Medical Mnemonics

A politically correct, non-inclusive approach to remembering things you might otherwise forget in med school

Joel G Ray, MD MSc FRCPC
Professor, Departments of Medicine, Health Policy Management and Evaluation, and Obstetrics and Gynecology, St. Michael’s Hospital
Toronto, Ontario
e-mail: rayj@smh.ca

Matthew L. Stein
PhD Candidate at the University of Waterloo, School of Public Health and Health Systems
MHSc, University of Ontario Institute of Technology
HBA, McMaster University
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**ANATOMY**

**Carpal Bones of the Hand:**
Simply Learn The Positions That The Carpals Have

- Scaphoid
- Lunate
- Triquetrum
- Pisiform
- Trapezium
- Trapezoid
- Capitate
- Hamate

---

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

Since there’s two T’s in carpal bone mnemonic sentences, need to know which T is where:
Trapezi**UM** is by the th**UM**B, Trapezi**OID** is in**SIDE**.

---Tom Ball

**Median Nerve Supply to the Hand: LOAF**

- Lumbricals of digits 1 and 2
- Opponens
- Abductor pollicis brevis
- Flexor pollicis

**Rotator Cuff Tendons: SITS**

- Supraspinatus
- Infraspinatus
- Teres minor
- Subscapularis
Adrenal Cortex, Three Zones of: GFR

- **Zona Glomerulosa** (produces mineralocorticoids)
- **Zona Fasciculata** (produces glucocorticoids)
- **Zona Reticularis** (produces androgens)

**Systems review: systems checklist: I PUNCH EAR**

- **Integumental**
- **Pulmonary**
- **Urogenital**
- **Nervous**
- **Cardiovascular**
- **Hematolymphoid**
- **Endocrine**
- **Alimentary**
- **Reproductive**

--- Beth Ann Young and Robert O'Connor

**Femoral triangle: arrangement of contents: NAVEl**

- From lateral hip towards medial **navel**:
  - **Nerve** (directly behind sheath)
  - **Artery** (within sheath)
  - **Vein** (within sheath)
  - **Empty space** (between vein and lymph)
  - **Lymphatics** (with deep inguinal node)
  - Nerve/Artery/Vein are all called Femoral.

--- Andrew J. Vasil

**Balance organs**

**Utricle and Saccule** keep **US** balanced.
Nasal Cavity: Never Call Me Needle Nose
Nares (external)
Conchae
Meatuses
Nares (internal)
Nasopharynx.

Three Tonsils
People (or PPL, for short) have three tonsils:
Pharyngeal
Palatine
Lingual.

Airflow Passages: Mouthy People are Loud Talkers
Mouth
Pharynx
Larynx
Trachea

Scalp nerve supply: GLASS
Greater occipital/ Greater auricular
Lesser occipital
Auriculotemporal
Supratrochlear
Supraorbital
ANESTHESIA

Six Questions to ask a conscious patient or his/her relative in a life-threatening emergency prior to taking him/her to the operating room: SAMPLE?

- Smoking history?
- Allergies to medications or previous anesthetics?
- Medications or alcohol use?
- Past medical history?
- Last meal?
- Events leading up to present injury or collapse?

Maintenance Intravenous Fluids in the Adult or Child: 4, 2, 1

- 4 mL/kg/hr for the first 10 kg
- 2 mL/kg/hr for the next 10 kg
- 1 mL/kg/hr for each remaining kg

Eg: A 37 kg adolescent requires \((4 \times 10) + (2 \times 10) + (1 \times 17) = 77 \text{ mL/hr IV fluid}\)
CARDIOLOGY

Bradycardia, causes: STAGERD J
- Sick sinus syndrome
- Thyroid (ie, hypothyroidism)
- Athletic heart
- Gastrointestinal mesenteric traction
- Rest/sleep
- Drugs (eg, beta-blockers, digitalis)
- Jaundice

Cardiomyopathy, Classification: DR. HO
- Dilated
- Restrictive
- Hypertrophic
- Obliterative

Heart Sounds, Corresponding Order of Valve Closure:
“Many Things Are Possible”
- Mitral valve closure = 1st part of 1st heart sound = A1
- Tricuspid valve closure = 2nd part of 1st heart sound = A2
- Aortic valve closure = 1st part of 2nd heart sound = P2
- Pulmonic valve closure = 2nd part of 2nd heart sound = P2

Chest Pain, Acute, Causes: CHEST MAPPED
- Cardiac anoxia (ie, ischemia or infarction)
- Hematological (e.g., sickle cell chest crisis)
- Esophagus (ie, spasm, esophagitis, rupture)
- Spinal (ie, nerve root damage, spinal column disease)
- Trachea or bronchus
- Mediastinum: infection or mediastinal emphysema
- Aorta: Dissection or aneurysm
- Parietal surfaces (ie, pleural, pericardial, diaphragm)
- Pulmonary embolus
- Pneumonia
- Extra-thoracic organs (eg, stomach, gallbladder, liver, pancreas)
- Diseases of viral origin (eg, epidemic pleurodynia, herpes Zoster, costochondritis)
**Endocarditis, Clinical Manifestations: LIME**

Local (ie, valvular vegetations and destruction)
Immune complexes (ie, retinal Roth spots, renal lesions, Janeway lesions, Osler's nodes)
Metastatic lesions (ie, bacterial "mycotic" aneurysms)
Embolism (ie, splenic, cerebral, renal and adrenal infarcts)

**Hypertension, Effects on Organs: HlGHER PEa**

Heart (ie, left ventricular hypertrophy, angina, myocardial infarction)
Infarction in brain
Hemorrhage in brain
Encephalopathy
Renal disease (eg, glomerulosclerosis)

Peripheral vascular disease
Eyes (ie, arteriolar narrowing, retinal hemorrhages and exudates, papilledema)

**Hypertension, Secondary Causes: RENALS**

Renal (eg, glomerulonephritis, renal artery stenosis)
Endocrine (eg, Cushing's disease, Conn's syndrome, pheochromocytoma, acromegaly, corticosteroids, oral contraceptive pill)
Neurogenic (eg, raised intracranial pressure)
Aortic coarctation
Little people (ie, pregnancy-induced hypertension)
Stress (eg, trauma, white coat hypertension)

**Digoxin, Drug Interactions: QuAcK**

Quinidine
Amiodarone
Calcium-channel blockers (especially verapamil)
Tachycardia, Causes: MD PISH^3

- Metabolic (eg, thyrotoxicosis)
- Drugs (eg, sympathomimetics, anticholinergics)
- Pain
- Ischemia
- Sepsis
- Hypotension
- Hypoxia
- Hypercarbia

Thrombolysis, Contraindications to Use of Streptokinase or TPA: S^5

- Stroke within 3 months
- Stomach ulcer or other GI bleed
- Surgery within the past six weeks
- Severe hypertension
- Streptokinase received previously (then can give tPA)

Chest X-ray: cavitating lesions differential: WEIRD H O L E S

- Wegener's disease
- Embolic (pulmonary, septic)
- Infection (anaerobes, pneumocystis, TB)
- Rheumatoid (necrobiotic nodules)
- Developmental cysts (sequestration)
- Histiocytosis
- Oncological
- Lymphangioleiomyomatosis
- Environmental, occupational
- Sarcoïd

--- LW Mason

Murmurs: systolic types: SAPS

- Systolic
- Aortic
- Pulmonic
- Stenosis

Systolic murmurs include aortic and pulmonary stenosis. Similarly, it's common sense that if it is aortic and pulmonary stenosis it could also be mitral and tricuspid regurgitation.
Myocardial Infarction: signs and symptoms

**PULSE**
- Persistent chest pain
- Upset stomach
- Lightheadedness
- Shortness of breath
- Excessive sweating

--- Sara Nemetz

Congestive Heart Failure: 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

--- Lau Yue Young Geoffrey

Murmurs: systolic vs. diastolic

**PASS:** Pulmonic & Aortic Stenosis = Systolic.

**PAID:** Pulmonic & Aortic Insufficiency = Diastolic.

--- W. Ciulla

Myocardial Infarction: therapeutic treatment

**O BATMAN!**
- Oxygen
- Beta blocker
- ASA
- Thrombolytics (eg heparin)
- Morphine
- Ace prn
- Nitroglycerin

--- Kristy Thomas
**Coronary artery bypass graft indications: DUST**

- Depressed ventricular function
- Unstable angina
- Stenosis of the left main stem

Triple vessel disease

---Sushant Varma

**Exercise ECG testing contraindications:**

**RAMP**

- Recent MI
- Aortic stenosis
- MI in the last 7 days
- Pulmonary hypertension

---Sushant Varma

**ECG T wave inversion causes: INVERT**

- Ischemia
- Normality [esp. young, black]
- Ventricular hypertrophy
- Ectopic foci [eg calcified plaques]
- RBBB, LBBB
- Treatments [digoxin]

---Robert O'Connor

**Atrial fibrillation causes: PIRATES**

- Pulmonary: PE, COPD
- Iatrogenic
- Rheumatic heart: mitral regurgitation
- Atherosclerotic: MI, CAD
- Thyroid: hyperthyroid
- Endocarditis
- Sick sinus syndrome

---Samuel Atom Baek-Kim

**Blue toe (microembolic toe)**

**CAVEMAN**

- Cholesterol embolizations
- Atrial fib with electricity or digitoxin
- Valvular problems
- Endocarditis
- Mural thrombosis
- Aneurysm/ AV fistula
- Nothing

---Samuel Atom Baek-Kim
Angina Pectoris, Precipitants: 4 E's
- Emotional upset
- Exertion
- Exposure to cold air
- Eating large meal

Hypertension, Treatment: ABCDE
- ACE inhibitors
- Beta-blockers
- Calcium-channel blockers
- Diuretics
- Exercise, weight loss, and dietary modifications (try first)

Myocardial Infarction, Medical Management: ABCDE
- ASA
- Beta-blocker
- Cagulation (i.e., thrombolytic; add heparin for anterior MI)
- Dilator (i.e., ACE inhibitor)
- Elevated lipids (measure fasting lipids within 48 hours of admission, and start a statin agent if total cholesterol or LDL are elevated).

T-Wave Inversion on the ECG, Causes: BIND HEP
- Bundle-branch block
- Infarction
- Normal (in AVR and V1)
- Digoxin effect
- Hypertrophy of left ventricle with strain
- Embolus (i.e., pulmonary embolism)
- Pericarditis

Valve Disease, Causes: DIC
- Degenerative (most common in North America)
- Inflammatory (e.g., lupus, rheumatic fever)
- Congenital (e.g., bicuspid aortic valve, Marfan's syndrome)
COMMUNITY HEALTH AND OCCUPATIONAL MEDICINE

Carcinogens, Known Types: A^2B^2C^2
- Arsenic (causes skin cancer)
- Asbestos (causes mesothelioma, laryngeal cancer)
- Benzidine dye (causes bladder cancer)
- Beta-naphthylamine (causes bladder cancer)
- Chromium (causes nasal cancer)
- Chloride vinyl (causes liver angiosarcoma)

Lead Poisoning, Clinical Manifestations: CRACK
- CNS (headache, memory loss, personality changes, encephalopathy)
- Reproductive (abortion, stillbirth)
- Anemia (microcytic)
- Colic ("lead colic" abdominal pain)
- Kidney (proximal tubular damage, interstitial fibrosis)

Occupational Lung Disease, Classification: ASTHMA
- Asthma
- Silicosis
- Toxic gases
- Hypersensitivity pneumonitis (ie, extrinsic allergic alveolitis)
- Many others
- Asbestosis

Erythema Nodosum, Causes: SITS
- Sarcoidosis
- Inflammatory bowel disease
- TB
- Streptococcal infection (post-infectious)
DERMATOLOGY

Toxic Epidermal Necrolysis characteristics: TEN
- Thickness
- Epidermal
- Necrosis

Neurofibromatosis, Clinical Characteristics: CANAL
- Cafe-au-lait spots
- Autosomal dominant, gene 17
- Neurofibromas of the skin
- Associated findings (e.g., optic gliomas, Multiple Endocrine Neoplasia)
- Lisch nodules (hamartomas) of the iris, seen under slit lamp

Malignant Melanoma, Diagnostic Characteristics: ABCD
- Asymmetry of lesion
- Border irregularity
- Colour variegation
- Diameter greater than 6 mm

(Source: Friedman and Rigel 1985)

Staphylococcal Scalded Skin Syndrome (SSSS) vs Toxic Epidermal Necrolysis (TEN): Pathological Difference
- SSSS is Superficial Subcorneal Skin Separation
- TEN is full-Thickness Epidermal Necrosis
Anaphylaxis, Treatment: ANAPHYLAXIS

Adrenalin 0.01 mg/kg IM or IV
Noradrenalin, 8 mg in 500 mL 2/3 1/3, at 2 mL/min infusion for average adult
Antihistamine (ie, diphenhydramine 1 mg/kg IM/IV over 3 min)
Proximal placement of tourniquet to relative to antigen site (eg, bee sting), removed every 15 minutes
H2 histamine blocker (ie, ranitidine 50 mg or cimetidine 300 mg IV) for refractory hypotension -- unproven value
Yell for help and oxygen, 100% by mask
Lower extremity elevation, patient in recumbent position
Aminophylline, 6 mg/kg IV over 20 minutes, to control bronchospasm
Xtra (ie, extra) treatments for patients already on beta-blockers (ie, isoproterenol 2-20 micrograms/kg/min to achieve heart rate of 60/min; or atropine 0.5 mg IV q 5 min until heart rate above 60/min)
Intubation
Steroids (eg, hydrocortisone 100 mg IV push and then 100 mg in 500 mL 2/3 1/3 q 2-4 hours; or methylprednisone 1 mg/kg IV push, and then 1 mg/kg IV q 8 hours)

Trauma Patient, Initial Assessment and Management:

Trauma Patient, Initial Assessment and Management: ABC^4

Airway
Breathing
Circulation
Cervical spine injury
Chest (tension pneumothorax, flail chest, pericardial tamponade)
Consciousness (assess level according to the Glasgow Coma Scale)

(Source: Budassi Sheehy 1984)

Trauma Patient, Initial Assessment and Management: ABCDEF

Airway/breathing (C-spine stabilization is actually first)
Bleeding sites
Central nervous system
Digestive organs
Excretory organs (ie, urine colour, quantity)
Fractures
Drug Toxicity/Overdose Blood Tests to Think About A^6

Alcohols (ethanol, methanol, ethylene glycol
ASA
Acetaminophen
Anticonvulsants (phenytoin, phenobarbital)
Antidepressants (tricyclics, lithium)
Anxiolytics (benzodiazepines)

Iron Overdose, Symptoms and Signs: HIS HeP

Hemorrhagic gastroenteritis (30-60 minutes post-ingestion)
Improvement (appears improved 2-12 hours post-ingestion)
Shock (12-48 hours post-ingestion)

Hepatic damage with possible hepatic failure (late)
Pyloric stenosis (residual complication)
ENDOCRINOLOGY

Addison's Disease, Clinical Findings: FATIGuED

Fatigue -- 94%
Antibodies (ie, anti-adrenal -- 52%, antithyroid -- 36%, antiparietal cell -- 25%)

Triad: hyponatremia -- 67%, hyperkalemia -- 55%, azotemia -- 52%
Increased pigmentation of skin -- 91%, tongue/cheeks -- 56%

Gastrointestinal: Weight loss -- 90%, anorexia -- 80%,
Nausea and vomiting -- 66%
Eosinophilia, neutropenia -- common
Decreased blood pressure (ie, hypotension) -- 81%

Cushing's Syndrome, Symptoms and Signs: MOON FACE

Menstrual changes
Osteoporosis
Obesity
Neurosis
Facial plethora (moon face, hirsutism)
Altered muscle
Calor of skin
Elevated blood pressure

Diabetic Ketoacidosis, Precipitants of: In^5

Insulin deficiency
Infarction (ie, myocardial infarction)
Infection (eg, viral respiratory tract infection)
Injury (ie, trauma)
Infant (ie, pregnancy)

Hypercalcemia, Causes: SHIFT

Sarcoidosis (and other granulomatous diseases)
Hyperparathyroidism, Hyperthyroidism
Immobilization
Familial
Tumour, Thiazides (Others: lithium, vitamin D)

(Source: Wynne and Fitzpatrick 1991)
Hypercalcemia, Causes: SIR
Skeletal resorption enhanced: Hyperparathyroidism (usually
due to a single parathyroid adenoma), malignancy (eg, bronchial carcinoma),
hyperthyroidism, immobilization
Intestinal absorption enhanced: Granulomatous disease (eg, tuberculosis, sarcoidosis),
vitamin D intoxication
Renal excretion reduced: Diuretic ingestion

Hypermagnesemia, Causes: RENAL
Renal failure
Exogenous loads (e.g., MgSO4, magnesium-containing antacids)
Necrosis of tissue (e.g., burns)
Adrenal insufficiency
Lithium intoxication

Hypoglycemia, Causes: ExPLAIN
Exogenous: Insulin, oral hypoglycemic agents, ethanol and ASA excess
Pituitary insufficiency
Liver failure
Renal insufficiency (e.g., Addison's disease)
Immune (i.e., anti-insulin antibodies)
Neoplastic (e.g., insulinoma, sarcoma, mesothelioma)
(Source: Dr. H. Gerstein, Hamilton, Ontario)

Osteoporosis, Causes: COLLES FRActure
Congenital (e.g., osteogenesis imperfecta, Ehlers-Danlos, homocysteinuria)
Osteoporosis type I (post-menopausal) & type II (senile)
Leukemia & other malignancies (e.g., multiple myeloma)
Liver disease
Endocrine disease (e.g., hyperparathyroidism, hyperthyroidism, acromegaly, Cushing's syndrome,
hypogonadism, diabetes mellitus)
Steroids (i.e., corticosteroids)
Familial
Renal disease
Anticonvulsants (e.g., phenytoin)
Calcium deficiency (e.g., malabsorption)
(Based upon: Wynne and Fitzpatrick 1991)
Pituitary hormones
FLAGTOP
Follicle stimulating hormone
Lutinizing hormone
Adrenocorticotropin hormone
Growth hormone
Thyroid stimulating hormone
Oxytocin
Prolactin
· Note: there is also melanocyte secreting hormone and Lipotropin, but they are not well understood.

Graves' Ophthalmopathy, Clinical Characteristics: PREDNISOL

Proptosis
Retraction of eyelids (Dairymple's sign)
Edema (periorbital)
Diplopia
Neuropathy of optic tract (leads to poor visual acuity)
Inhibited upward gaze
Skin changes (eg, pretibial myxedema, peu d'orange)
Onset ages 20-40
Lid lag on downward gaze (Graefe's sign)

Hyperthyroidism: "Myxedema is not myxedema"

That is, “the physical sign of pre-tibial myxedema is not found with hypothyroidism (myxedema), but with hyperthyroidism of Grave's disease.”

Hypomagnesemia, Causes: 10 Ds

Diarrhea & gastrointestinal losses
Diuretics & renal losses
Diabetes mellitus & endocrine causes
Dietary insufficiency
Diverted to free fatty acids
Drugs (e.g., cisplatin, amphotericin B, diuretics)
Drinking excess amounts of ethanol
Delivery with toxemia of pregnancy
Decompensated heart, lungs or liver
Denuded skin (e.g., burns)

(Based upon: Isperi, Allen and Brodsky 1989)
Multiple Endocrine Neoplasia (MEN), Classification

MEN Type 1 ("W"on = Wermer's syndrome): i. Pituitary adenoma, ii. Pancreatic adenoma iii. Parathyroid adenoma

MEN Type 2 ("S"econd = Sipple's syndrome): i. Pheochromocytoma, ii. Parafollicular (medullary) thyroid cancer iii. Parathyroid adenoma

MEN Type 3 (like MEN Type II, but with cutaneous neuromas)

Osteoporosis, Treatment: ABCDE

- Activity & exercise
- Biphosphonate drugs
- Calcium supplementation (e.g., 1000 mg/day)
- D(vitamin D supplement)
- Estrogens (for post-menopausal women)

Pheochromocytoma, Clinical Characteristics: P^8

- Palpitations
- Pallor
- Perspiration
- Panic
- Paroxysmal attacks
- Pain (headache, chest, abdominal)
- Paradoxical rise in blood pressure with beta-blockers
- Pregnancy-associated hypertension in some cases

Thyroid Malignancies, Age-Associated Types:

- Papillary carcinoma seen in Pediatric group
- Medullary(parafollicular) carcinoma seen in Middle-aged group
- Anaplastic carcinoma seen in Aged group
- Follicular carcinoma seen in all groups
ETHICS

Critically Ill, Guide to Ethical Decision-Making:
3R's and Q.C.
Rational: Does the intervention meet the test of competent assessment (diagnosis) and scientifically proven benefit?
Redeeming: What is the risk/benefit of the intervention? Are known risks and iatrogenic complications weighed against anticipated benefits?
Respectful: Does the intervention respect the rights of the patient?

Quality of life: Is the intervention "good" for that patient in human terms? Is it compatible with priorities of the patient, the family, the society?
Cost: Is the monetary cost/reward of the intervention appropriate for the patient, the family, society?

(Source: Weil, Weil, Rackow 1988)
GASTROENTEROLOGY

Bacterial Overgrowth Syndrome, Risk Factors: PASSED GAS

- Pernicious anemia
- Achlorrhodia
- Steroids (i.e., corticosteroids)
- Scleroderma
- Endocrine (i.e., diabetes mellitus, hypothyroidism)
- Diverticula of jejunum
- Gastrectomy (i.e., partial gastrectomy)
- Antibiotics
- Strictures within the small bowel

Celiac Disease, Treatment/Prevention: Elimination of Gluten-Containing Foods (BROW) From the Diet

- Barley
- Rye
- Oats
- Wheat

Constipation, Treatment: FECES

- Fluid and fibre intake
- Exercise
- Cathartics (e.g., lactulose)
- Elimination of constipating medications
- Stimulation of the gastrocolic reflex (i.e., enema)
  
  (Source: Rousseau 1988)

Hepatic Disease, Factors Used in the Child-Pugh Classification: A^2B^2C^1

- Ascites: absent, moderate, or tense
- Albumin level: > 35 g/L or < 30 g/L
- Bleeding (Prothrombin Time/INR): normal or increased
- Bilirubin level: < 20 g/L or > 30 g/L
- Cephalopathy (i.e., encephalopathy): none, grade I, II, III, or IV
Hepatic Encephalopathy, Symptoms and Signs: SCALP
- Sychosis
- Confusion
- Asterixis
- Lethargy --> coma (late sign)
- Personality changes (early sign)

Inflammatory Bowel Disease, Extra-intestinal Manifestations: STINGSS
- Sclerosing cholangitis
- Thromboembolic disease
- Nephrolithiasis (i.e., calcium oxalate, urate stones)
- Skin (i.e., aphthous ulcers, pyoderma gangrenosum, erythema nodosum)
- Seronegative spondyloarthropathies

Splenomegaly, Causes: IBM PCM
- Infectious (eg, Viral: Epstein-Barr, herpes; Parasitic: malaria, schistosomiasis, babesiosis, kala-azar = visceral Leishmaniasis; Bacterial: subacute bacterial endocarditis)
- Blood disease (eg, hemolytic anemia, hereditary spherocytosis, hemoglobinopathies i.e., sickle-cell disease, thalassemias)
- Malignancy (eg, Hodgkin's lymphoma, leukemias)
- Portal hypertension (ie, Banti's syndrome)
- Connective tissue disease (eg, sarcoidosis, systemic lupus erythematosus, polyarteritis nodosa)
- Miscellaneous (eg, Gaucher's disease, Niemann-Pick disease

Pepsin-producing cells: Chief of Pepsi-Cola
- Chief cells of stomach produce Pepsin.

---Dr. Atif Farooq Khawaja Rawalpindi
Splenomegaly causes: CHICAGO
Cancer
Hem, onc
Infection
Congestion (portal hypertension)
Autoimmune (RA, SLE)
Glycogen storage disorders
Other (amyloidosis)

---Gerard Dang

Splenomegaly causes: CHINA
Congestion/ Cellular infiltration
Haematological (eg haemolytic anaemia, Sickle cell)
Infection/ Infarction (eg malaria, GF, CMV)
Neoplasia (eg CML, lymphoma, other myeloproliferative)
Autoimmune

---Jamal Khan

Ascites, Causes: P^4
Peritonitis (peritoneal carcinomatosis, post-irradiation, peritoneal dialysis, pancreatitis, mesothelioma, bacterial, TB, fungal, parasitic)
Peritoneal lymphatic obstruction (traumatic, congenital)
Protein deficiency (cirrhosis, protein-losing enteropathy, nephrotic syndrome, kwashiorkor)
Portal hypertension (pre-hepatic, hepatic, post-hepatic causes)

Colonic Adenocarcinoma, Treatment
Rectal gets Radiation (i.e., Duke's stage B or C gets radiation therapy regardless of other therapy)
C gets chemo (i.e, Duke's stage C benefits from chemotherapy regardless of other therapy)

Gallstone Disease, Risk Factors: CHOlesterol PIgment
Cirrhosis of liver
Hemolysis
Obesity
Parity > 2
Indian (ie, North American Indian)
Gender (ie, female, fair, fat, forty, flatulent and fertile)
Gastric Carcinoma, Risk Factors: A^5
Anemia (ie, pernicious anemia)
Achlorhydria
Atrophic gastritis
Adenomas (ie, gastric adenomas)
A blood type

Megacolon, Causes: C^5
Congenital megacolon (Hirschprung’s disease)
Colitis (Crohn’s disease and ulcerative colitis)
Cancer of the bowel
Chagas’ disease (Trypanosoma cruzi destroy the bowel plexus)
Crazy (functional megacolon)
(Note: The last four causes present well after birth)
GENERAL SURGERY

Abdominal Pain, Acute, Differential Diagnosis:
ABDOMINAL
Appendicitis
Biliary tract disease
Diverticulitis
Ovarian disease
Malignancy
Intestinal obstruction
Nephritic disorders
Acute pancreatitis
Liquor (ethanol)

Duodenal Ulcer, Indications for Surgical Management: I PROB
Intractable pain
Perforation
Refractive to medical treatment
Obstruction (ie, of the gastric outlet)
Bleeding

Venous Insufficiency, Signs: STUBbED
Stasis dermatitis
Trendelenberg test positive
Ulceration of medial malleolus
Brown pigment coloration
b
Edema
Dependency pain (ie, painful when leg below body level)

Anal Pain, Differential Diagnosis: H^2A^2F^2
Hemorrhoids,
Hematoma
Abscess,
Anal Prolapse
Fistula,
Fissure

Laparotomy, Emergency Indications: PERFS
Peritonitis
Evisceration
Ruptured ectopic pregnancy
Free air in peritoneal cavity
Shock, with blood from rectum, nasogastric tube, or bladder
GYNECOLOGY

Oral Contraceptive Pill, Absolute Contraindications to its Use: OCP H^3
Oestrogen-dependent tumours (eg, hepatocellular carcinoma and adenoma, uterine carcinoma, breast carcinoma)
Cardiovascular disorders (ie, thromboembolic, cerebrovascular and coronary artery disease, and moderate to severe hypertension)
Pregnancy
Hepatic disease
Hyperlipidemia
Hemorrhage from vagina not yet diagnosed

Pelvic Mass That is Painful, Differential Diagnosis: CREAM PEA
Cyst (ie, ovarian cyst)
Renal colic
Ectopic pregnancy
Adhesions
Many other causes
Pelvic inflammatory disease
Endometriosis
Appendicitis/appendical abscess

Post-menopausal Painless Vaginal Bleeding, Causes: ACE
Atrophic vaginitis
Cervical carcinoma
Endometrial carcinoma

Uterine (Endometrial) Carcinoma, Risk Factors: HEAD
Hypertension
Estrogen Unopposed (ie, post-menopausal estrogen administration, nulliparity, late-onset menopause, polycystic ovary disease, obesity)
Atherosclerosis
Diabetes mellitus
Vulvar Pruritus, Differential Diagnosis: ILL DOC
Infection: Candidiasis, oxyuris vermicularis (pinworms), trichomonas vaginalis
Lichen sclerosis et atrophicus
Lichen simplex (ie, neurodermatitis)
Diabetes mellitus
Oestroegn deficiency (ie, post-menopausal)
Contact dermatitis

Endometrial carcinoma: risk factors: HONDA
Hypertension
Obesity
Nulliparity
Diabetes
Age (increased)

Gestational Trophoblastic Neoplasia (Hydatidiform Mole, Choriocarcinoma), Symptoms and Signs: TALIEST FETA
Threatened abortion" picture (with prune juice vaginal bleeding)
Anorexia
Large for dates (ie, large uterus)
Episiotomy
Sore uterus (ie, tender, doughy uterus)
Fetus absent on ultrasound
Eclampsia (ie, pre-eclampsia or eclampsia in first or second trimesters)
Thyrotoxicosis
Anemia

Ovarian Carcinoma, Types: MEGS-GEMS
Metastatic Tumours (Krukenberg gastrointestinal, breast, endometrial, lymphoma)
Epithelial Tumours (serous, mucinous, endometrioid, clear cell, undifferentiated, Brenner's)
Germ Cells Tumours (dyserminoma, immature teratoma)
Sex Cord Stromal Tumours (granulosa cell, Sertoli-Leydig cell, thecoma)
HEMATOLOGY

Intrinsic vs. extrinsic pathway tests: PeT PiTTbull
PeT: PT is for extrinsic pathway.
PiTTbull: PTT is for intrinsic pathway.

--- Marcus James Fidel Medical Student, University of New Mexico

Anemia, Normocytic-Normochromic, Causes: Cream Pile

Connective tissue disease
Renal disease
Endocrinopathy (ie, hypothyroidism, Addison's disease, hypopituitarism, hypoparathyroidism)
Amyloidosis
Pregnancy
Infectious (abscess, subacute bacterial endocarditis)
Liver disease
Everything else (eg, malnutrition, malignancy)

Chronic Lymphocytic Leukemia, Classic Feature:

CELL
CLL
See smudge cells on microscopy (smudge CELL = CLL)

Disseminated Intravascular Coagulation, Causes: TOM'S V
Trauma (especially brain trauma)
Obstetrical (ie, abruptio placenta, retained fetus, placenta previa, septic abortion)
Malignancy
Sepsis (eg, meningococcemia, E. coli)
Venom (usually from viper snake bites)
Hodgkin's Disease, Clinical Features: WA^3RM L
IMFHS
Weight loss (30%)
Anemia,
Abdominal pain,
Alcohol-induced pain in lymph nodes
Regional lymphadenopathy
Mediastinal involvement
Lymphadenopathy (neck 60%, axillary 25%, groin 15%)
Itchiness (12%)
Mediastinal involvement (eg, compression of local structures)
Fever (30%), night sweats (30%), Pel-Epstein fever (rare)
Hyperuricemia (eg, manifesting as gout)
Splenomegaly (30%)

Multiple Myeloma, Symptoms and Signs: POOR FAB
Pathological bone fractures
Osteoporosis
Osteolytic bone lesions on x-ray
Renal insufficiency or failure
Fatigue
Anemia
Bone pain

Myeloproliferative Disorders, Clinical and Laboratory Features: PEPTIC
Pruritus
Ecchymoses
Peptic ulcer disease
Thrombosis
Increased blood levels of: uric acid, LDH, B12, histamine, eosinophils, basophils
Causes: Chronic myelogenous leukemia, polycythemia rubra vera, thrombocythemia, myelofibrosis
INFECTIOUS DISEASES

Exposures to Infectious Agents, Diagnosis: COASTED
- Contacts (e.g., family, friends, co-workers)
- Oral ingestion (e.g., seafood, restaurants, picnics)
- Animal exposure (e.g., pets, wild animals)
- Sexual history (e.g., sexual orientation, number of partners, use of prostitutes)
- Travel history
- Employment exposure (e.g., animals, insects, fumes)
- Drug history (e.g., illicit drugs, needle sharing, over-the-counter medications)

(Source: Gettler 1991)

Rheumatic Fever, Jones' Major Diagnostic Criteria: ACCES
- Arthritis (ie, migratory arthritis)
- Carditis
- Chorea (ie, Sydenham's chorea or St. Vidas' Dance)
- Erythema marginatum
- Subcutaneous nodules

Urinary Tract Infection, Common Causative Organisms:
- PEEKS
  - Proteus
  - E. Coli
  - Enterococcus
  - Klebsiella
  - Serratia

DNA viruses morphology rule of thumb: DNA
- Double-stranded
- Nuclear replication
- Anhedral symmetry
- Rule breakers: pox (cytoplasmic), parvo (single-stranded).

---Robert O'Connor

Ducket John's major criteria: ACNES
- Arthritis
- Carditis
- Nodule (subcutaneous)
- Erythema marginatum
- Sydenham chorea

---Atif Farooq Khawaja Rawalpindi
Tuberculosis: Antibiotics used

STRIPE
STreptomycin
Rifampicin
Isoniazid
Pyrazinamide
Ethambutol

--- Sushant Varma

Tuberculosis: treatment
If you forget your TB drugs, you'll die and might need a PRIEST

Pyrazinamide
Rifampin
Isoniazid (INH)
Ethambutol
STreptomycin

--- Hugo Basterrechea

Bloody Diarrhea, Infectious Causes:

CESS? YECh!

Campylobacter jejuni
E. Coli (enterohemorrhagic strains)
Salmonella
Shigella
Yersinia enterocolytica
Entamoeba histolytica
Clostridium difficile

Pneumonia, Community-Acquired, Non-Immunocompromised, Causes:

C PHLEMS

Chlamydia pneumoniae
Pneumococcus
Haemophilus influenzae
Legionella sp.
Everything else (e.g., viral Influenzae)
Mycoplasma pneumoniae
Staphylococcus aureus

Scarlet Fever, Symptoms and Signs:

SCARLET

Streptococcus pyogenes (ie, causative organism is Group A beta-hemolytic streptococcus)
Circumoral pallor
Areas of desquamation of skin (late finding)
Rash (ie, sandpaper scarlatiniform rash, especially in axillae, groin)
Laryngitis/pharyngitis
Elevated temperature
Tongue (ie, initially, white strawberry tongue, then red
METABOLIC DISEASES

Hemochromatosis, Clinical Manifestations:

A
Arthralgias
B
Bronzed skin colour
C
Cardiac (enlargement, heart failure, conduction abnormalities)
D
Diabetes
E
Early in life (aged mid-30’s upon presentation)
F
Ferritin (serum) elevated
G
Gonadal involvement (decreased libido, infertility)

Porphyria, Diagnostic Tests:

1) Acute Intermittent
   Porphyrria (AiP)
   ALA (increased urinary aminolevulinic acid)
   PBG (increased urinary porphobilinogen) ppl

2. Porphyria
   Cutanea Tarda (PCT):
   CP (increased urinary coproporphyrin)
NEPHROLOGY

Glomerulonephritis in Childhood:
**HIS PISH**
- Henoch-Schonlein purpura
- IgA nephropathy (ie, Berger’s Disease)
- Systemic lupus erythematosus
- Post-streptococcal glomerulonephritis
- Immune vasculitis (eg, Wegener’s granulomatosis, polyarteritis nodosa)
- Subacute bacterial endocarditis
- Hemolytic-uremic syndrome

*Note: “Pish” is the Yiddish word for urine*

**Hematuria, Causes:**
- SIT^3 Gn:
  - Stones (ie, kidney stone)
  - Infection (ie, urinary tract infection)
  - Tuberculosis,
  - Trauma,
  - Tumour (ie, renal or bladder cancer)
  - Glomerulo nephritis

*(Source: Dr. L. Lagrotteria, Hamilton, Ontario)*

**Nephritic Syndrome With Decreased Complement Levels, Causes:**
- LESS Complement

- Lupus
- Endocarditis
- Shunt infection-associated disease
- Streptococcal glomerulonephritis
- Cryoglobulinemia

*(Source: Baird 1989)*
**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).

---

**Aldosterone: regulation of secretion from adrenal cortex**

**RNAs**
- Renin-angiotensin mechanism
- Na concentration in blood
- ANP (atrial natriuretic peptide)
- Stress

--- Tan Xin Yu

---

**Metabolic acidosis: causes**

**USED CAR**
- Ureterenterostomy
- Saline hydration
- Endocrinopathies (hyperparathyroid, hyperthyroid, Addison's)
- Diarrhea/ DKA/ Drugs
- Carbonic anhydrase inhibitors
- Ammonium chloride
- Renal tubular acidosis

*Alternatively: USED CARP, to include Parenteral nutrition/
Pancreatic fistula.*

--- J.J.H. and Vince Yamashiroya

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**Syndrome of Inappropriate Antidiuretic Hormone (SIADH), Drug Causes: "-ines"**
- Nicotine
- Oxytocin
- Vincristine
- Carbamazepine
**NEUROLOGY**

**Cerebellar Lesion, Signs:**
- Dysarthria
- Dysdiadochokinesia
- Ataxia
- Rebound phenomenon
- Nystagmus
- Intension tremor

**Creutzfeldt-Jakob Disease, Signs:**
- Blindness
- Myoclonic movements of the limbs
- Ataxia
- Dementia (rapidly progressive in nature)

**Headache, Classification:**
**VITAMIN**
- Vascular: migraine, cluster, toxic vascular, hypertensive
- Inflammatory and Traction: Mass lesion (tumour, edema, hematoma, hemorrhage), arteritis, phlebitis, neuralgia, occlusive vascular disease, temperomandibular joint syndrome
- Atypical variants
- Muscle contraction headache: depressive equivalents and conversion reactions, cervical osteoarthritis, chronic myositis
- Infectious (ie, meningitis, encephalitis)
- Non-cranial sources: Eyes, ears, nose, throat, teeth

**Migraine Headache, Symptoms:**
**PUPIL**
- Pulsatile quality
- Unilateral location
- Physical activity worsens headache
- Inhibits daily activity when present
- Location: temporal region of head
Peripheral Polyneuropathy, Causes:
M^2I^2D^2
Metabolic: Diabetes mellitus, amyloidosis, acute intermittent porphyria
Miscellaneous: Guillain-Barre (acute infective polyneuritis), Infections
Idiopathic
Drugs and chemicals
Deficiency states

Unconscious Patient, Initial Considerations of Causes: DEATHH
Diabetes mellitus (causing DKA, non-ketotic hyperosmolar coma, or hypoglycemia)
Epilepsy
Alcohol or drugs
Trauma
Hypertension (causing hypertensive encephalopathy or stroke)
Heart disease (causing myocardial infarction)

Unconscious Patient, Initial Treatments When Cause Unknown: DONT Forget
Dextrose, 50 mL of 50 per cent dextrose IV bolus
Oxygen, 40 per cent by mask
Naloxone, 1 mg IV initially, to maximum 10 mg
Thiamine 100 mg IV (give before dextrose)
Flumazenil, 0.1 mg IV push

Temporal lobe: location of high vs. low frequency recognition
The bass clef looks like an ear.
Therefore, the bass clef [low frequency] is closer to the ear, and the treble clef [high frequency] is more medial.

---Robert O'Connor
Cerebellar damage signs: DANISH
Dysdiadochokinesis
Ataxia
Nystagmus
Intention tremor
Slurred speech
Hypotonia

---Grant Wilde and Kristian Mears

Thalamic boundaries
I HIT PPL (people)
*Directions are in alphabetical order:*
Anterior: Interventricular Foramen
Inferior: Hypothalamic nuclei (plane connecting them)
Lateral: Internal capsule (posterior limb)
Medial: Third ventricle
Posterior: free Pole of Pulvinar
Superior: Lateral ventricle
Posterior has 2 P’s.

---David Colbert

Stroke risk factors
HEADS
Hypertension/ Hyperlipidemia
Elderly
Atrial fib
Diabetes mellitus/ Drugs (cocaine)
Smoking/ Sex (male)

---Rinku S. Uberoi

Wernicke-Korsakoff's psychosis: findings
COAT RACK
- Korsakoff's psychosis (chronic phase): Retrograde amnesia Anterograde amnesia Confabulation Korsakoff's psychosis

---HBV
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 Stooped.

Parkinsonism drugs: SALAD
Selegiline
Anticholinergics (trihexyphenidyl, benzhexol, ophenadrine)
L-Dopa + peripheral decarboxylase inhibitor (carbidopa, benserazide)
Amantadine
Dopamine postsynaptic receptor agonists (bromocriptine, lisuride, pergolide)

---Dr. Harsh Sharma

Thickened nerves causes: HANDS
Hansen’s (leprosy)
Amyloidosis
Neurofibromatosis
Diabetes mellitus
Sarcoidosis

---Dr. Harsh Sharma

Migraine Headache, Precipitating Factors:
C^6
Cino (ie, wine)
Cheese
Chocolate
Citrus fruits
Coronary vasodilator (ie, nitrates)
Contraceptive pill

---Dr. Harsh Sharma

Stroke, Etiology:
L^2AC^2
Lacunar (seen in basal ganglia and brain stem)
Large-artery disease (eg, Takayasu’s arteritis, syphilis)
Atherosclerotic (ie, carotid artery-to-cerebral artery embolism)
Cardiogenic (eg, atheroma, bacterial vegetations in endocarditis)
Coagulable (ie, hypercoagulable) states
Scalp Layers: SCALP
Skin
Connective tissue
Aponeurosis of Galen
Loose connective tissue
Pericranial tissue

Cervical Spine X-ray, Interpretation: ABCS
Alignment of: soft tissue, vertebral bones anteriorally, facet joints, spinous processes
Bone fractures
Cartilage: intervertebral disc spaces should be equal
Soft tissues: prevertebral and retropharyngeal spaces are increased with bony injury, blood or air from tracheal injury

Hydrocephalus in Infants and Children, Causes: MHO
Meningitis (infectious)
Hemorrhage (periventricular hemorrhage)
Obstruction (eg, aqueduct stenosis, tumor)
OBSTETRICS

Biophysical Profile (Ultrasound of Fetal Behaviour), Scoring Criteria: MR HAT
Movement of fetus
Respirations (ie, fetal breathing)
Heart rate of fetus (ie, Non-Stress Test)
Amniotic fluid volume
Tone of fetus
Maximum score of 10; each criterion is scored as a 0 or 2

Multiple Gestation (eg, Twins, Triplets), Complications: TIP^7
Transfusion from twin to twin
Intrauterine Growth Restriction
Placenta previa
Polyhydramnios
Post-partum hemorrhage
Presentation (ie, malpresentation)
Pre-eclampsia
Premature rupture of membranes
Premature labour

Pre-Eclampsia, Clinical Features: HELP
Hypertension
Edema
Late in pregnancy
Proteinuria
Primigravida (more common)
Note: Do not confuse this mnemonic with the HELLP syndrome, which is a variant of pre-eclampsia

Breech Presentation, Causes: P^7
Prematurity
Parity (ie, grand multiparity)
Pregnancy (ie, multiple pregnancy)
Pelvis (ie, contracted pelvis)
Polyhydramnios
Placenta previa
Pelvic tumours (eg, uterine leiomyoma)

Diabetes Mellitus (Gestational), Fetal and Delivery Complications: SLIM PUSH^3
Stillbirth
Lung immaturity
Intrauterine growth restriction
Macrosomia
Prematurity
Underdevelopment (ie, sacral agenesis, ventricular septal defect, neural tube defect, cerebral palsy)
Shoulder dystocia
Hypoglycemia, Hypocalcemia, Hyperbilirubinemia
Dystocia (ie, Abnormal Labour), Causes: Power, Passenger, Passage
Power (ie, poor or uncoordinated uterine contractions)
Passenger (ie, fetus too large or malpresentation)
Passage (ie, pelvis too small or unusual shape)

Ectopic Pregnancy, Risk Factors: The Five “-ees
Ectopy (ie, previous ectopic pregnancy)
PID (ie, pelvic inflammatory disease)
IUD (ie, intrauterine device)
Surgery (ie, previous lower abdominal surgery)
Endometri (ie, endometriosis)

HELLP Syndrome (a severe variant of pre-eclampsia)
Hemolysis
Elevated Liver enzymes
Low Platelets

Forceps Delivery, Indications: D^3
Delay in second stage of labour
Distressed fetus
Distressed mother

Forceps Delivery, Prerequisites for: ABCDE
Analgesia is adequate
Bladder empty
Cervix is dilated
Descent past ischial spines
Ead (ie, head) presentation

Polyhydramnios, Complications: P^4
Prolapse of umbilical cord
Placental abruption
Preterm labour
Presentation (ie, malpresentation)

Postpartum Pyrexia, Causes According to Temporal Sequence:
Wind (ie, lung atelectasis)
Water (ie, urinary tract infection)
Womb (ie, endomyometritis)
Wow (ie, mastitis)
Wind (ie, pneumonia)
Wound (ie, C-section or episiotomy site)
Walk (ie, deep venous thrombosis)
Pre-eclampsia, Associated Risk Factors: MAD PRIMigravida
Multiple gestation
Age extremes (mother is younger or older)
Diabetes mellitus
Primigravida
Renal disease
Intrauterine growth restriction
Mole (ie, hydatidiform mole)
Increased blood pressure (ie, chronic hypertension)
Bone Metastases, Common Causes of: Mom, Buy The Kid Long Pants!

- Malignant melanoma
- Breast
- Thyroid
- Kidney
- Lung
- Pants
OPHTHAMOLOGY

Proptosis, Causes: THE I
- Tumour (eg, retinoblastoma)
- Hemorrhage (eg, traumatic posterior orbital hematoma)
- Endocrinopathy (eg, Graves' disease)
- Infection (eg, orbital cellulitis)

Pupillary dilatation (persistent) causes: 3AM
- 3rd nerve palsy
- Anti-muscarinic eye drops (eg to facilitate fundoscopy)
- Myotonic pupil (Holmes Adie pupil): most commonly in young women, with absent/delayed reaction to light and convergence, and of no pathological significance.

--- Gajan Rajeswaran Final Year Medical Student, Imperial College School Of Medicine, London

Innervation of the Extraocular Muscles: LR^SO4
All extraocular muscles are innervated by the third cranial nerve except the Lateral Rectus by the 6th cranial nerve and the Superior Oblique by the 4th cranial nerve

Myopia, Clinical Characteristics: LM^2N
- Long eyeball is ...
- Myopic, requiring ...
- Minus diopter lens for correction, and the patient is ...
- Nearsighted
ORTHOPEDICS

Carpal Tunnel Syndrome Causes: TENS
Trauma (eg, Colles' fracture, daily overuse at typing keyboard)
Endocrinopathy (ie, pregnancy, hypothyroidism, diabetes mellitus, acromegaly)
Neurological (C5-C6 disk herniation can mimics a CTS)
Synovitis (eg, rheumatoid arthritis)

Colles' Fracture, Casting Position: PUP
Phlexion (ie, wrist flexion) +
Ulnar deviation od wrist +
Pronation of wrist
Note: Keep on cast for six week

Compartment Syndrome (Ischemic Injury), Signs: P^6
Passive stretching causes severe pain (most reliable sign)
Pain
Pallor
Paresthesiae
Poor capillary refill
Pulselessness (late sign)

Epiphyseal Injury, Salter-Harris Classification: SALTER
Type I: Straight through the epiphyseal growth plate
Type II: Above the epiphyseal growth plate (ie, in a fragment of metaphysis attached to the epiphysis)
Type III: Lower (ie, through and below the epiphyseal growth plate)
Type IV: Through the epiphysis and metaphysis
Type V: Emergency (ie, crush of the epiphyseal growth plate)

Scoliosis, Neuromuscular Causes: M^4AC
Muscular dystrophy
Muscular atrophy (i.e., spinal muscle atrophy)
Myelodysplasia
Mucocutaneous syndromes (e.g., neurofibromatosis)
Arthrogryposis multiplex congenita
Cerebral palsy

Shoulder Dislocation Posteriorally, Causes: 3 E's
Epileptic seizure
Ethanol intoxication
Electrical injury (eg, electrocution, electroconvulsive therapy)
Note: A posterior shoulder dislocation is rare, but often missed)
Otalgia (Earache), Causes of Referred Pain: 10 T's
Teeth
Temporomandibular joint syndrome
Trismus
Trachea
Tube (ie, eustachian tube)
Tic douloureux (ie, trigeminal neuralgia)
Tonsilar (ie, tonsillitis, cancer)
Tongue
Throat (laryngeal carcinoma)
Thyroiditis
PATIENT HISTORY AND EXAMINATION

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.

---Richard Rathe

Pain history checklist LOST WAR:
Location
Onset
Severity
Time
Worsening factors
Alleviating factors
Radiation

---Jane Day

Pain history checklist CHLORIDE:
Character (stabbing, throbbing, etc.)
Location
Onset
Radiation
Intensity
Duration
Exacerbating and alleviating factors

Patient profile (PP) LADDERS:
Living situation/ Lifestyle
Anxiety
Depression
Daily activities (describe a typical day)
Environmental risks/ Exposure
Relationships
Support system/ Stress

---Michael Waddell
Unconsciousness: differential FISH SHAPED:
Fainted
Illness/ Infantile febrile convulsions
Shock
Head injuries
Stroke (CVE)
Heart problems
Asphyxia
Poisons
Epilepsy
Diabetes
Cerebral Palsy, Criteria for Diagnosis: POSTER
Posturing (especially abnormal extensor thrusting)
Oropharyngeal problems (tongue thrusts, grimacing, W swallowing difficulties)
Strabismus
Tone increased or decreased in muscles
Evolutional responses (ie, persistent primitive reflexes or failure to develop equilibrium and protective responses)
Reflexes (ie, deep tendon reflexes are increased and plantar reflexes are up going).
In order to diagnose CP require four criteria in a child older than one year who has no evidence of a progressive disease by history.

Constipation in Childhood, Organic Causes: H^3AND
Hirschprung's disease, Hypothyroidism, Hypercalcemia
Anal fissure
Neurogenic bowel (eg, spina bifida)
Diabetes mellitus

Failure to Thrive, Causes: The Seven C's
Congenital abnormalities (eg, ventricular septal defect)
Chromosomal abnormalities (eg, Down's syndrome)
Cystic fibrosis
Celiac disease
Cow's milk protein intolerance (allergy)
Calorie-protein malnutrition
Cruelty (eg, parental neglect, abuse, environmental deprivation)

Henoch-Schonlein Purpura, Symptoms and Signs: RASHH
Rash (ie, purpuric rash over buttocks, extensor surfaces of legs, pre-tibial region)
Arthralgia
Sore abdomen
Hematuria
Hematochezia
Obesity in Childhood, Complications: FATSO
Furunculosis
Acanthosis nigricans
Triad (1. diabetes mellitus, 2. atherosclerosis, 3. hypertension)
Slipped femoral capital epiphysis
Obesity in adulthood

Seizures in the Neonate, Causes: H^5I temp
Hypoxia
Hypoglycemia
Hypocalcemia
Hypomagnesemia
Hemorrhage (ie, periventricular, subarachnoid, subdural)
Infection (ie, fever, meningitis, TORCH organisms)

Turner syndrome components: CLOWNS
Cardiac abnormalities (specifically Coartication)
Lymphoedema
Ovaries underdeveloped (causing sterility, amenorrhea)
Webbed neck
Nipples widely spaced
Short

---Robert O'Connor

Kwashiorkor distinguishing from Marasmus: FLAME
Fatty Liver
Anemia
Malabsorption
Edema

---Chris

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

---Kimberly Scott
Potter syndrome features: POTTER
Pulmonary hypoplasia
Oligohydrominios
Twisted skin (wrinkly skin)
Twisted face (Potter facies)
Extremities defects
Renal agenesis (bilateral)

---Dr. Atif Farooq Khawaja Rawalpindi

PriVaTe TIM HALL
Phenylalanine
Valine
Threonine
Tryprophan
Isoleucine
Methionine
Histidine
Arginine
Leucine
Lysine

Croup Scoring: Remain Calm Coughing Makes Stridor Appear

Remain = Retractions (none --> intercostal & nasal flaring)
Calm = Colour (normal --> central cyanosis)
Coughing = Cough (none --> paroxysmal "bark")
Makes = Mental status (alert --> restless --> delirious)
Stridor = Stridor (none --> stethoscope --> without stethoscope)
Appear = Air entry (normal --> decreased --> delayed or minimal)
Based upon: Webb 1990.

Developmental Milestones, Pull-To-Sit Response in the Infant
At two months the head lags behind the trunk
At four months the head is kept in alignment with the body
At six months the head leads before the body

Developmental Milestones, Rolling and Sitting
Roll at four months (there are four letters in the word "ROLL")
Sits at Six months (sounds the same)

Developmental Milestones, Vision
20/20 visual acuity is developed by 20 months of age
Epiglottitis, Symptoms and Signs: 5 D's
Distressed
Drooling
Dysphagia
Dysphonia
Dyspnea

Sexual Development in the Female, Stages of: ABCDE
Accelerated growth (ie, height)
Breast development
Cunnus (vaginal) hair
Distal hair growth (ie, axillae)
Endometrial sloughing (ie, menarche)

Seriously Ill Pediatric Patient, Recognition: SAVE A CHILD
Skin (mottled, cyanotic, petechiae, pallor)
Activity (needs assistance, not ambulating, responsive)
Ventilation (intercostal retractions, drooling, nasal flaring, respiratory rate, stridor, wheezing)
Eye contact (glassy stare, fails to engage examiner)

Abuse (unexplained bruising/injuries, inappropriate parent)

Cry (high-pitched, cephalic, irritable)
Heat (high fever > 41 deg C, hypothermia < 36 deg C)
Immune system (AIDS, corticosteroids, asplenic, sickle cell)
Level of consciousness (irritable, lethargic, convulsions, unresponsive)
Dehydration (% of total weight lost with 1 mL = 1 g, capillary refill, fontanelle, mucous membranes, cold hands/feet, voiding, diarrhea, vomiting)
SAVE: Observations made prior to touching the child
CHILD: History from caretaker & brief exam

PHARMACOLOGY

Metabolism enzyme inducers
"Randy's Black Car Goes Putt Putt and Smokes":
Rifampin
Barbiturates
Carbamazepine
Grisoefulvin
Phenytoin
Phenobarb
Smoking cigarettes

---Brad

Nicotinic effects: MTWTF (days of week):
Mydriasis/ Muscle cramps
Tachycardia
Weakness
Twitching
Hypertension/ Hyperglycemia
Fasiculation

---John Nguyen

Direct sympathomimetic catecholamines: DINED
Dopamine
Isoproterenol
Norepinephrine
Epinephrine
Dobutamine

---Robert O'Connor

ACE Inhibitor contraindications: PARK
Pregnancy
Allergy
Renal artery stenosis
K increase (hyperkalemia)

---Anthony Chan
PLASTIC SURGERY

Burns, initial resuscitation: SAVE A PATIENT

Stop the burning process
ABCs of basic life support
Visualize the patient for all injuries
Estimate burn size and begin fluid resuscitation
Airway (intubate if inhalation injury present)

Penicillin (i.e., start antibiotics)
Analgesic
Topical therapy (e.g., flumazamine cream)
Intoxicants/Inhalants
Nasogastric tube
Tetanus toxoid

(Source: Williams and Porvaznik 1989)

Carpal tunnel syndrome treatment: WRIST

Wear splints at night
Rest
Inject steroid
Surgical decompression
Take diuretics

--- Sushant Varma

Burn Size Estimation by Total Body Surface Area: Rule of 9’s

Entire Head: 9%
Entire trunk: 18% + 18% = 36%
Entire arm: 9%
Entire leg: 18%
Whole body: 100%
Alcoholism Screening Questions: CAGE
Have you ever tried to Cut down on your drinking?
Do people ever Anger you about your drinking?
Do you ever feel Guilty about your drinking?
Do you ever require an Eye opener (i.e., drink of alcohol) to get going in the morning?

Anticholinergic Drug Side Effects: ION^7
- Confusion
- Blurred vision
- Reduced lacrimation
- Reduced salivation
- Heart acceleration (tachycardia)
- Urinary retention
- Constipation

Delirium, Signs: AIDS
1. Acute onset, then fluctuation over days
2. Inattentiveness (especially to conversation)
3. Disorganized thinking (i.e., incoherent speech)
4. State of consciousness either reduced or hypervigilant

For diagnosis of delirium need both 1 and 2 + either 3 or 4 (sensitivity 94-100%, specificity 90-95%)

(Source: Hospital Practice, April 30, 1991)

Depression, Symptoms and Signs: ASSESS PAT
- Appetite diminished +/- weight loss
- Sleep disturbance (especially diminished number of sleep hours)
- Sexual libido diminished
- Energy diminished
- Suicidality/Self-worthlessness and guilt
- Psychomotor agitation
- Anhedonia
- Thought process impaired
Generalized Anxiety Disorder, Symptoms: STOMACH

- Scanning and vigilance
- Two or more worries
- Organic causes should be ruled out
- Motor tension
- Anxiety unrelated
- Course of mood or psychotic should be ruled out
- Hyperactive autonomics

(Source: Short, Workman, Morse, Turner. 1992)

Lithium, Side Effects: VANISH LITH^3

- Vertigo
- Ataxia
- Nystagmus
- Intention tremor
- Stupor
- Hyperreflexia

- Leukocytosis
- Insipidus (i.e., nephrogenic diabetes insipidus)
- T-wave inversion on the electrocardiogram
- Heaviness (i.e., weight gain), Hypothyroidism, Hyperparathyroidism

Mania, Symptoms: GREAT SAD

- Grandiosity
- Racing thoughts
- Euphoria
- Activities, goal-directed
- Talkative

- Sleep deprived
- Activities, reckless
- Disractibility

(Source: Short, Workman, Morse, Turner. 1992)
Mental Status Examination: COMO ESTAS

Cognitive function (calculation, concentration, insight, judgment)
Overview (appearance, attitude, level of consciousness, movements)
Memory (recent and remote)
Orientation (to person, place & time)

Emotion (affect & mood)
Speech (fluency, form, & comprehension)
Thought (process, content, & perceptual disturbances)
Attention (abstract thinking, recall, and intelligence)
Something else (that might be important to the patient)

(Source: Astrachan 1991)

Post-Traumatic Stress Disorder, Symptoms: IRAN

Insomnia and nightmares
Re-experiences of traumatic event at a later date
Arousal is increased
Numbing of general responsiveness to the real world

Suicide, Risk Factors: SAD

Schizophrenia
Alcohol abuse
Depression
Scale: SAD PERSONS

Sex: male
Above 40 years of age
Depression
Previous suicide attempt
Ethanol abuse
Rational thinking lost
Support systems lost
Organized suicide plan
No spouse
Sickness (physical illness)

If score 0-2: send home with friend or family
If 3-4: arrange close follow-up or consider short admission
If 5-6: strongly consider hospitalization
If 7-10: hospitalize and watch closely

Nervous stimulus: the 4 ways to classify "A MILD stimulus":
Modality
Intensity
Location
Duration

---Robert O'Connor

Depression: 5 drugs causing it PROMS
Propranolol
Reserpine
Oral contraceptives
Methyldopa
Steroids

---Sunu George

Dementia, Alzheimer's, Differential Diagnosis: DEMENTIAS
Drugs
Encephalitis
Metabolic (eg, electrolyte or liver abnormality, dehydration, acute intermittent porphyria)
Endocrine (thyroid disease, diabetes mellitus)
Normal-pressure hydrocephalus
Trauma (eg, chronic subdural hematoma)
Infection (eg, of lung or urine, AIDS, syphilis)
Affective disorder (ie, depression manifesting as pseudodementia)
Structural defect of brain (eg, infarction, tumour, abscess)
Dementia Patient, Management: FICS'MA

Family answering questions, referral to services and resources, treatment of behavioral disturbances, helping with placement, postmortem investigation and support
Intellectual status: observing for/treating delirium, depression, drug side effects Incontinence: initiating discussion
Clinical investigation, retraining regimens
Sleep: counselling family regarding expected disorders, ruling out environmental and physical causes, treating insomnia
Mobility/Activity: investigating causes of immobility, adjusting environment and drugs, restricting wandering

(Source: Jarvik and Wiseman 1991)

Tricyclic Antidepressants, Side Effects: A^4

Anticholinergic (see above for Anticholinergic Drug Side Effects)
Antihistaminic (eg, sedation, weight gain)
Ani-alpha 1 adrenergic (eg, orthostatic hypotension)
Arrhythmogenic (eg, quinidine-like ventricular cardiac effects)
REHABILLTATION MEDICINE

Activities of Daily Living, Assessment: BATTED

Bathing
Ambulation
Transfers
Toileting
Eating
Dressing

(Source: Brummel-Smith 1995)
RESPIROLOGY

Dyspnea of Sudden-Onset, Causes: M^1A^2P^5S^1

- Mucous plug
- Asthma,
- Aspiration, RDS
- Pulmonary embolus,
- Pneumonia,
- Pneumothorax,
- Pulmonary edema,
- Psychogenic
- Sepsis

Digital (Finger) Clubbing, Causes: FINGER Clubb

- Fibroses of lung
- Infections (e.g., lung abscess, bronchiectasis, infective endocarditis)
- Neoplastic (e.g., lung adenocarcinoma)
- Gastrointestinal (e.g., chronic liver disease, inflammatory bowel disease, celiac disease)
- Endocrine (e.g., hyperthyroidism)
- Renal disease (chronic)

- Cardiac (i.e., cyanotic congenital cardiac disease)
- l
- u
- b
- b

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)

--- Vince Yamashiroya
Arthritis, Classification: i heart MEDICS

Metabolic (ie, gout, pseudogout, hemochromatosis)
Endocrine (ie, acromegaly)
Degenerative (ie, osteoarthritis)
Infectious (ie, septic joint, infectious synovitis, rheumatic fever)
Connective tissue disorders (rheumatoid factor-positive)
(i.e, systemic lupus erythematosus, rheumatoid arthritis, progressive systemic sclerosis/scleroderma, polymyositis/dermatomyositis)
Inflammatory vasculitides (ie, polyarteritis nodosa, Wegener's granulomatosis, hypersensitivity vasculitis, giant cell arteritis)
Seronegative spondyloarthropathies (rheumatoid factor-negative) (ie, ankylosing spondylitis, Reiter's syndrome, psoriatic arthritis, inflammatory bowel disease)

Joint pain causes: SOFTER TISSUE

Sepsis
Osteoarthritis
Fractures
Tendon/muscle
Epiphyseal
Referred
Tumor
Ischaemia
Seropositive arthritides
Seronegative arthritides
Urate
Extra-articular rheumatism (such as polymyagia)

Arthritis seronegative spondyloarthropathies: PEAR
Psoriatic arthritis
Enteropathic arthritis
Ankylosing spondylitis
Reiter's/ Reactive

---Dave Hassan
Lupus, Drug-Induced Causes: CHIMP

Chorpromazine
Hydralazine
Isoniazid
Methyldopa
Procainamide

Osteoarthritis, Radiological Features: OS\textsuperscript{3}teo

Osteophytes
Subchondral sclerosis
Subchondral cysts
Space between joint diminished
t
e
o

Synovial Fluid Analysis, Three Necessary Tests: Three C's

Cell count and differential
Crystal examination
Culture and Gram's stain

Systemic Lupus Erythematosus (SLE), Eleven Diagnostic Criteria: PRUNE RASH

1. Photosensitivity
2. and 3. Rashes (ie, 2. Discoid rash; 3. Malar rash)
4. Ulcers in mouth
5. Neurologic (ie, seizures, psychosis)
6. and 7. Elevated blood tests (ie, 6. raised antinuclear antibody; 7. positive SLE cells seen, positive anti-double-stranded DNA antibody, positive anti-smooth muscle antibody, false-positive VDRL test)
8. Renal (ie, proteinuria, hematuria, cellular casts)
9. Arthritis (non-erosive)
10. Serositis (ie, pleuritis, pericarditis, peritonitis)
11. Hematologic (ie, hemolytic anemia, leukopenia, thrombocytopenia)

Note: Need 4 of 11 criteria for diagnosis of SLE
HLA-B27 associated diseases:
PAIR
Psoriasis
Ankylosing spondylitis
Inflammatory bowel disease
Reiter's syndrome

--- Atif Farooq Khawaja Rawalpindi Medical College
UROLOGY

Incontinence, Causes of Transient Form: DIAPERS

Delirium
Infection of urinary tract
Atrophic urethritis
Pharmacologic agents
Endocrine (e.g., glycosuria)
Restricted mobility ("geographic incontinence" of new setting)
Stool impaction

(Based upon: Resnick 1990)

Urinary incontinence: causes of acute and reversible: DRIP
Delirium
Restricted mobility/ Retention
Inflammation / Infection/ Impaction [fecal]
Pharmaceuticals / Polyuria

"Drip" is convenient since it is urinary incontinence, so urine only drips out.

Epididymitis bacterial causes: CENT
Chlamydia trachomatis
E. coli
Nisseria gonorrhoeae
Tuberculos bacteria

---Dr. Atif Farooq Khawaja Rawalpindi

Dialysis indications: AEIOU
Acid-base problems (severe acidosis or alkalosis)
Electrolyte problems (hyperkalemia)
Intoxications
Overload, fluid
Uremic symptoms

---Malvinder S. Parmar,

Enlarged kidneys causes: SHAPE
Sclerderma
HIV nephropathy
Amyloidosis
Polycystic kidney disease
Endocrinopath (diabetes)

---Dino Santoro
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

---Ben Beckwith

Penile Pain, Differential Diagnosis: P^8

Priapism
Phimosis
Paraphimosis
Peyronie’s disease
Penile tumour
Purulence (ie, venereal disease)
Prostatitis
Push (ie, coitus-related trauma/overuse)