



# The Medical MNEMONIC Booklet

By Timothy Aebi, Bern, Switzerland, April 2000

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## Introduction

Welcome to this collection of medical mnemonics and hints which is supposed to make your life as a student or a new-born S.H.O. (Intern) a little easier. Of course, this booklet will not replace the need of good founded knowledge in medicine and it won't make you a brilliant doctor, either. But who knows, it might help you become one. There's no shame to admit that our mind is not perfect and especially at the beginning of your medical career: Why not use some helpful mnemonics, why not give your brain a little support?

A lot of information can be easily found on the Internet too. This co-operation between networks allows the sharing of information resources worldwide and it's accessible to everyone. Already by searching the world wide web a few minutes you will be able to find various medical pages including education, clinical care, research, communication and many more. Therefore this booklet contains a small selection of medical internet-addresses, where you can find useful information.

**Call-Up:** Do YOU know any other helpful mnemonics? Have you figured out some by yourself? As this collection is supposed to be continued and to grow, don't hesitate to e-mail any new mind aid to [Aebi.MD@gmx.net](mailto:Aebi.MD@gmx.net) for publication in the next edition.

**Please Note:** These mnemonics are thought as a help for your studies or your work on the ward. They may not correspond to your local or other official recommendations. Before prescribing any drug the reader must check with the most update product information and safety regulations. No responsibility can be taken for any information provided in this text.



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## Emergency Medicine

### Essential Steps For Heart Attacks

When dealing with a myocardial infarction remember that 'Time Is Muscle'! Your patient might be terrified; reassure him. Act fast, attach an ECG monitor and ensure a defibrillator trolley is on hand. Most deaths occur within the first hour of the onset of AMI and are usually due to ventricular fibrillation.

The following little and very simple phrase will remind you of the first (maybe even prehospital) steps to think of:

**"OH MAN"**

- O:** Oxygen, high-flow O<sub>2</sub> (unless CO<sub>2</sub> retaining, eg COPD)
- H:** Heparin, eg 80 units/kg, followed by a continuous infusion of 18 units/kg/h. This is not done everywhere, so check out local recommendations.
- M:** Morphine, eg 5mg IV (therefore always place an IV cannula). It is: analgesic, anxiolytic, anti-arrhythmic and venodilatory. Please always consider an anti-emetic like metoclopramide.
- A:** Aspirin®, eg 300mg should be given as soon as possible, unless contraindicated
- N:** Nitro-glycerine, eg capsule or spray sublingually for coronary vasodilatation

### The Heart Attack And Its Enzymes

It's a very common question you are asked as a student, and funny enough you always get those enzymes mixed up, although you have learned them several times before. Here's some help: Remember „**C**ardial**L**“

In myo**C**ardial**L** infarction

- C:** CK (CK-MB) goes up first
- A:** ASAT (GOT) goes up second
- L:** LDH goes up third

### Handling The Pulmonary Oedema

As this medical emergency involves the **L**ungs, start with the **L** and follow the letters of the alphabet... **LMNOP**.

- L:** Lasix® (furosemide), eg 40-80mg IV slowly
- M:** Morphine, eg 2,5-5mg IV (subcutaneous application is effective in milder cases). Avoid respiratory depression!
- N:** Nitro-glycerine, capsule or spray sublingually, consider isosorbide dinitrate (ISDN) IV
- O:** Oxygen by face mask: 100% if no pre-existing lung disease
- P:** Position the patient sitting up with his legs dangling over the side of the bed. This facilitates respiration and reduces venous return!

## Staying Calm In Acute Severe Asthma Or An Exacerbated COPD

Anyone who has ever experienced an exacerbation of a COPD knows in what panic situation such a patient can get. And even you as the one who should help could end up panicking, but: An atmosphere of calm helps cure the Patient! And be careful: the severity of an asthmatic attack is easily underestimated.

The mnemonic „**SHO** and **CIA**“ I found to be extremely helpful, when working on casualty.

- S:** Salbutamol nebulized through a mask, or if not available use a „spacer“
- H:** Hydrocortisone, eg 100-200mg IV. This of course will take some time to show its benefit!
- O:** Oxygen! Sit Patient up and give O<sub>2</sub> in high-dose. Beware: Patients with COPD, especially if they are CO<sub>2</sub>-retaining (type 2 respiratory failure) have their right for oxygen, but they have to be under constant surveillance!
- C:** Chest X-ray. Pneumothorax is a common complication and can be life threatening. Always do a chest x-ray!
- I:** Ipratropium bromide. Add to the nebulized β-agonist.
- A:** Aminophylline=Theophylline (Consider!), eg 250mg IV over 20mins.

Beware: Avoid β-blockers and NSAID in asthmatic patients, they can worsen the situation significantly!

Explanation: The **SHO** (Senior House Officer) in Ireland or Great Britain is the equivalent to the American „Intern“ or the Swiss „Assistenzarzt“.

## Trauma Requires Fast Thinking

In initial trauma management every second saves lives. You must think „**FAST**“ about immediate life-threatening conditions, and if present treat them.

- F:** Flail chest trauma
- A:** Airway compromise or obstruction
- S:** Sucking chest wound and Shock tamponade
- T:** Tension pneumothorax

By being confronted with a multi-trauma patient, there might be no time for x-rays or any tests, just pure clinical judgement and immediate treatment.

## Pain Assessment – Made Easy

Sometimes on casualty it is extremely important to assess pain exactly. To ask all 10 important points about pain gives you all the necessary information. The only problem is, that every time you should remember all those questions, you don't. The following mnemonic proved to be very helpful! Remember:

„the **SRN** (Senior Register Nurse) at the **OPD** (Ot Patient Department) is called **SARA**“.

<b>S:</b>	Sight	<b>O:</b>	Onset
<b>R:</b>	Radiation	<b>P:</b>	Progression
<b>N:</b>	Nature	<b>D:</b>	Duration

<b>S:</b>	Severity
<b>A:</b>	Aggravating factors
<b>R:</b>	Relieving factors
<b>A:</b>	Associated symptoms

Explanation: Senior Register Nurse = dt. „Oberschwester“  
Out Patient Department = dt. „Poly- oder Tagesklinik“

## Causes Of Coma

The Mnemonic "MIDAS" will help you remember important states to exclude as a cause of coma, especially in stressful situations:

<b>M:</b>	Meningitis
<b>I:</b>	Intoxication
<b>D:</b>	Diabetes
<b>A:</b>	Air! Respiratory failure
<b>S:</b>	Subdural or Subarachnoid haemorrhage

## The Cholinergic Overdose

The word „**SLUDGE**“ is a very simple reminder of the clinical features of a cholinergic overdose:

<b>S:</b>	Salivation
<b>L:</b>	Lacrimation
<b>U:</b>	Urination
<b>D:</b>	Diarrhoea
<b>G:</b>	Gastric upset
<b>E:</b>	Emesis

And additionally miosis, muscle weakness and bradycardia!

## The Anticholinergic Overdose

This is not really a mnemonic than rather a picture describing you these clinical features:

Blind as a bat  
Dry as a bone  
Red as a beet  
Mad as a hatter  
Hot as a hare

And additionally mydriasis, absent bowel sounds, urinary retention!

## Facing Malignant Hyperthermia

This is a rare complication during anaesthesia. There is rapid raise in temperature (eg 1°C every 5 minutes, up to 43°C) and acidosis due to rigidity. Prompt treatment is vital and following mnemonic can be helpful as a basic guideline for treatment in such a situation:

**"SOMe Hot Dude Better Give Iced Fluid Fast!"**

**S**O: Stop all triggering agents first! Give 100% Oxygen.  
**H**: Hyperventilate  
**D**: Dantrolene, eg 1mg/kg every 5 minutes IV – up to 10 mg/kg in total  
**B**: Bicarbonate (Consider)  
**G**: Glucose and Insulin  
**I**: IV-fluids, 'Icy'/cool blanket  
**F**: Fluid output (check!), Furosemide  
**Fast**: Tachycardia



## Internal Medicine

### **Possible Causes For Illness**

When facing a constellation of symptoms and signs, it may be helpful to try to relate them to a single underlying disease process.

“**VINDICATE**” will help you to think of all possible pathologic groups causing disease:

- V:** vascular
- I:** infectious
- N:** neoplastic
- D:** degenerative
- I:** iatrogenic
- C:** congenital
- A:** autoimmune
- T:** traumatic, toxic
- E:** endocrine

### **The Essential Of Asthma**

When asked the exact definition of asthma: Don't think too far, just remember „**ASTHMA**“! And do respect Asthma: people still die of it!

- A:** Airway obstruction
- S:** Spasm of bronchial muscle\*
- T:** Transient (!) and reversible
- H:** High mucus production\*
- M:** Mucosal swelling/inflammation\*
- A:** Attack comes paroxysmal

\* these are the 3 main factors which narrow the airways!

### **Talking About Asthma**

Salbutamol is a selective  $\beta_2$  adrenoreceptor agonist and acts on the airways. So to remember where which receptor is, just note:

**"One Heart, Two Lungs"**

Beta-1 primarily on the heart

Beta-2 in the airways

## Possible Causes Of Hypoglycaemia

This is a great little mnemonic to remind you of the most important causes of hypoglycaemia. This is the commonest endocrine emergency, so prompt diagnosis and treatment is essential! By definition a hypoglycaemia is plasma glucose <2.5mmol/L. Threshold for symptoms varies.

Remember: “**EXPLAIN Malaria**”

- Ex:** Exogenous drugs, eg insulin or chlorpropamide; Alcohol, eg alcoholic on a binge with no food; and others like atorvastatin, ACE-inhibitors etc.
- P:** Pituitary insufficiency
- L:** Liver failure plus some rare inherited enzyme defects
- A:** Addison's disease
- I:** Islet cell tumours (insulinoma) and immune hypoglycaemia (eg anti-insulin receptor antibodies in Hodgkin's disease)
- N:** Non-pancreatic neoplasms (especially fibro sarcoma and haemangiopericytomas)

**Malaria:** especially with quinine administration!

## Clinical Presentation Of Hyperthyroidism

Following findings should cause a little „**STING**“ in your brain and remind you of hyperthyroidism:

- S:** Sweating
- T:** Tremor and Tachycardia
- I:** Intolerance to heat, Irregular Menstruation and Irritability
- N:** Nervousness
- G:** Goitre and Gastrointestinal symptoms (like loose stools, diarrhoea)

## Probing Questions On Alcoholism

Every Physician will have to face the problem of alcoholism over and over again. Denial is a leading feature in this disease and therefore you can use specific questions to evaluate, if there is a severe problem with alcohol. Besides these questions, which are quite sensitive, always be sure to question relatives too.

Approach 1: The „**CAGE**“-questions

- C**hange: Has anybody ever asked you to change your drinking habits?
- A**ngry: Have you ever been angry about other people complaining?
- G**uilty: Did you ever feel guilty?
- E**y-opener: Do you need an „eye-opener“ in the morning?

Approach 2: The mnemonic „**CONTROL**“

Can you always **C**ontrol your drinking?

Has alcohol ever led you to **N**eglect your family or your work?

What **T**ime do you start drinking? Do you sometimes start before this?

Do friends comment on how much you drink or ask you to **R**educe intake?

Do you ever drink in the mornings to **O**vercome a hangover?

Go through an average day's alcohol, **L**eaving nothing out.

## Identifying Parkinson's Disease

Parkinsonism is a syndrome which literally **entrap**s the patient slowly. So keep the word "**TRAP**" in mind for the important clinical features of this disease:

- T:** Tremor, 3-6Hz (cycles per second). It's most marked at rest and often seen as a so called 'pill rolling' of thumb and fingers.
- R:** Rigidity, limbs resist passive extension throughout movement (not spasticity!). Cogwheel rigidity (dt. Zahnradphänomen) is combined rigidity and tremor.
- A:** Akinesia or bradykinesia
- P:** Posture typical of a Parkinson's patient and Postural instability

Additional features are monotonous speech (+/- dysarthria), expressionless face, dribbling, short shuffling steps, difficulty stopping and starting walking, blink rate↓, fidgeting↓, peristalsis↓, micrographia and 'couche-volant'.

## Big Belly

The differential diagnosis of an abdominal distension includes „the **5 F**“ and one **T**:

- |                  |                  |
|------------------|------------------|
| <b>F:</b> Fat    | <b>F:</b> Fluid  |
| <b>F:</b> Foetus | <b>F:</b> Flatus |
| <b>F:</b> Faeces | <b>T:</b> Tumor  |

## Basic Hypertension Treatment

Think of "**WATER**" when evaluating patients for hypertension:

- W:** Weight reduction
- A:** Alcohol use ↓
- T:** Tobacco use ↓ (smoking or chewing)
- E:** Exercise
- R:** Restriction of salt

## Medical Hypertension Therapy

The therapy of hypertension has to be individually evaluated for each patient, but as an easy reminder of the basic possibilities here's "**ABCD**", as easy as the ABC!

- A:** ACE-inhibitors (are first choice in the diabetic-they help prevent renal failure, they may be first choice if coexisting LVF)
- B:**  $\beta$ -blocker, eg atenolol (if no asthma, heart failure, or claudication)
- C:** Calcium antagonist, eg amlodipine (SE: flushing, fatigue, gum hyperplasia, oedema)
- D:** Diuretics, eg Bendrofluazide (SE!)

Basically **A** and **B** are preferred in younger patients, **C** and **D** in the elderly (this is just thought as a basic idea).

## Acute Rheumatic Fever

This illness is due to cross-reactivity with  $\beta$ -haemolytic streptococci. The diagnosis is based on the revised **JONES-Criteria**. It can be made in the presence of evidence of previous streptococcal infection plus 2 major criteria or 1 major and 2 minor criteria. The major criteria are very easy to keep as they are already listed in:

**"JONES-Criteria"**

- Jo:** Joints red and tender due to migratory ('flitting') polyarthritis (75%)
- N:** Nodules, subcutaneous nodules (2-20%)
- E:** Erythema marginatum on trunk, thighs, arms (2-10%)
- S:** Sydenham's chorea (10%, St Vitus dance = dt. Veiztanz), commoner if female. These odd darting movements are usually a late sign.
  
- C:** Carditis (endo-, myo-, or pericarditis)

Note: The minor criteria include fever, raised ESR or CRP, arthralgia (but not if arthritis is one of the major criteria), history of previous rheumatic fever and prolonged P-R interval (but not if carditis is one of the major criteria)

## ST Elevation in ECG's

The possible causes of ST elevation in an ECG are listed in the word "**ELEVATION**":

- E:** Electrolytes
- L:** LBBB (left bundle branch block)
- E:** Early repolarisation
- V:** Ventricular hypertrophy
- A:** Aneurysm
- T:** Treatment – pericardiocentesis
- I:** Injury (acute myocardial infarction, contusion)
- O:** Osborne waves (in hypothermia)
- N:** Non-occlusive vasospasm

## Sleep Apnoe Syndrome And The Number 10

To keep the very essential of the definition and epidemiology in your mind, use four times **10**:

- By definition more than **10** apnoe periods longer than **10** seconds per hour
- About **10%** of all males over 40 affected
- Men **10** times more affected than women

## Pheochromocytoma And The Number 10

Number **10** will remind you of some important features of pheochromocytoma (which are discussed **10** times more often than actually seen):

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

## When Elderly People Fall

When ever you get into touch with an elderly patient who has fallen or fainted you'll surely think of all the cardiovascular causes first. But there are some special causes you should always keep in mind (and which are often neglected):

Remember: "**DAME**"

- D:** Drugs (always take a full history including all drugs involved, ask relatives if necessary)
- A:** Ataxia
- M:** higher Mental dysfunction
- E:** Environment (a carpet with a little fold can be disastrous, consider removing loose carpets at home), Eyes (check visual abilities)

## Who Is Who In Pneumonias

Which bacteria cause community-acquired pneumonias and which are the most common ones? There's hardly any student who hasn't been asked this question, and there's hardly anyone who hasn't forgotten at least one of them. So remember:

"**Street Climbers Have My Legs**"

- Streptococcus pneumoniae** is the commonest (40-80%)
- Chlamydia pneumoniae** or psittaci (causes psittacosis *via* parrots)
- Haemophilus influenzae**
- Mycoplasma pneumoniae**
- Legionella pneumophila**

For hospital acquired pneumonias remember "**SPEK**":

- S:** Staphylococcus aureus
- P:** Pseudomonas aeruginosa
- E:** Enterobacteria, gram-negative
- K:** Klebsiella

## **Pneumonia in the Immune Compromised**

The four most common pneumonia in patients with immunodeficiency disorders are listed in

**the four C's:**

- C:** Pneumocystis Carinii pneumonia
- C:** Cryptococcus neoformans
- C:** Cytomegaly virus
- C:** Candida albicans

## **Identifying Osler's Nodes**

Basically: Fever + new regurgitant murmur = endocarditis until proven otherwise!

Here are **the four P's** to help you to identify Osler's nodes in infective endocarditis:

- P:** Pink
- P:** Painful
- P:** Pea-sized
- P:** on the Pulp of the fingers or toes

## **The Causes Of Hemorrhagic Effusion**

This little hint gives you a first idea of what can cause a hemorrhagic pleural effusion, it's:

**the four T's:**

- T:** Tumour
- T:** Tuberculosis
- T:** Trauma
- T:** Thrombosis

## Causes Of Red Urine

When ever you're asked about the causes of haematuria, just relax, "**SITTT**" down and go:

- S:** Stones
- I:** Infection
- T:** Trauma
- T:** Tumour
- T:** Tuberculosis

By the way: rifampicine (Rimactan®) makes the urine orange.

## COPD-Complications

The COPD patient is in danger of developing special complications, which should always be considered when his state is suddenly worsening: Think of "**PICA**"!

- P:** Pneumothorax (especially in sudden respiratory failure or in any exacerbation. Always do a chest x-ray!)
- I:** Infiltrates (Pneumonia)
- C:** Cor Pulmonale
- A:** Atelectasis

For treatment of COPD-exacerbation see "Emergency Medicine" above.

## Carpal Tunnel Syndrome

Multiple diseases can cause this quite common syndrome. Therefore, following mnemonic could be quite useful: "**ARMPIT**"

- A:** Acromegaly, Amyloidosis
- R:** Rheumatoid arthritis
- M:** Myxoedema
- P:** Pregnancy and Pill
- I:** Idiopathic (most common by the way!)
- T:** Trauma, Tuberculosis

## Signs Of Chronic Liver Disease

Being aware of all the pathophysiologic pathways involved, most of these clinical features should be clear. But if you still have some problems gathering them together, here's a little help:

"**LAST JOG**"

- L:** Liver flap
- A:** Ascites
- S:** Spider Naevi
- T:** Testis atrophy

- J: Jaundice
- O: Oedema
- G: Gynaecomastia

## Peptic Ulcer Disease Reminders

Peptic ulceration includes either duodenal or gastric ulceration – 2 distinct entities (it may also occur in Barrett's oesophagus or rarely in a Meckel's diverticulum).

Dyspepsia is often the present complaint. Here's the "**ABC**" for the predisposing factors of peptic ulcers:

- A: Anxiety
- B: Blood group O
- C: Cigarette, Coffee
- D: Drugs (especially Aspirin and Steroids, NSAID use ↑ risk 3-4 fold)
- E: Emotions (so called 'ulcer personality', the role of stress though is controversial)
- F: Family history
- G: Gastric hyper secretion
- H: Helicobacter pylori (~90% of all duodenal ulcers are HP +ve, and ~80% of all gastric ulcerations are HP +ve), HLA type

Predisposing diseases are enclosed in "**the 7 C's**":

- C: Cirrhosis
- C: Calcium (hyperparathyroidism)
- C: Chronic pancreatitis
- C: Cystic fibrosis
- C: Chronic renal failure/Cholestatic jaundice
- C: COPD
- C: Calculi (renal)

For complications it's "**the 5 P's**":

- P: Perforation
- P: Pyloric stenosis
- P: Peptic malignancy
- P: Penetration into pancreas
- P: Plus haemorrhage (which may be catastrophic)

Note: Benign gastric ulcers are *not* premalignant. **But:** Gastric cancer may present this way, and its prognosis is better if caught early, so *all* suspected GU *must* be endoscoped!

## The Little Reminder In Immunology

Gell & Coombs classified the hypersensitivity reactions into four groups. So, if you still have some problems keeping them in your mind, maybe a little “**ACID**” might help you:

Type I	<b>Anaphylaxis</b>
Type II	<b>Cytotoxic-mediated</b>
Type III	<b>Immune-complex</b>
Type IV	<b>Delayed hypersensitivity</b>

## Showing Off In Haematology

Some of you might think that keeping all these values in your mind is not worthwhile doing. But some professors will be impressed if you know them by heart, and you never know if you won't be glad to know them on the ward too.

It's **the numbers 3 and 4** in haematology:

- 1.**34**cm<sup>2</sup> oxygen carried by 1g of Hb
- Average of **3.4** lobes per neutrophil cell
- 3.4**mg iron in each g Hb
- 34**mg bilirubin from each g Hb

## Some More Haematological Help

As a student or on the ward, it's handy to have some values of the white blood cell count (WBC) present. Remember:

“**Never Let Mum Eat Beans**” and “**60, 30, 6, 3, 1**”

<b>N:</b>	Neutrophils	<b>60%</b>
<b>L:</b>	Lymphocytes	<b>30%</b>
<b>M:</b>	Monocytes	<b>6%</b>
<b>E:</b>	Eosinophils	<b>3%</b>
<b>B:</b>	Basophils	<b>1%</b>

## Helpful Reminder In Dermatology

To remember the criterions, which make a nevus suspicious to be malignant (Melanoma!), think of the **alphabetical rule**:

- A:** Asymmetrical
- B:** Borders are irregular
- C:** Colour is not uniform
- D:** Diameter more than 6mm
- E:** Elevation of some parts in the lesion



## Surgery

### Causes Of Acute Pancreatitis

This is an unpredictable disease (mortality 5-10%) which is often managed on surgical wards. But because surgery is not often involved, it is easy to think that there is no acute problem - but THERE IS! This mnemonic is a perfect reminder on all the different causes that can lead to an acute pancreatitis. As in any good mnemonic, either the most important or the most common cause appears at the top of the list. So, if asked by your consultant during an operation or some other occasion, just...  
..."GET SMASHED"

**G:** Gallstones  
**E:** Ethanol  
**T:** Trauma

**S:** Steroids  
**M:** Mumps  
**A:** Autoimmune (PAN)  
**S:** Scorpion venom (commonest cause in Trinidad!)  
**H:** Hyperlipidaemia ( $\uparrow$ Ca<sup>++</sup>, hypothermia)  
**E:** ERCP, also Emboli  
**D:** Drugs: (azathioprine, asparaginase, mercaptopurine, pentamidine etc)

also pregnancy; and often no cause is found!

### Acute Ischaemia Of The Limb

This emergency might be caused by an embolus, thrombosis, or trauma. There is little difference in its clinical presentation: „the six **P**'s!“

The limb is:

<b>P</b> ale	<b>P</b> aralysed
<b>P</b> ulseless	<b>P</b> araesthetic
<b>P</b> ainful	<b>P</b> erishing with cold, or causing <b>P</b> rostration

### Post-OP Fever

Here's the **five "W"** which are supposed to help you to determine the possible cause(s) of fever in a patient who has undergone a surgical procedure recently. A raised temperature post-op should stimulate an infection screen:

- W ind:** the pulmonary system is the primary source of fever in the first 48 hours!
- W ound:** check for signs of infection at the surgical site
- W ater:** check intravenous access site for signs of phlebitis
- W alk:** deep venous thrombosis can develop due to pelvic pooling or restricted mobility related to pain and fatigue
- W hiz:** consider urinary tract infection in patients who underwent catheterisation

## Predisposing Factors for Gallstones

Here's now the probably best known mnemonic to remember the risk factors predisposing to gallstones: **the five "F"**

- F at**
- F emale**
- F orty**
- F ertile**
- F air**

## Meckel's Diverticulum And The Rule Of 2

When discussing the issue of Meckel's diverticulum it's good to think of **the number 2**, as this number has got a lot to do with this anatomical variety:

- 2** inches long
- 2** feet from the ileocolic valve
- 2%** of the population
- commonly presents in the first **2** years of life
- may contain **2** types of epithelial tissue

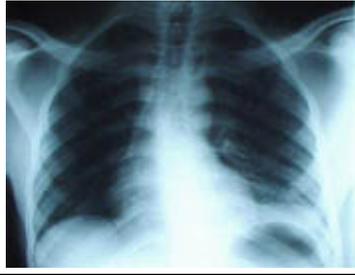
Note: 1 foot = 30,48cm  
1 inch = 2,54cm

## After Day-Case Surgery

Before discharging a patient, be sure that "**LEAP-FROG**" is established:

- L:** Lucid, not vomiting, and cough reflex established
- E:** Easy breathing and easy urination
- A:** Ambulant without fainting
- P:** Pain relief + post-op drugs dispensed and given. Does he understand dose?
- F:** Follow up arranged
- R:** Rhythm, pulse rate, and BP checked one last time. Is trend satisfactory?
- O:** Operation site checked and explained to patient
- G:** GP letter sent with patient or carer. He *must* know what has happened!

# Radiology



## Dense Bones

A dense area in a conventional bone x-ray can have various causes. First of all make sure that this is not due to any technical circumstances or a twisted exposure of the patient. So if asked about the causes of pathologic dense bones remember that:

**“Regular Sex Makes Occasional Perversions Much More Pleasurable And Fantastic”**

- R:** Renal osteodystrophy (first there's primary bone destruction, but then reactive sklerosis)
- S:** Sickel-cell disease (due to ineffective O<sub>2</sub>-transportation there's hyperplasia of the bone marrow and therefore reactive bone proliferation, this new bone though is less stable)
- M:** Myelofibrosis
- O:** Osteopetrosis
- P:** Pyknodysostosis (recessive inherited disorder with generalised osteosklerosis and abnormal growth of already existing bones)
- M:** Mastocytosis
- M:** Metastasis (especially from breast or prostate tumours)
- P:** Paget's disease
- A:** Athletes (here this finding can be physiologic)
- F:** Fluorosis (eg County Valais, Switzerland)

## When Bone Has Disappeared

For any bubbly or lytic bone lesion in a conventional x-ray remember **“FEGNOMASHIC”**. This will help you to think of all important causes possible:

- F:** Fibrous dysplasia
- E:** Enchondroma, eosinophilic granuloma
- G:** Giant cell tumour
- N:** Non ossifying fibroma
- O:** Osteoblastoma
- M:** Metastasis and myeloma
- A:** Aneurysmale bone cyst
- S:** Solitary bone cast
- H:** Hyperparathyroidism (so called 'brown tumour')
- I:** Infection
- C:** Chondroblastoma, chondromyxoid fibroma

## Metastasis In The Bone

Here's a nice little phrase encompassing all important tumours that like to metastasise to the bones:

### "Kinds Of Tumours Leaping Primarily To Bone"

- K:** Kidney
- O:** Ovarian
- T:** Testicular
- L:** Lung
- P:** Prostate
- T:** Thyroid
- B:** Breast

## The Salter Classification

For traumatology and radiology it is very helpful to have this classification present. As you might forget it after a while (like we all tend to forget things we don't use regularly), maybe this mnemonic will help you keep it a little longer in your mind. In Salter Classification think of "**SALTR**"

- S:** Slip of physis
- A:** Above physis
- L:** Lower than physis
- T:** Through physis
- R:** Rammed physis

## Interstitial Lung Disease

This mnemonic encompasses at least 80-90% of interstitial lung disease seen in clinical practice.

It's the word "**SHITFACED**":

- S:** Sarcoidosis
- H:** Histiocytosis X
- I:** Idiopathic pulmonary fibrosis
- T:** Tumour (lymphangitic)
- F:** Failure
- A:** Asbestosis (and other dusts)
- C:** Collagen vascular disease
- E:** Extrinsic allergic alveolitis (eg farmer's lung)
- D:** Drugs

## Anterior Mediastinal Mass

Here's the famous five **T's**, representing common conditions which can produce an anterior mediastinal mass seen in a conventional chest x-ray pa/lateral.

- T:** Thymoma
- T:** Teratoma
- T:** Thyroid tumour/goitre
- T:** Terrible lymphoma
- T:** Tortuous vessels

## Middle Mediastinal Mass

It's the "**HABIT5**" to keep in mind:

- H:** Hernia, Haematoma
- A:** Aortic aneurysm
- B:** Bronchogenic cyst/duplication cyst
- I:** Inflammation (sarcoidosis, histoplasmosis, coccidiosis and tuberculosis)
- T5:** 5 tumours (lung, lymphoma, leukaemia, leiomyoma, lymph node hyperplasia)

## 'Pneumonic' For Cardiophrenic Angle Mass

"**Fat PAD**" will remind you of five possible conditions to think of:

- Fat:** Fat (easy ey!)
- P:** Pericardial cyst
- A:** Adenopathy/Aneurysm
- D:** Diaphragmatic hernia

## When Lungs Become Honeycombed

There are various causes for so called honeycomb lungs. It has to do with "**BIG HIPS**":

- B:** Bleomycin
- I:** Idiopathic
- G:** Granulomas
  
- H:** Histiocytosis X
- I:** Interstitial pneumonia
- P:** Pneumoconiosis
- S:** Sarcoidosis



## Gynaecology & OBSTETRICS

### **Dangerous Situations During Pregnancy**

In obstetrics the most common causes for maternal death are listed in the German word "**BEIL**" (meaning axe), or "**LIEB**" (meaning nice):

- B:** Bleeding
- E:** Eclampsia
- I:** Infections
- L:** Emboli in the Lungs

### **When Hellp Means Help**

Pregnancy induced hypertension is a complex of symptoms of which the cause is not fully understood yet (immunologic, disturbed prostaglandin metabolism, Mg-deficiency?). Especially teenage pregnancies and elderly primigravida are in danger. It is more often in diabetes, multigravida and rhesus-incompatibility, too. One special form of pregnancy induced hypertension is the **HELLP**-syndrome:

- H:** Haemolysis
- EL:** Elevated Liver enzymes
- LP:** Low Platelets

### **Prolonged Birth**

There are various causes for a prolonged birth, which means an opening of the cervix < 1cm/h. The reasons are listed in **the 5 P's**:

- P:** Passenger too big
- P:** Passage too small
- P:** Power too little
- P:** Pain too big
- P:** Patience too little

## Evaluating The Newborn

The newborn's vitality is evaluated right after birth by using the score from Virginia Apgar (from 1953). A score is given for each sign at one and five minutes after the birth. If there are any problems with the baby an additional score is given at 10 minutes. A score of 7-10 is considered as normal, while 4-7 might require some resuscitative measures, and a baby with **APGARs** of 3 and below requires immediate resuscitation. The **APGAR**-score after 5 minutes is the prognostic most important one:

- A:** Activity/muscle tone (absent=0, arms or legs flexed=1, full activity=2)
- P:** Pulse (absent=0, <100=1, >100=2)
- G:** Grimace/reflex irritability (no response=0, grimace=1, sneeze/cough/pulls away=2)
- A:** Appearance/skin colour (blue-grey=0, normal except for extremities=1, normal over entire body=2)
- R:** Respiration (absent=0, slow/irregular=1, good/crying=2)

## Dangerous Infections During Pregnancy

To memorize infections which can harm the embryo (until the 12<sup>th</sup> pregnancy week) or the foetus, think of the English word "**TORCH**" or the German "**STORCH**". Most of these infections are asymptomatic and can only be diagnosed by antibodies, microbiology or culture:

- S:** Syphilis
- T:** Toxoplasmosis
- O:** Others (Listeriosis, Hepatitis B, Chicken pox)
- R:** Rubella
- C:** Cytomegaly
- H:** Herpes

# Internet Links @

[www.imd.ie](http://www.imd.ie) : Website of the Irish Medical Directory, especially helpful when searching for international medical journals. Click on "International Medical Links of Repute".



IMD

[www.bmj.com](http://www.bmj.com) : The British Medical Journal

[www.thelancet.com](http://www.thelancet.com) : The Lancet

[www.nejm.com](http://www.nejm.com) : The New England Journal of Medicine

[www.smw.ch](http://www.smw.ch) : The Swiss Medical Weekly. New: All articles in full text free online. National and international news provided.

[www.jwatch.org](http://www.jwatch.org) : The Journal Watch, another resource for all sorts of journal information



[www.admin.ch/bag](http://www.admin.ch/bag) : Official Site of the Swiss Federal Department of Health

[www.who.org](http://www.who.org) : Website of the World Health Organisation

[www.medscape.com](http://www.medscape.com) : Subscribe here for latest publications, case presentations, medical news, doctor's homepage and, and, and

[www.nlm.nih.gov](http://www.nlm.nih.gov) : Official MEDLINE Resource Centre



UNITED STATES  
**National Library of Medicine**

[www.vh.org](http://www.vh.org) : The online Virtual Hospital

[www.reutershealth.com](http://www.reutershealth.com) : Reuter's clinical information online with various links.



[www.cponline.gsm.com](http://www.cponline.gsm.com) : Clinical pharmacology online. Registration necessary



[www.biomednet.com](http://www.biomednet.com) : Subscribe here to join this internet community for biological and medical researchers

**BioMedNet™**

The Internet Community for Biological and Medical Researchers

[www.bhia.org](http://www.bhia.org) : British Healthcare Internet Association



[www.fmh.ch](http://www.fmh.ch) : Official website of the Swiss Medical Association (FMH)



**FMH**

Verbindung der Schweizer Ärztinnen und Ärzte  
Fédération des médecins suisses  
Federazione dei medici svizzeri  
Swiss Medical Association

[www.vsao.ch](http://www.vsao.ch) : Official website of the 'Vereinigung Schweizerischer Assistenz- und Oberärzte'

[www.pipeline.com/~djoyce/medical/home.html](http://www.pipeline.com/~djoyce/medical/home.html) :

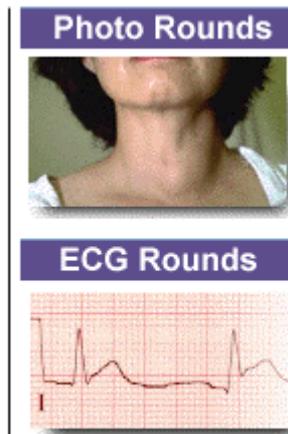
This is a huge collection of all sorts of medical links, which have to do with emergency medicine. You'll find your way to organisations, journals, sites (anaesthesia, cardiology, critical care, orthopaedics, general medicine, neurology, paediatrics...).

[www.virtualer.com](http://www.virtualer.com) : Virtual ER. Online emergency cases, ECG's, murmurs, procedures, x-rays, tests and much more.

[www.hin.ch](http://www.hin.ch) : Swiss Health Info Net. Hospitals, doctors, news, links and internet-café.

[www.MDchoice.com](http://www.MDchoice.com) : Lots of medical information, health news, interactive education (photo rounds\*, ECG rounds\*, cyberpatient simulator) , Links to journals and books and more!

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[www.evimed.ch](http://www.evimed.ch) : Interesting information all around evidence based medicine.