site
Water: check IV for phlebitis
Walk: deep venous thrombosis, due to pelvic pooling or restricted mobility related to pain and fatigue
Whiz: urinary tract infection if urinary catheterization
Wonder drugs: drug-induced fever
Knowledge Level 4, System: Lymphoid
Anonymous Contributor

Appendicectomy: complications
WRAP IF HOT:
Wound infection
Respiratory (atelectasis, pneumonia)
Abscess (pelvic)
Portal pyemia
Ileus (paralytic)
Fecal fistula
Hernia (r. inguinal)
Obstruction (intestinal due to adhesions)
Thrombus (DVT)

Knowledge Level 2, System: Other/Miscellaneous
Sami Almusawa JUST

Post-operative complications (immediate)

"Post-op PROBS":

Pain
Primary haemorrhage
Reactionary haemorrhage
Oliguria
Basal atelectasis
Shock/ Sepsis

Knowledge Level 2, System: Other/Miscellaneous
Jacob George University of Sheffield, UK

Compartment syndrome: signs and symptoms

5 P’s:
- Pain
- Palor
- Pulseless
- Paresethia
- Pressure (increased)

Knowledge Level 4, System: Skeletal
Michelle Zetoony Medical Student 2003, Philadelphia College of Osteopathic Medicine

UROLOGY / NEPHROLOGY

Dialysis: indications

AEIOU:
- Acid-base problems (severe acidosis or alkalosis)
- Electrolyte problems (hyperkalemia)
- Intoxications
- Overload, fluid
- Uremic symptoms

Knowledge Level 6, System: Kidney/Urine
Malvinder S. Parmar, MD, FRCPC, FACP Timmins & District Hospital, Timmins, ON, Canada

Enlarged kidneys: causes

SHAPE:
- Sclerderma
- HIV nephropathy
- Amyloidosis
- Polycystic kidney disease
- Endocrinopathy (diabetes)

Knowledge Level 5, System: Kidney/Urine
Dino Santoro University of Manitoba

Hematuria: differential

Knowledge Level 6, System: Kidney/Urine
Hydronephrosis: differential

Unilateral is PACT:
Pelvic-uteric obstruction (congenital or acquired)
Ablerrant renal vessels
Calculi
Tumours of renal pelvis
   Bilateral is SUPER:
Stenosis of the urethra
Urethral valve
Prostatic enlargement
Extensive bladder tumour
Retro-peritoncal fibrosis

Knowledge Level 3, System: Kidney/Urine
Sushant Varma  Medical student, University of Sheffield, UK

Nephrotic syndrome: causes for secondary nephrotic syndrome

DAVID:
Diabetes mellitus
Amyloidosis
Vasculitis
Infections
Drugs

Knowledge Level 3, System: Kidney/Urine
Anonymous Contributor

Polycystic kidney: genetic marker

"P" is the 16th letter of the alphabet.
Autosomal dominant Polycystic kidney disease is associated with abberation on the 16th chromosome.

Knowledge Level 6, System: Kidney/Urine
Thomas B. Edmunds, Jr, MD  Chief Resident at SUNY Stony Brook

Prostatism: initial symptoms

"Prostatism is initially FUN":
Frequency
Urgency
Nocturia

Knowledge Level 1, System: Kidney/Urine
Peter L  University of Queensland Medical School

Pyelonephritis (acute): predisposing factors

SCARRIN’ UP:
Sex (females <40, males >40)
Catheterization
Age (infant, elderly)
Renal lesions
Reflux (vesciouteral)
Immunodeficient
NIDDM, IDDM
Urinary obstuction
Pregnant
   Acute pyelonephritis heals by scarrin’ up the area (pyelonephritic scar).

Knowledge Level 4, System: Kidney/Urine
Yazeed A.Oqaili  King Saud University Medical College

Urinary incontinence: causes of acute and reversible

Knowledge Level 4, System: Kidney/Urine
Vince Yamashiroya
DRIP:
Delirium
Restricted mobility/ Retention
Inflammation / Infection/ Impaction [fecal]
Pharmaceuticals / Polyuria
"Drip" is convenient since it is urinary incontinence, so urine only drips out.
Knowledge Level 3, System: Kidney/Urine
Anonymous Contributor

<table>
<thead>
<tr>
<th>Testicular atrophy: differential</th>
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<tbody>
<tr>
<td>TESTES SHRINK:</td>
</tr>
<tr>
<td>Trauma</td>
</tr>
<tr>
<td>Exhaustional atrophy</td>
</tr>
<tr>
<td>Sequelae</td>
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<tr>
<td>Too little food</td>
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<tr>
<td>Elderly</td>
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<tr>
<td>Semen obstruction</td>
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<tr>
<td>Sex hormone therapy</td>
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<tr>
<td>Hypopituitarism</td>
</tr>
<tr>
<td>Radiation</td>
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<tr>
<td>Inflammatory orchitis</td>
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<tr>
<td>Not descended</td>
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<tr>
<td>Klinefelter's</td>
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</tbody>
</table>

Knowledge Level 4, System: Reproductive
Robert O'Connor  University College Dublin