

2015

# The ultimate OTC notes

By Zahara Multani

Bismillah: In the name of God...

Hi guys! I hope you find these notes as useful as I did.

- All OTC topics are included. (up to date in summer 2015.)
- This is my own work. Information was collated from OTC text books, OTC guides (C+D), regional course material, SPCs and other sources, to make my own set of notes.
- I personally found these so useful and didn't have to look at a single textbook after I made these.
- Some information may differ from text books, e.g. age restrictions. I found the text books were a bit outdated, so I had to use SPCs to confirm.

## General advice to pre-reg's:

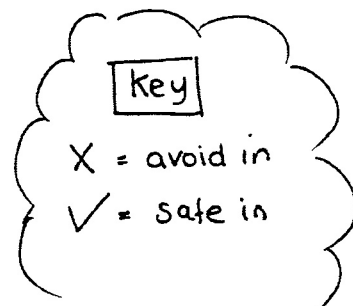
- Don't forget to learn doses for common OTC medicines + ages. E.g. paracetamol  
Ibuprofen
- POM to P switches: memorise these word for word from the RPS quick reference guides  
Do not summarise. All info on those guides is very important!  
The POM to P medicines not covered in RPS QRGs, I have covered in  
these notes.  
e.g. naproxen

Best wishes. Good Luck! Please remember me in your prayers.

Zahara

xx

P.S. I am not claiming that this information is 100% accurate, so please do not sue me or facebook cuss me if you find any errors (hopefully there shouldn't be any!) 8-)



# Travellers diarrhoea

- Bacterial cause
- Results from consumption of contaminated food/drink
- Can result in severe + prolonged cases of diarrhoea
- To prevent use strict hygiene measures

**Treatment:** would generally refer (see OTC section on diarrhoea). But would sell:

Dioralyte sachets	GSL	Adults + children - all ages	<b>Prepare with:</b> • 200ml water • once reconstituted Store in fridge drink within 24hrs Best sipped every 5-10mins
Dioralyte <u>Relief</u> sachets	GSL	Adults + children > 3 months	

\* DO NOT Sell loperamide: It will slow gut down: Bacteria inside for longer

# Malaria

- Ask patient
  - where they're visiting
  - Length of visit
  - Age
  - other medicine
  - check patient not epileptic, pregnant or suffer from psoriasis.

• counsel patient: report if you fall ill within 1 year particularly 3 months

**Prophylaxis:**

Medicine	Age	dose	Avoid in	S-E	drug interactions	Pregnancy B/f
[P] chloroquine	All	310mg once weekly 1 wk before + 4 weeks after	X Epilepsy	GI Visual N&V Seizures Psoriasis	Amiodarone ciclosporin Digoxin	OK
[P] Proguanil		200mg once daily 1 wk before + 1 wk after	X Renal impairment	Diarrhoea	none	OK (But says folic acid supplementation)
DEET 20-50%	>2 months	Apply after Sunscreen		skin irritation		
Picaridin 20%	>2yrs					



# Headache

- Primary (no serious underlying cause)
- Secondary (underlying injury or disease)

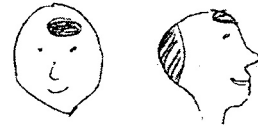
**Refer:**  
 > Says symptoms first time  
 Sudden + severe onset  
 Increasing in severity  
 Localised to one particular area  
 > 2 weeks (lasted for)  
 Rash and/or fever  
 Recent head trauma  
 first time headache  
 < 12 yrs (meningitis - stiff neck)  
 > 15 days / month

**Trigeminal neuralgia:** nerve pain, cheeks, jaws, lips gums  
 unilateral common in women

**Meningitis:** generalised with fever, neck stiffness  
 Kernigs sign - pain behind both knees when extended  
 Purpuric rash (purple) - difficulty placing chin on chest  
 Temp > 38.9°C

## Tension-type headache

- Last 30 mins → 7 days in duration. **Bilateral**
- Pt will have history of recent headaches
- Pain = generalised, non throbbing - tightness or weight pressing down on head
- Gradual in onset + worsens progressively throughout day
- Causes stress + posture



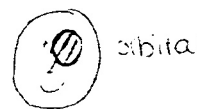
Treatments → Analgesics: NSAIDs, ibuprofen, aspirin  
 → Doxycycline sedating antihistamine  
 → Levamisole: applied directly to head: cooling sensation

**Migraine** → with aura (classical) Aura = 5min - 1hr. visual or neurological. Ugnis = visual. neurologist = pns + accdt.  
 → without aura (common)

- few hrs up to 3 days. Average length = 24 hrs
- Phase 1: Prodrome phase: hrs or days before headache
- Phase 2: Headache with / without aura
- Phase 3: After. Patient feels lethargic + drained. Drug absorption hindered by non emptying
- Pain = unilateral. Moderate - severe. May become diffuse
- physical activity tends to intensify the pain
- photophobia + phonophobia (sounds) => dark quiet room.
- Trigger factors: Alcohol (red wine), mature cheese, chocolate, caffeine, citrus fruits  
 Hormonal changes: menstruation, HRT, oral contraceptives, menopause  
 Sleepless nights, having a lie in.

## Sinusitis

localised, orbital  
 unilateral, dull pain/pressure under eye  
 Treatment: decongestants, analgesics



## cluster headache

- men > 30 yrs occurs some time each day 10mins → 3hrs
- + conjunctival redness, lacrimation, nasal congestion on pain side of head nausea absent eye drooping

**REFER:** because Sumatriptan: not licensed for cluster headaches  
 OTC

# Treatment

**Migraine treatment** ① Try paracetamol + aspirin/ibuprofen first  
 ② see below

Medicine	Age	Side effects	Caution/Avoid	Pregnancy/Bf	Interactions
<p>must be officially diagnosed [P]</p> <p><b>Migraleve PINK</b></p> <p>Paracetamol 500mg                      codeine 8mg                      Bicyclonolol 6.25mg</p> <p>Amnistomine &gt; 10yrs</p> <p>2x pink at onset                      2x yellow every 4hrs PRN.                      *max 2 pink                      6 yellow</p>	>12yrs	Dry mouth Sedation Constipation  (driving)	Glaucoma Prostate enlarged  * max 3 days continuous * Max 2 pink } 24hrs 6 yellow }	Avoided in 3rd trimester	Increased sedation with alcohol, opioids, anxiolytics, antidepressants
<p><b>Migraleve yellow</b></p> <p>Paracetamol 500mg                      codeine 8mg</p>	>12yrs				
<p>Relief of migraine + throbbing headaches                      Symptom mimetic → causes vasoconstriction</p> <p><b>Midrid</b> [P]</p> <p>isometheptene 65mg                      paracetamol 325mg                      2 initially then 1 each hr for 3 hrs PRN. Max 5/24hrs</p>	>12yrs	Dizziness Rash	x severe cardiac, hepatic or renal impairment x severe HTN, glaucoma Short term loss of control of HTN and diabetes Max 5 in 12hrs	Avoid	x MAOIs x B-blockers x TCAs (Antihypertensives)
<p><b>Buc castem M</b> [P]</p> <p>Prochlorperazine                      (must be officially diagnosed)</p>	>18yrs 2 tabs BD	drowsiness dizziness dry mouth	x Parkinson's disease x epilepsy x glaucoma	Avoid	Increased sedation
<p>SEE RPS QRG</p> <p>- max 2 tabs in 24hrs                      - second tab only if response to first and more than 2 hrs elapsed                      - second tab not for same attack                      - AFTER headache starts                      - NOT during prodrome or aura</p> <p><b>Imigran recovery</b> [P]</p> <p>Sumatriptan 50mg</p> <p>Treatment with/without aura                      diagnosed established patient</p>	>18yrs - 65yrs	Dizziness Drowsiness Tingling Heaviness SOB	x prophylactic use x previous MI, IHD, TIA x PVD x cardiac arrhythmias x HTN x seizure history x hepatic/renal impairment x atypical migraines	Avoid	MAOIs Ergotamine

## Recommend

soluble / orodispersible formulation to maximise absorption before it is inhibited by gastric stasis (recovery phase of migraine)

**Buccal tabs advice**

- place between upper lip + gum
- allow to dissolve. will form gel like substance after 1-2hrs
- 3-5hrs to completely dissolve
- shouldn't be chewed, crushed or swallowed

## Medicine overuse headache

Rebound headache ↑ risk if simple analgesics taken for >15 days/month or compound >10 days/month over 3 months

Some risks with all analgesics: NSAIDs (low) → Aspirin + paracetamol (medium) → codeine (high best)  
E.g. Co-codamol

**Signs**

- Headache every day
- persists throughout day
- relieved by analgesics then wears off
- worsens with physical/mental exertion
- nausea, anxiety, restlessness, irritability or depression

# Hay fever

Summer + travel

Hay fever → histamine (sneezing, itching)  
 → prostaglandins (nasal congestion)

**REFER**

- NO history
- Breast feeding / pregnancy
- If symptoms don't improve in 1 wk
- worrying symptoms e.g. wheezing fever

Medicine	Age	max duration	onset	Extra info.
Corticosteroid nasal sprays	Ⓟ ≥18yrs	3 months	up to 2 weeks to reach max benefit	ineffective for acute symptoms
Topical decongestants e.g. oxymetazoline 0.1% (xylometazoline)	≥12yrs (≥6yrs = 0.05%)	7 days (Rebound congestion)	Fast acting	For relief NOT prevention
Topical antihistamines -Azelastine (Rhinolast)	>5yrs	4 weeks		
Pseudoephedrine oral decongestant	>12yrs			Refer: Diabetes Thyroid high BP Heart disease pregnancy
		Dose		
Loratadine	>2yrs	2-12: <30kg 5mg OD >30kg 10mg OD		
Cetirizine	>2yrs	2-6: 2.5mg BD 6-12: 5mg BD 12-18: 10mg OD		
Acrivastine	>12yrs	12-18: 8mg TDS		
Chlorpheniramine	>1yr Syrup >6yr tabs	1-2: 1mg BD 2-6: 1mg every 4hrs 6-12: 2mg every 4hrs 12-18: 4mg every 4hrs		

# Bites + stings

Bites = <sup>injection of</sup> saliva, local allergic reaction

Stings = injection of mild poisons - causing pain + inflammation

} Redness, swelling, itching

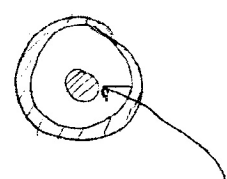
Anaphylaxis signs → swelling, itchy skin  
→ difficulty breathing  
→ pain/itching  
→ Nausea, rash

Medicine	Age	duration / dose	Extra information
① <b>Corticosteroids</b> Hydrocortisone 1% cream	≥ 10yrs	max 7 days	X pregnant / breastfeeding X face or anogenital regions X broken skin
② <b>Antihistamine</b> Mepyramine cream e.g. antihistamin cream	> 2yrs	BD / TDS <b>max 3 days</b>	useful if cannot use steroids <b>prolonged use = sensitisation</b> X broken skin X near eyes / mouth
Chlorpheniramine Soln / tabs	> 1yr	< 2yrs = BD > 2yrs = QDS	
③ <b>Antiseptics</b> Chlorhexidine cetrimide Pan-done-iodine Chloroxylenol			
④ <b>Ammonia Soln</b>		Roll on pen Apply to bite.	Bites are v acidic in nature Neutralises acid from sting relieves pain + itching

## Lyme disease

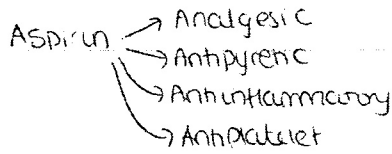
caused by tick (woodland + moorland, may → sept)  
needs to be safely removed  
need to monitor signs of illness  
Tick passes bacterium into human, leading to infection

- Signs → flu-like symptoms:  
→ Headache  
→ stiff neck  
→ muscle pain  
→ Swollen glands  
→ extreme pain / tiredness  
→ Nausea vomiting diarrhoea  
→ Characteristic rash: a large red circular rash, spreading from bite area (bull's eye) pinpoint



# Pain

NSAIDs inhibit Cox preventing production of prostaglandins (involved in pain + inflammation)



Medicine	Age	max dose / duration	Extra info
① <u>NSAIDS - ORAL</u> Naproxen <b>P</b>	15-50yrs	MDD = 3 tabs 3 days per cycle max pack = 9	only for primary dysmenorrhoea
{ counsel on photosensitivity { Voltarol gel <b>P</b>	<u>Topical NSAIDs</u>	>12yrs 3-4 times a day	ADRs rash / itching GI irritation very occasionally
	>14yrs	3-4 times a day max 4 times / 24hrs	<b>max 7 days</b>
② paracetamol	≥3 months ≥2 months (post-immunisation)	60mg: 2 doses	✓ elderly ✓ stomach problems
③ opiates <b>P</b> codeine <b>P</b> dihydrocodeine	>12yrs >12yrs	max 12.8mg in OTC preparation  max 7.46mg in OTC preparation	{ PILS and labels <u>must</u> state ① short term use only (3 days max) ② Treatment for moderate acute pain ③ can cause addiction or overdose headache if used >3 days consecutively

Drug misuse => accidentally being used in wrong way

Drug abuse => Drug purposefully used in wrong way

not for cold symptoms or mild

# Musculoskeletal injuries

**Sprain** Joint, ligaments, more painful (pain, swelling, bruising, restricted movement)

**Strain** muscle, supporting tendon (pain, muscle spasm, muscle weakness)

Heat treatments should not be used for the first 72 hrs following injury

If used after 72 hrs

> 72 hrs: heat rubs will decrease stiffness + improve mobility

X Heat, X Alcohol, X Running, X Massage (↑ blood flow ↑ inflammation)

**GSL Rubefacients** (counterirritants) - <sup>Include</sup> derivatives of nicotinic + salicylic acids. ↑ blood flow = vasodilation

- Wintergreen

- Menthol

- Camphor

- Capsaicin

- Turpentine oil

volatile oils work in same way to rubefacients

Can be used in all patient groups

Counterirritants

(DO NOT apply to broken skin)

Reduce perception of pain ⇒ mode of action

Deep heat

Heat rub

> 5yrs

Radian B

> 6yrs

**Bruise**: X massage X heat treatment

# Thrush

## Thrush

Candida albicans

Symptoms: itching, soreness + curdy white discharge (shouldn't be colored or malodorous)

### Refer

first time sufferers

women under 16 and over 60 (thrush is unusual in these age groups)

Strong smelling discharge (suggests bacterial vaginosis or trichomoniasis)

Diabetics (suggests poor control hyperglycemia enhances production of albican organisms)

Pregnancy (topical agents safe but not licenced)

women with unusual bleeding, pain on urination, pelvic pain, sores/blisters in genital area

> 2 attacks in past 6 months. i.e. this is 3rd attack. (Re-current thrush) - underlying issue doesn't get better in 7 days

Medication	Legal status	Age	Pregnancy/BF	extra information
<p>① Imidazoles</p> <p><b>Clotrimazole</b></p> <p>2% cream: Thrush itching 2-3 times daily</p> <p>10% cream: internal single use</p> <p>500mg pessary single use</p> <p>1% cream: male partners</p>	<p>cream + cream cream + pessary</p> <p>Combi = <b> GSL </b></p> <p>Rest are <b> P </b></p>	16-60	<p>OK, BUT</p> <p>REFER if pregnant</p> <p>Treat if BF</p>	<p>creams + pessaries containing clotrimazole may damage latex condoms and diaphragms. use alternative form of contraception</p> <p>- Single dose</p> <p>- Taken at anytime of day</p> <p>- Side effect: GI disturbances</p> <p>- Drug interactions not relevant with single dose but</p> <p>→ Amphotericin → ciclosporin → rifampicin → phenytoin</p>
<p>② <b>Fluconazole</b></p> <p>150mg capsule</p>	<p><b> P </b> or <b> POM </b></p> <p>AS combi = P</p>	16-60	<p>X pregnancy</p> <p>X Breast feeding</p>	<p>- Single dose</p> <p>- Taken at anytime of day</p> <p>- Side effect: GI disturbances</p> <p>- Drug interactions not relevant with single dose but</p> <p>→ Amphotericin → ciclosporin → rifampicin → phenytoin</p>

### Symptom resolution

burning, soreness or itching should disappear within 3 days

if no improvement after 7 days then see G.P.

### Preventative Advice

Avoid tight fitting clothing (warm moist environment trigger for thrush)

use simple non perfumed soaps (affect pH balance of vagina)

live yogurt: inhibits growth of candida - but not much evidence

# Dysmenorrhoea

- ① **Primary** → no underlying health problem (most common in adolescents & early 20's, rarely severe < 3 days, starts within 24hrs of menses)
- ② **Secondary** → underlying health problem (around > 30yrs, starts few days before menses onset) e.g. fibroids, PID, endometriosis & IUDs

## Refer

Secondary dysmenorrhoea

Severe pain

Signs of systemic infection (fever, malaise)

vaginal bleeding in post-menopausal women

Pain during intercourse, irregular periods

Pain that increases at onset of menses

women > 30yrs with new or worsening symptoms

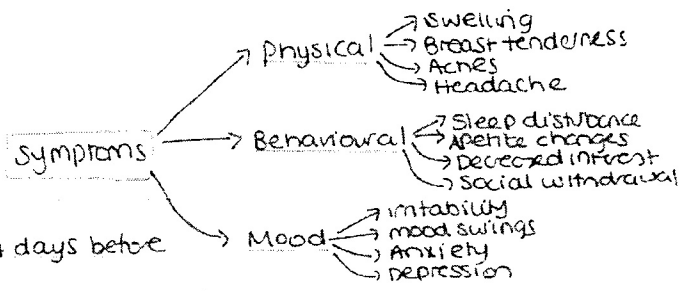
Medicine	Age	Dose	Side effects	Avoid in	Pregnancy / BI	Drug interaction
① <b>NSAIDS</b> Ibuprofen	> 12	400mg TDS	GI	asthma GI history	NSAIDS OK in 1st	Lithium Anticoagulants metoprolol SSUs
<b>P</b> Naproxen 250mg (teminal ultra) (pack of 9 tabs)	15-50	DAY 1 2 tabs initially then 1 tab 6-8 hrs later max 3 tabs in 24hrs  DAY 2+3 1 TDS  MAX 3 DAYS				
→ <b>② Antispasmodic</b> Hyoscyne		could not find a product licenced for P-D	Dry mouth Secondary constipation	x glaucoma x thyroid x heart probs	Avoid	Other anticholinergics e.g. TCAs
<b>P</b> Alverine (spasmonal) 60mg	> 12yrs	1-3 times a day		x paralytic illas x intestinal obstruction		

Reduce muscle contractions

licenced for Primary dysmenorrhoea



# PMS



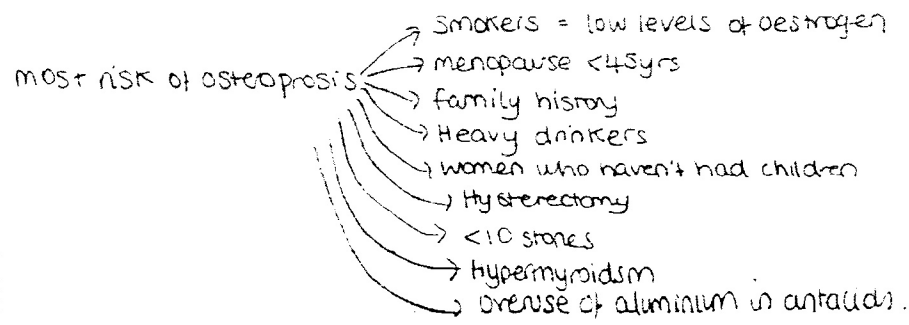
- Experienced 7-14 days before
- Disappears a few hrs after onset
- Most common in 30s and 40s

Medicine	Side effects	Drug interactions	Avoid in	Breast feeding
pyridoxine vit B6	Toxicity > 500mg/day	L-DOPA alone		OK
calcium	Nausea flatulence	None	Renal impairment	OK

- St John's wort - low depressed mood. ~~X~~ antidepressants ~~X~~ SSRIs ~~X~~ Biotin. SE:
  - weight gain
  - constipation
  - dizziness
  - dry mouth
  - sensitivity to sun
- Evening primrose oil - helps ease breast pain + discomfort. does interact with drugs
- Ammonium chloride - Acidifies urine. has diuretic effect. helps water retention + bloating
- Magnesium - improve symptoms of mood changes
- Agnus castus : some evidence of helping breast pain

# Menopause

Oestrogen keeps calcium bonded to bone. without calcium leeches out of bone



- Treatment : REFER: these can only be prescribed by a doctor
- HRT : replace oestrogen
- Bisphosphonates : bind calcium to bone

- Advice
- Diet: dairy, green leafy, nuts, soya curd
  - Aerobic exercise
  - Reduce intake of caffeine, smoking, alcohol + spicy foods - may trigger symptoms such as facial flushing

- Contraception
- spermicide contraceptives should be used with condoms or caps
  - lubricants e.g. baby oil, petroleum => may damage latex condoms.

(Dysuria = painful urination  
 Dyspareunia = pain during sexual intercourse  
 Nocturia = need to wake + urinate)

# CYSTITIS

- Inflammation of bladder + urethra
- Half of cases caused by bacteria (E-coli most common, or staph). or can be non-bacterial
- most common in women. uncommon in men - men have a longer urethra = greater barrier
- Symptoms: soreness, increased urgency + frequency of urination, burning sensation start suddenly

## Refer

- children <1yrs (cystitis less common)
- Men (could indicate serious infection)
- Diabetes - may indicate poor diabetic control
- Duration >7days - risk patient has pyelonephritis.
- Haematuria
- Patients with associated fever + flank (kidney: upper abdomen + back) pain.
- pregnancy - cystitis can lead to kidney problems. can lead to miscarriage
- Immunocompromised (pts at risk of upper UTI = immunocompromised, diabetic, pregnant, elderly)
- vaginal discharge (suggests vaginal infection)
- If symptoms don't improve within 24hrs of treatment \*
- women >60/70yrs

## major diseases - refer

pyelonephritis: kidney infection  
 STD: chlamydia, gonorrhoea  
 symptoms like cystitis but more gradual + longer lasting  
 pyuria - pus in urine present

Atrophic vaginitis: oestrogen deficiency  
 Thinning of lining = At risk of cystitis  
 - lubricating product or HRT

↑K<sup>+</sup> levels →

NB:  
 C + D  
 indicates that these are  
 GSL

Medicine	Age	side effects	Avoid in	Pregnancy/BF	extra info
① Potassium citrate Effercitrate Cytosporin	>6 >6	GI limitation ↑K <sup>+</sup>	x ACEI x K <sup>+</sup> sparing diuretic x spirolactone x intestinal ulceration	ok	Taste unpleasant - dilute with water Refer if <1yrs (2 day course)
② Sodium citrate Cymalon cystenme Canesten basis	Adults only TDS for 3days	↑Na <sup>+</sup>	x Heart disease x High BP x kidney problems x diabetes x low Na diet		consult doctor if symptoms persist after 48hr course (2 day course)

- Advice →
- increase fluid intake - flushes bacteria out
  - Avoid alcohol / caffeine (makes urine acidic)
  - Hygiene methods - wipe front → back
  - cranberry juice does offer some protection: But avoid with warfarin

\* Does contraindicate referral point above but it is licenced for a 2-day course. You should still refer if no improvement in 24 hrs (according to all text books)

# Coughs

Acute = < 3 weeks

Chronic = > 8 weeks

Refer:

> 3 weeks

Recurring

SOB / wheezing

pain on breathing

coloured sputum - haemoptysis  
 night cough in children (asthma)

## Conditions

Upper airways cough syndrome: sinus or nasal discharge. non-productive, worse at night  
 Accompanied by allergy symptoms e.g. sneezing, nasal block.

Group: 3 months - 6 yrs. commonly follows on from URTI - occurs late evening / night  
 Bark-like. > 48hrs refer. or if stridor (high pitched breathing - turbulent air flow)

Chronic bronchitis: coughing up sputum on most days for 3 consecutive months over 2 yrs  
 Starts as non-productive then becomes mucopurulent productive cough  
 > 40 yrs. Smokers. Men.

Asthma: worse at night cough. non-productive. other symptoms: chest tight, wheeze

Pneumonia: non-productive, painful (24-48hrs) rapidly becomes productive. Sputum = RED  
 Worse at night. other symptoms: ↑ fever, malaise, pleuritic pain. REFER.

Medicine induced cough / wheeze: ACEI, NSAIDs, B-Blockers

TB: chronic cough. sputum = mid-severe with haemoptysis: malaise, fever, night sweats, weight loss

GERD: cough when lying down. ↑ cough reflex sensitivity

Colours: sputum

Rust = pneumonia

Pink tinged = LVF

Dark red = carcinoma / ruptured blood vessel

clear + white (mucoid) = normal

yellow / green / brown = infection

Nature: sputum

Smells = Bronchiectasis or lung abscess

stinky. blocks airways  
 Thick white / yellow = Asthma

Thin + frothy = LVF.

Croup info

**VIRAL**

Air borne (droplets)

Thick mucus  
 worse when lying down

- fever - other cold / flu symptoms

**A+E** if child unusually sleepy, struggling to breathe

**Blueness** around nose + nails

incline to swallow

Steam inhalants **NOT** recommended

# Cough treatment

	Name of medicine	Age	side effects	Avoid in	Pregnancy / BF
Thins mucus so its easier to cough up PRODUCTIVE → ①	Expectorants [P]				
	Guaifenesin Ipecacuanha + Ammonium chloride	>6yrs	-	-	OK
Suppress cough reflex in brain. DRY NON PRODUCTIVE opioids → ②	Suppressants - opioid [P]				
	Codeine	>18yrs	sedation/constipation	Case in asthma	Avoid. No BF.
	Pholcodine Dextromethorphan	>6yrs >6yrs	possible sedation "	" "	" "
- Dry up secretions - Drowsiness help to suppress cough → ③	Antihistamines [P]				
	Diphenhydramine	>6yrs	dry mouth sedation constipation	x glaucoma x prostate enlargement	Manufacturers advise avoid
Also - glycerin - Honey >1yr (risk of bacterial infection) → ④	Demulcents				
	Simple linctus	>12yrs			OK
	Simple linctus paed	>1yr			
Bronchial cough, wheezing, breathlessness symptoms of asthmatic bronchitis → ⑤	Theophylline [P]	>12yrs	hypokalaemia Nausea vomiting GI intolerance diarrhoea Tachycardia CNS stimulation convulsions	X BPH X hyperthyroidism X HTN X cardiac disease X ↓K+	Avoid

## Cough + cold medicines

Caution in young children

Suppressants (Antitussives): Dextromethorphan + pholcodine, codeine (>18yrs)

Expectorants: guaifenesin + Ipecacuanha

decongestants: ephedrine, oxymetazoline, phenylephrine, pseudoephedrine, xylometazoline

Antihistamine: Brompheniramine, chlorpheniramine, diphenhydramine, doxylamine, promethazine, triprolidine

6-12yrs = 2nd line ⇒ 5 days max duration  
(please refer to NEM)

# Cold

- Symptoms
- Headache/tiredness
  - runny nose
  - Sore throat
  - Sneezing
  - cough + congestion
  - high fever

last for 2-14 days

Cold	Flu
occurs any time throughout the year	Winter months
onset = 1-2 days	onset = More abrupt (hrs)
	Symptoms
	marked myalgia
	chills, malaise
	loss of appetite

**Refer**

- Acute sinusitis - doesn't respond to decongestants
- >14 days
- Middle ear pain - not helped by meds
- flu symptoms
- vulnerable groups like elderly
- Rash
- symptoms worsened by exercise
- neck stiffness

Name	Age	Side effects	Avoid / caution	Pregnancy / Bf	Drug interactions
① Antihistamines	>6yrs	Dry mouth sedation constipation	Glaucoma Prostate enlargement		↑ sedation: alcohol, opioids antidepressants
② Systemic Sympathomimetics phenylephrine 12mg (GSL) pseudoephedrine	>12yrs >6yrs = 30mg liquid (max 5 days) >12 = 60mg	insomnia, tachycardia	x MAOI x monoamine oxidase (hypertensive crisis) x B-blockers x TCA	Pregnancy - avoid Bf - OK	M - medicines D - diabetes T - hyperthyroid BH - BP, heart drugs P - pregnancy
③ Topical Sympathomimetics oxymetazoline xylocaine (amine child) 0.05%	>12yrs >6yrs	local irritation	Can be given to most pts with heart disease, HTN, hyperthyroidism but systemic absorption possible so avoid MAOIS	After 1st trimester	MAX 5-7 days (rebound congestion)

+ ephedrine Short acting TDS

P

GSL

e.g. Vicks

long acting

GSL

child = P

Indication = 1st degree + Sinusitis

- MAX 720mg (12 tabs) = pseudoephedrine. 120mg = ephedrine. can't sell at same time

- Aromatic inhalations: containing eucalyptus oil or menthol: soothes coughs + improves nasal congestion

> 3 months

- Echinacea: ↑ WBC. X Pregnancy, X Breast feeding, X HIV, X Asthma, X MS, X diabetes
- vitamin C: depleted in infection. Not enough evidence

High risk of serious illness if they catch flu

- > 65y's
- > 6 months: chronic respiratory disease including asthma
- care homes
- care of elderly person or disabled
- CHD
- diabetes
- kidney/liver disease
- immunosuppression

# Sore throat

Mostly viral or streptococcal (swollen glands, fever, absence of cough)

## Refer

Dysphagia: (laryngeal + tonsillar carcinoma)

> 2 weeks

Marked tonsillar exudate + ↑ temp + swollen glands

ADR: captopril, carbimazole, cytotoxics, neuroleptics (lozapine), penicillamine, sulphasalazine  
Sulphur-containing Abx.

Skin rash.

Glandular fever: viral, kissing disease, pharyngitis, fever, fatigue

Medicine	Age	Side effects	Avoid in	Pregnancy/BF	Extra
Local anaesthetics					
① Lidocaine	>12yrs	sensitisation		OK	} max 5 days
② Benzocaine	Lozenge >3yrs Spray >6yrs	"		OK <del>but not orally</del> 30 wks	
NSAIDS					
<6yrs = mg/kg dose → Benzocaine	Rinse >12yrs spray >6yrs	Rinse may cause stinging		Every 1 1/2 - 3 hrs PRN. OK but not after 30 wks	} pregnancy
Flurbiprofen	>12yrs		X peptic ulcers	Avoid	
Antiseptics					
Tyrosinacin	>3yrs				
Benzalkonium chloride					
Cetylpyridium chloride					
Hexylresorcinol					

**ACNE**

- Mild = non-inflammatory comedones
- moderate = many inflammatory spots not confined to face. pain. scarring
- severe = same as moderate but includes nodules (raised >1cm) cysts  
upper back + chest

### Refer

- Moderate - severe acne
- occupational acne
- OTC treatment failure
- >25yrs for first time
- Rosacea: inflammatory disease of skin follicles. >40yrs, recurrent flushing + blushing of nose + cheeks  
irritation + blepharitis present in about 20%.
- >2 months of treatment
- uncontrolled or sudden worsening  
<12yrs: acne uncommon in this age

### Medicine: Benzoyl peroxide: First line

- mild - moderate acne
- Higher strengths e.g 10% should be avoided: erythema + irritation
- Potent bleaching effect - clothes
- Keratolytic (break down keratin). Antimicrobial
- S.E = redness + peeling
- Dose = Apply thinly once daily or alternate days for 1 week. increase to BD  
increase strength after 2-3 wks
- If redness + irritation doesn't reduce after 7-10 days then return to pharmacy.

### Nicotinamide: Anti-inflammatory

- Derived from vit B3
- Reduces redness + swelling
- Freederm gel or Nicam = Brand names

### Advice:

- use regularly for about 2 months to see improvement
- wash with gentle cleanser BD
- oil free products

# SCALP + SKIN

↙ P. ovale fungal infection

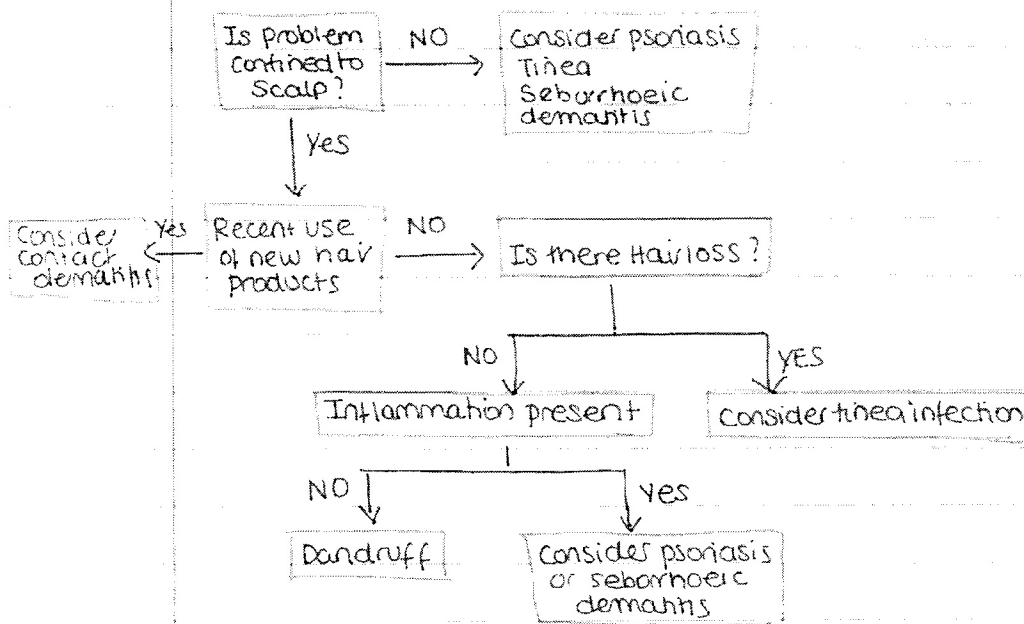
↘ increased sebum causes scaly skin to form on scalp behind ears, eyebrows + nose

## Dandruff + Seborrhoeic dermatitis

These 3 for Seborrhoeic dermatitis only

Medicine	Age	Side effects	Extra notes
Coal tar	All	Local irritation Dermatitis	can stain bairns + fabrics
Selenium (selsun) (antifungal)	> 5yrs	TWICE weekly for first 2 weeks then ONCE weekly for the next 2 weeks 4 weeks together	- can discolor gold / silver jewellery - unpleasant odour, cause discoloration of hair
Zinc pyrithione (Head + shoulder)	All	• 3-5mins TWICE weekly for first 2-4 weeks then prophylactically once every 1-2 weeks	treatment = 2-4 wk course can cause burning + may discolor hair rarely
Ketoconazole (Nizoral)			

## Flow chart to help in diagnosing



Varicose dermatitis → red freckled spots  
 → it likely to develop varicose veins: poor circulation causes it  
 → compression hoisery, Topical corticosteroids used for flare ups

## Psoriasis

Coal tar - As above

Salicylic acid - To remove plaques - Keratolytic

Dithranol - Burning + red => S.E. Purple staining: permanent

Emollients

corticosteroids - DO NOT USE: can cause deterioration



# Treatments for tinea infections

Medicine	Age	Side effects	Pregnancy/Bf	extra info
① Imidazoles 1% cream → [GSL] Bifonazole → OD at night [P] clotrimazole → canesten soln 1% [P] Powder [P] miconazole [GSL] can be [P] ketoconazole [GSL] [P] imidazole + steroid >10yrs	All	Mild burning/itch	OK	BD/TDS <u>continue 2-3 weeks</u> BD for 1 wk. continue 10 days BD for 1 wk. continue 2/3 days Max 7 days. switch to imidazole only after 7 days.
② Allyl amine Athletes foot groin infection → Terbinatine Ringworm skin (corpous) → Lamisil once >18yrs	>1yrs Lamisil once >18yrs	Redness/itching	OK	cream = OD / BD 1-2 weeks spray/gel = OD for 1 week
Athletes foot + groin infection → ③ Tolnaftate Mycil Tinadum	-	-	OK	BD for 7 days after cleared
Athletes foot → ④ Undecenoates mycota GSL	-	-	OK	BD. continue for 7 days after
Athletes foot → ⑤ Griseofulvin GSL + P	>1yrs	max 4 weeks	Avoid	OD. max 3 sprays/24hrs Continue for 10 days after max 4 weeks

**REFER**

- < 8yrs
- > 70yrs
- Diabetes
- Circulatory disorders
- Large number
- Skin cracked or bleeding
- Warts on face
- Warts on genitals

viral, caused by HPV occur in multiples  
 Hands, face, feet, on genital

is a wart: found on foot sole little black dots

keratolytic + antiviral

# Warts + verrucas

Salicylic acid, lactic acid + silver nitrate => skin dissolving agents

Glutaraldehyde + formaldehyde => dry out wart

podophyllin => Acts by preventing cell division (teratogenic)

SELF LIMITING.

Name of medicine	Age	side effects	Pregnancy lbf	Extra information
① Salicylic acid compound w Bazuka Extra Strength occlusal verrugen Wartex	> 7yrs > 2yrs	local skin irritation	OK	Apply daily May take up to 12 weeks Avoid mucus membranes, cuts
② Salicylic acid + Lactic acid Bazuka Duplex Duofilm Salactol Salatac	- - - - - - - -	local skin irritation	OK	Don't apply on healthy skin
③ Glutaraldehyde Glutrol	-	local skin irritation skin stained brown	OK	keratolytic, kill virus TWICE daily. not once like salicylic acid Removal can take up to 12 wks
④ formaldehyde veracur	-	-	Avoid	same as above
⑤ silver nitrate Avoca	-	local skin irritation	-	Protect surrounding skin

**Bazuka FOR:**  
 Warts, verrucas, CORNS, CALLUSES

**Difference between Corns/callouses and Warts/verruca**

**LOCATION**  
 -> Lesions on EOP or between toes = corn  
 -> plantar surface = verruca

**PAIN**  
 -> CORN: pain relieved by taking off footwear or relieving friction  
 -> verruca: pain is there irrespective of footwear

**APPEARANCE**  
 -> Corn = white or yellow thick skin  
 verruca = black dots (capillaries)

**HISTORY**  
 -> corns = patients will have a long history of foot problems / tight fitting shoes.

Other treatments

Cryotherapy (freezing): using liquid nitrogen Destroys cells + enclosed virus may trigger immune response to virus less effective than topical liquids fortnightly application

Surgery

Duct tape: cover wart for 6 days then remove tape + soak for 10 mins. reapply tape following day + continue cycle. many warts respond in 28 days.

When top layer of dead skin removed can see pointed part of core = nucleus can be painful



# CORNS + CALLOUSES

**REFER**

- Difficulty walking
- impaired circulation
- < 10 diabetes
- Soft corns present

**Hard**  
 skin thick, hard lump due to friction

**Soft**  
 Between toes, painful where perspiration collects white + rubbery

Burning sensation due to nerve pressure

Some as corns but cover a large area

Difference - callous doesn't have a nucleus

foot: ball, back side of heel or hands

**Treatment**

- sock in warm water
- Allows removal with pumice stone
- or Salicylic acid lactic acid

# Chill blains, Bunions, Varicose veins

**Chill blains** : Treatment is SELF LIMITING : normally resolves after 1-3 weeks

Symptoms :

- Red skin or purple
  - Inflamed skin
  - Swelling
  - Itchiness
  - Soreness
  - Skin looks shiny
- Due to faulty blood circulation - associated with cold + damp conditions: Extreme cold + damp conditions.  
This causes a temporary paralysis of nerve endings that act on blood vessels under skin  
Results in stagnation of the blood in the tissues => congestion  
swelling  
itchiness  
soreness

- Occurs in extremities - hands + feet. Severe cases: back of legs, nose + ears
- Tight + wrongfully fitted socks + shoes can exacerbate the condition by restricting circulation
- Smoking can also make chilblains worse - due to ~~restricted~~ <sup>REDUCED</sup> blood circulation

**REFER** if > 3 weeks

**TREATMENT** : symptom relief + improving circulation

Products usually contain combination of

- Menthol - relieves itching + improves circulation
- camphor
- Methyl salicylate
- capsaicin
- oleoresin

counter-irritants  
Reduce perception of pain  
↑ blood flow to area / vasodilation

## Bunions

- Inflammation of big toe joint
- Area hardens + fluid form (bursal)
- Pain, difficulty walking
- Straightening toe is only an option in very early / mild case
- Referral to podiatrist necessary
- Pain + inflammation can be relieved by topical analgesics such as Ibuprofen

## Varicose veins

- Due to poor circulation in legs
- veins become swollen + inflamed. develops into raised blueish purple lines on calves / thighs
- Complication: Ankle swell, inflamed / irritated skin, night cramps, ulceration
- Risk factors: Overweight, family history, standing still, pregnancy, female, poor diet
- Compression hosiery : forces blood up the legs  
Greater pressure or force at ankle - encourages correct blood flow.

class I : pregnancy + early varicose  
class II : medium varicose + prevention of ulcers  
class III : severe varicose veins and ulcers.

} measure early in morning

# Pubic lice (crabs) + scabies

## Pubic lice (crabs)

- Pubic hair, around anus, underarms, chest face
- Transmitted by close contact, usually sexual contact
- Hugging or kissing someone with infected beards
- Symptom = itch
- Treatment = malathion (insecticide) to whole body. <sup>leave for 1hr</sup> Repeat after 7 days
- Permethrin >18yrs. lycleer dermal cream. Leave for 24 hrs (OTC guide)
- <sup>leave on for 24 hrs. Repeat after 7 days (MCA)</sup>

## Scabies

- caused by a mite. Small red papules, change into vesicles
- Transmitted via close contact (holding hands, hugging)
- Burrows in skin. can be seen as thin blue grey lines. commonly on hands + wrists
- Areas: wrists, hands, finger webs, elbow, penis, buttock, breast.
- infants: all areas can be involved
- Allergic reaction to the mite's faeces occurs 2-6 weeks after. causing symmetrical rash
- mite can survive for 24 - 36 hrs away from human skin.
- machine wash all clothes + bedding at temps >50°C OR enclose in plastic bags until mites die.
- highly contagious: stay off school until first treatment is completed

### IMPORTANT

- Itch due to allergy. May persist for several weeks - 2 months AFTER EFFECTIVE treatment.
- Does not mean treatment failure.

• Do not have bath before (increases systemic absorption)

- Refer** → secondary infection of skin: may need abx  
 → severe symptoms. institutional outbreaks  
 → suspected dermatitis herpetiformis (itchy clusters: papules, vesicles. Hand involvement rare) gluten intolerance involved

**Advice**  
 Bathing not recommended for 24hrs after or straight before

< 2yrs medical supervision required

now not recommended due to irritant properties

medicine	Age	side effects	pregnancy/Bf	application + notes
<u>Permethrin</u> (Lyclear cream)	>2yrs >6 months for head lice treatment	Burning, stinging	OK	full tube to whole body leave on for 8-12hrs wash. Repeat after 7 days
<u>Benzyl benzoate</u>	>12yrs	Burning, irritation	OK	Apply then repeat next day
<u>Malathion</u>	>6months	Stup. Irritation rare	OK	Apply. leave on for 24hrs Repeat after 7 days

- Crotamiton - for itch >3yrs. Apply for 3-5 days
  - Topical corticosteroid - reduce itch + inflammation
  - Sedating antihistamines - itching due to allergy  
 licensed for allergic itch - this would be classed as allergy
- } BNF p. 836

REFER: > 50 yrs + symptoms for first time  
 No warning symptoms  
 unexplained weight loss

**Duodenal ulcers**

- ① Blood in vomit / stools
- ② causes waking
- ③ relieved by eating then recurring
- ④ gnawing hunger like pain

**Gastric (peptic) ulcers**

- worse AFTER eating
- Bloating
- nausea
- weight loss

Stomach lining irritated.  
 Symptoms:  
 Bloating  
 gnawing  
 stomach cramp  
 wind

**Dyspepsia**

umbrella term

5 main conditions include

- ① indigestion = non ulcer dyspepsia / functional dyspepsia
- ② GORD (heartburn)
- ③ Gastritis
- ④ Duodenal ulcers
- ⑤ Gastric ulcers

Symptoms: bloating, dull pain, flatulence (wind), excess acid, feeling full, nausea + vomiting

REFER < 12yrs

Gnawing, sharp or stabbing is unlikely to be dyspepsia

Pain / discomfort in epigastric region

NO

consider other causes of pain

below umbilicus is not dyspepsia  
 behind breastbone = heartburn (sternum)

YES

Alarm symptoms

YES

Refer

- (Gastric cancer)
- Anaemia
  - weight loss
  - Anorexia
  - Dark stools (GI bleed)
  - Dysphagia
  - vomiting blood (ulcer or cancer)
  - > 50yrs

Taking regular NSAIDs

YES

Rule out ADR  
 Refer to GP

Taking regular NSAIDs

NO

Pain radiates to jaw / neck / arm

YES

Refer CVS cause

Reflux non produce chest pain, neck, shoulder pain  
 Angina: intense crushing pain: jaw + arm  
 MI: crushing pain + Nausea, SOB, sweating, irregular pulse

NO

Pain wakes patient at night

YES

Refer possible duodenal ulcer

Duodenal ulcer: pain relieved by eating

NO

Pain worse when stomach is FULL

YES

Refer possible gastric ulcer

Pain experienced when food presses against ulcer

NO

Heart burn major symptom?

YES

Reflux: treatment with alginate for 2 weeks

Treatment failure

vague pain with belching / bloating

YES

Treatment with antacid for maximum of 2 weeks

Treatment failure

REFER

Irritation of oesophagus

**Heartburn**

Symptoms

- pain upper chest
- burning back of throat
- taste of acid in mouth
- burning rising up throat
- stabbing pain
- excess acid

REFER

- If symptoms occur > 2/week
- Same as dyspepsia above
- < 12yrs

worse after eating, or when body is horizontal (lying down), lifting bending

Smokers, heavy drinkers, fatty foods, chocolate, coffee, pregnancy (baby pushing internal organs upwards)

# Treatment Heartburn

Refer <12yrs

Classification	Medicine	Age	side effects	Avoid or Drug interactions	pregnancy/Bt	notes.
<p><b>Calcium abuse</b> Milk alkali syndrome ↑ Ca in blood → ↑ in absorbable alkali leading to kidney failure + death.</p> <p><b>Aluminum abuse</b> ⇒ osteomalacia (soft bone) ↓ PO<sub>4</sub><sup>3-</sup> + Ca children = rickets</p>	① Antacids	>12yrs	gas Milk-alkali syndrome constipation Rebound secretion	Renal problems HTN, Heart disease E/c preparation Bisphosphonates Tetracyclines quinolones Imidazoles Porphyrin porphyrin peroxide <b>2hr gap</b>	OK	Take when symptoms occur expected after food Fast + short acting Fast + long acting Trisilicate = weak hydroxide long acting
	<p>② Alginates</p>	>12yrs		Renal failure Consult Dr. if low Na <sup>+</sup> /K <sup>+</sup> diet	OK	After food + meds
<p><b>Ranitidine Zantac 75mg</b> not prevention Relief of heartburn only</p> <p><b>GSL</b> Pack 12 tabs max 6 days MDD 2 per day</p> <p><b>P</b> Prevention of heartburn as well as relief MDD 300mg (4 tabs) max treatment = 2 weeks</p>	③ H <sub>2</sub> antagonists	>16yrs	Abdominal Pain Diarrhoea Constipation Headache		Avoid	
<p><b>P</b> 2 x 10mg in morning max 4 weeks</p>	④ PPIs	>18yrs	Headache (common) diarrhoea constipation N&V Asterixis ↓ Mg.	Warfarin Azole antifungals clopidogrel Diazepam fluvastatin abiraterone	Avoid	metabolised by CYP450
<p><b>GSL</b> Short term relief of reflux symptoms on 2 days per week licensed &gt;18yrs 20mg OD max 2 weeks MDD 20mg max pack = 14 tabs</p>	Esomeprazole 20mg tabs (nexium)	>18yrs	"		Avoid	24 hr relief 1-4 days for full effect
<p><b>P</b> Short term relief of reflux symptoms 20mg OD max 4 weeks See doc if no improvement in 2 weeks</p>	Pantoprazole Pantoloc control 20mg	>18yrs	"		Avoid	May take 3-7 days for full treatment

- Medicines that causes dyspepsia
- Alcohol
  - ABX - macrolides, tetracyclines
  - ACEI
  - Bisphosphonates
  - Metformin
  - Membranole
  - Nitrates
  - oestrogens
  - steroids
  - Theophylline

# Constipation

**REFER**

- Pain splitting (anal fissure)
- >40yrs with sudden bowel habit change (cancer)
- >2 weeks (underlying cause)
- Tiredness (check for anemia or thyroid probs)
- Children > 7 days
- Blood in stools (pregnant women)

① Establish patient's current bowel habit compared to normal

- Constipation can be caused by
  - ↳ medicines
  - ↳ neurological disorders (MS, Parkinson's)
  - ↳ metabolic + endocrine disorders (diabetes, hypothyroidism)
- Alternating with diarrhoea = IBS
- Chronic constipation = > 6 weeks
- Refer adults > 14 days. Refer children > 7 days

Classification	Medicine	Age	Acts in	Side effects	extra notes
	<b>① Stimulant</b>		<b>TAKE AT NIGHT</b>		
GSL	a) Senna 7.5mg 20N	>12yrs	6-12hrs	Abdominal pain	Generic tabs >8yrs Syrup >6yrs. Colours urine red/yellow
P	b) Bisacodyl (Colcolax tabs)	>10yrs	10-12hrs suppositories 20-60mins	"	Don't take milk, antacids, PPIs Suppositories >4yrs EC Prep (enteric coated)
P	c) Sodium picosulfate	>10yrs	6-12hrs	"	
	d) Glycerol supp	>infants	15-30mins		<1yrs = 1g mould 1-12yrs = 2g mould >12yrs = 4g mould.
	<b>② Bulk forming</b>		<b>MORNING + EVE BD</b>		
GSL	Ispagula (Fybogel)	>6yrs	12-36hrs	flatulence + pain	Adequate fluid to avoid obstruction Do not take immediately before bed
GSL	Sterculia (normacol)	>6yrs	12-36hrs	"	Take after meals.
GSL (select)	Methylcellulose	>7			✓ Pregnancy - safest
	<b>③ Osmotic</b>		<b>TWICE DAILY - BD</b>		
P	Lactulose	>1yr	48hrs	Oral crises. Bad taste flatulence Abdominal pain Colic	15ml BD: Adults. Not absorbed from GIT produces low faecal pH discourages ammonia-producing organisms caution: lactose intolerance
P	Macrogol (Movicol)	>12yrs paed >2yrs	48hrs	(Paeds: Avoid CV impairment Renal impairment)	1-3 sachets OD in divided doses CV impairment must 2 doses/hr
GSL	magnesium hydroxide (Epsom salts)	Avoid	48hrs		Before breakfast or bedtime
	<b>④ Softener + Stimulant</b>		<b>upto TDS</b>		
GSL	Picosate	>12yrs	1-2 days	Abdominal cramp rash	Paed soln >6months

↑ volume of stool stimulates peristalsis

↑ water in bowel

**PREGNANCY**

- ↳ ① diet + lifestyle
- ↳ ② Bulk-forming (safe)
- ↳ ③ osmotic (lactulose)
- ↳ ④ stimulant (senna or bisacodyl)

**Diarrhoea**

- Acute = < 7 days
- Persistent = > 14 days
- Chronic = > 1 month

Gastroenteritis = inflammation of intestinal wall, very common. Especially in children  
 Caused by virus, or bacteria

If bacterial: nausea + vomiting also present

Acute = self limiting. Symptoms resolve 2-4 days (bacterial), longer (viral)

**REFER**

- Sudden change in bowel habit > 50yrs
- Recent travel (travellers diarrhoea)
- Refer children + elderly > 2/3 days or signs of dehydration
- Refer Adults > 4 days
- Blood in stools
- Steatorrhea (fatty shit) - malabsorption syndrome

**Referral children**

- < 1yr refer if > 1 day
- < 3yrs refer if > 2 days
- > 3yrs refer if > 3 days

classification	Medicine	age	Side effects	Drug interactions	Pregnancy/Bf	extra notes
<b>GSL</b>	ORT (Diamyte)	> 3 months	Sip slowly over 5-10 mins Adults: 2 litres in first 24hrs		OK	Boiled + cooled for children < 1yr Store in fridge 24hrs. Not fizzy/flavoured
<b>GSL</b> Acute diarrhoea + in IBS after diagnosis by doctor in adults > 18yrs	loperamide	> 12yrs > 18 (IBS)	Abdo pain N&V Tiredness Dry mouth Drowsiness	MAX 6 in 24hrs (12mg) 2 initially then 1 after each loose motion	OK	Acute diarrhoea
<b>P</b> for indigestion heartburn stomach nausea diarrhoea	Bismuth (pepto bismol)	> 16yrs	darkening of stool + tongue	Quinolone ↓ BA 2hr GAP - Avoid aspirin (salicylate) x diabetes, gout	Avoid	<b>DARKENING OF STOOLS + TONGUE</b>



# REFER

- Blood in stools (IBD)
- Fever
- N&V
- children < 16yrs (unusual)
- > 4yrs + recent change in bowel habit
- Steatorrhea (malabsorption)

# IBS

- Symptoms
- flare ups associated with life events
  - pain below belly button (left)
  - Alternating constipation + diarrhoea
  - Bloating feeling + trapped wind
  - relieved by passing wind

Twice as common in women than men

20-30yrs = common. < 4yrs. > 45 = rare.

• Foods: spicy + oily can trigger

• stress can also trigger

• NICE says clinicians should diagnose with IBS if patient has following for 6 months

- Abdo pain
- Bloating
- change bowel habit

• IBS tends to be episodic. patient will have history of bouts

• Flare ups associated with life events

• Treatment: to treat alternating constipation/diarrhoea + relieve muscle spasm pain

Constipation: Bulk forming + stimulant laxatives

Diarrhoea: Loperamide

Classification	Medicine	Age	Dose/ Side effects	Drug interactions	Avoid in	Pregnancy
	<b>① Antimuscarinics</b>					
<p><b>GSL</b> relief of GIT spasm associated with medically confirmed IBS</p> <p>Max dose 20mg MDD = 80mg Max pack = 24</p>	Hyosine BUTYLbromide 10mg tabs	> 12yrs	1 TDS. up to 2000 dry mouth + constipation	Antihistamines Antidepressants (TCA)	Glaucoma prostate enlarge	Avoid
	Dicyclanide (in Kolanticon gel)		max dose = 10mg MDD = 60mg			
	<b>② Muscle relaxants</b>					
<p><b>P</b> for IBS MD = 135mg MDD = 3 tabs (405mg) Not for IBS MD = 100mg MDD = 300mg.</p> <p><b>GSL</b> medically confirmed IBS contains peanut oil.</p>	Mebeverine 135mg tabs	> 10yrs	1 three times/day 20 mins before food Risk of allergy			OK
	Peppermint oil (Colpermin)	> 5yrs	1-2 TDS for 1-2 weeks up to 3 months S.E = heart burn	Do NOT take immediately after food	xpeanut/ soy allergy	OK pregnancy Avoid BF (can decrease milk production)
<b>P</b>	Alverine (Aldimonal)	> 12yrs	1-2 1-3 times/day S.E: Rash, nausea, Headache			OK
<b>P</b>	Elyogel - mebeverine (sachets)	> 12yrs	TDS			

**Haemorrhoids** → Pain + some bleeding - should be fresh blood  
 → mucus discharge  
 → Swelling leads to itching  
 → Dull ache which worsens when passing motion

Anal fissures  
 Whereas anal fissures are tears of the sensitive mucosal lining of anus (cause blood pain)

Swelling of veins in lower part of large intestine i.e. rectum + anus  
 Swelling + pain due to reduced blood flow - causing blood to pool  
 can occur at any age  
 rare < 20 yrs

**REFER**

- > 3 weeks
- Patients > 40yrs + persistent change in bowel habit (sinister)
- unexplained rectal bleeding
- patients who have to reduce haemorrhoids manually
- Severe pain when pooing (anal fissure)
- Blood mixed in stool (sever GI bleed or IBD)
- fever (IBD)
- > 5-7 days + treatment not worked
- < 20yrs old. < 12yrs MUST be referred

**Risk factors**

- constipation
- overweight
- Sedentary
- Heavy lifters
- pregnancy
- genetics
- varicose vein sufferers

**Treatment:** to reduce swelling + itching

- Suppositories for internal piles
- creams + ointments for both internal + external

USE MORNING AND NIGHT AND AFTER BOWEL MOVEMENTS

**Local anaesthetics** → Reduce pain + itching  
 → short acting  
 → can cause allergy + irritation  
 → Max 14 day use

- Lidocaine
- Benzocaine
- Amococaine

**Corticosteroids** → Never recommend hydrocortisone 1% cream for anogenital  
 → reduces swelling + inflammation  
 → Maximum 7 days  
 → > 18yrs.

Hydrocortisone X fungal or viral conditions. corticosteroids alone will make them worse

**Astringents** → Reduce swelling by forming protective coating  
 → protect area when pooing thus helping to remove pain + itching  
 → little evidence

- Allantoin
- Bismuth
- Zinc oxide
- Peru balsam

# Thread worms

## Thread worms (Parasitic) : Helminths

- most common helminth infection = threadworm
- 5 - 15mm in length
- only affects humans. cannot be spread from animals
- very common. Eggs are highly contagious - can survive for several weeks outside body hence can be picked up from toys, pens, books

Symptoms → itching around anus particularly at night (caused by female laying eggs)  
→ from tickling sensation to acute pain  
→ can observe threadworm in stool to confirm diagnosis  
→ may wake/keep child up

### Refer

- Broken / weeping skin
- when medication fails
- Pregnancy / Breast feeding
- children < 2yrs
- secondary infection due to <sup>scratching</sup> itching
- Return from tropical region

### Hygiene measures

- wear close fitting underwear change every morning
- wear gloves at night
- Bath on waking
- wash hands + scrub under nails
- discourage nail biting
- Avoid shared towels

### Environment hygiene

- vacuum
- wet dust
- wash toys
- change + wash clothes daily
- change + wash bed linen

### Round worms

- fever
- cough
- dyspnoea
- urticaria
- diarrhoea

## Treatment = Anthelmintics

- Recommended for all members of household even if only one person showing signs
- common for re-infection - Repeat dose after 14 days to ensure that any eggs matured or eradicated

**Mebendazole**: Stops worm from absorbing glucose: causing death to worm

**P**

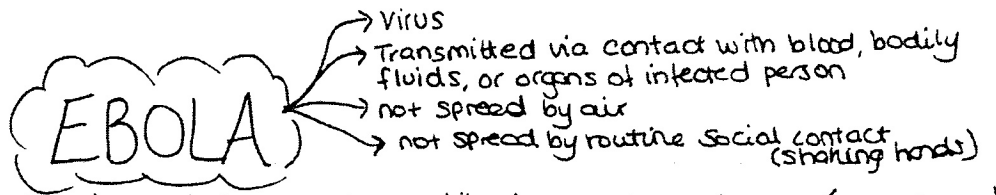
> 2yrs

Dose = ONE tablet or 5ml single dose. REPEAT after 14 days

Side effects: abdominal pain, diarrhoea, rash

Avoid in pregnancy. ok in BF

Interactions: phenytoin + carbamazepine (decrease mebendazole levels. may need higher dose)  
Avoid concomitant use with mebendazole (SJS risk)



Has the patient returned from guinea, Liberia or Sierra Leone (West Africa) or cared for an individual in the last 21 days



Symptoms: fever  
Headache  
Sore throat  
profuse/intense diarrhoea + vomiting  
general malaise



suspect Ebola



isolated in side room, contact infection specialist



Refer if patient

- on other antihistamines
- has glaucoma
- Abusing
- pregnant / Bf
- child.

- Treatment only licenced for temporary sleep disturbance
- Abusable - Beware of frequent requests

	Dose	extra info
<p><b>P</b></p> <p>Promethazine (sominex) 20mg tabs</p>	<p>20mg ON</p>	<p>max 7 days Long duration effects will persist next day</p>
<p><b>P</b></p> <p>Diphenhydramine 25mg tabs (Nytol)</p>	<p>25mg ON MD = 50mg</p>	<p>≥ 1yrs Short duration</p>

# EAR

## Refer- Earwax it

- Dizziness + tinnitus (inner ear problem)
- pain originating from middle ear
- fever + general malaise in children
- Trauma related deafness
- foreign body
- OTC failure

## Ear wax

- Symptoms
- difficulty hearing
  - pain, (in severe cases)
  - Tinnitus (noise/ ringing in ear)
  - Blocked feeling
  - Temporary deafness (especially after submerging in water)

## Treatment

medicine	Age	side effects	dose	Extra notes
olive oil		irritation of ear canal		nut allergy 2 drops BD - 7 days
Arachis (peanut) oil (cerumol)			5 drops BD/TDS for up to 3 days	< 5yrs medical diagnosis + supervision
Almond oil (earex)		earex	4 drops BD for 4 days	
camphor oil (earex)				
Dowsate (waxol)			max 2 nights	
urea hydrogen Peroxide (earex + otex)			5 drops once / twice daily for 3-4 days (don't plug ear)	
Sodium bicarbonate			BD / TDS for max 3 days	
Glycerin (earex advance + plus)	> 1yrs		3-6 drops. leave for few mins then rinse out with luke warm water. max 4 days	

Help to soften impacted ear wax inserted via dropper or spray put cotton wool.

loosens ear wax by releasing bubbles of oxygen into the wax helping to disperse it sensation can be felt + heard by patient so must be warned.

- Advice:
- Do not use cotton buds, fingers or other objects to try and remove wax because it will push wax further down, increasing build up + damaging
  - Any trauma can cause acute pain
  - Swimmers: advise to use ear plugs to stop water entering ear canal

## Ear infections

Otitis media = middle ear infection

common in children because of shape of growing eustachian tube

- Symptoms
- pus
  - fluid
  - inflammation inside middle ear

most cases clear up in 72hrs without need for treatment other than pain relief

Routine use of antibiotics no longer recommended

### Chronic: media

Glue ear: chronic otitis media. Occurs after long-term build up of thick / sticky fluid causes hearing loss. REFER

## REFER

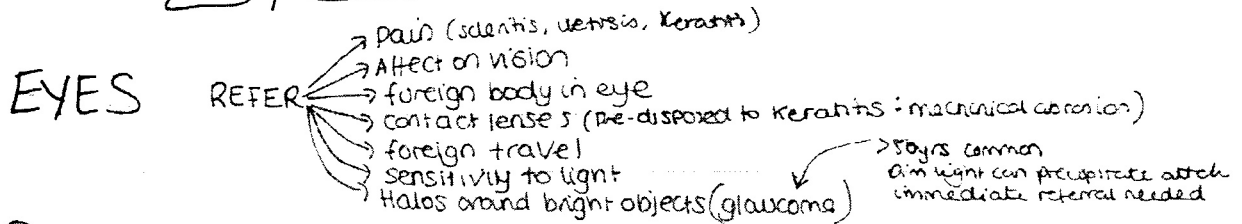
- Severe pain
- > 3 days
- discharge
- Hearing loss
- Tinnitus

Choline Salicylate (earex plus) > 1yr.

Acetic Acid  
• mild cases of otitis externa  
• Acts as antifungal + antibacterial  
• > 12yrs. max 7 days

Otitis externa: Bacterial or fungal infection affecting the ear canal. common in children  
Common in swimmers: too much water => strips protective ear wax => gets  
Symptoms: Pain, itching, loss of hearing, discharge

# EYES



**Allergic conjunctivitis**: caused by allergy. Symptom of hayfever

- redness + itching caused by histamine release from mast cells
- Eye appears red + blood shot + overproduction of tears
- will affect both eyes at the same time: coupled with itchy eyes. NOT gritty

Treatment	Age	dose/ side effects	Interactions	Pregnancy	extra.
Sodium cromoglicate		QDS		OK	X contact lenses
Antazoline (combined with OTMINE ANSHX Xylometazoline)	>12yrs	2-3 times/day max 7 days	X glaucoma X MAOIS		X contact lenses
Sympathomimetics naphazoline xylometazoline	>12yrs	2-3 times/day max 7 days	X corneal damage X MAOIS	Avoid	
Witch hazel					

Antihistamine →

Constrict blood vessels in the conjunctiva →

Slight antiseptic properties can be soothing for itchy eyes.

**Infective conjunctivitis**

- Viral (common adult. recent cold symptoms - most likely virus)
- Bacterial (sticky yellow, common in children)

① viral conjunctivitis.

② Bacterial conjunctivitis

- common with adults. Associated with URTI
- Resolves itself without treatment (weeks)
- Thin watery discharge. not sticky. Red eye (gritty)
- usually caused by adenovirus
- more common in infants + children
- Resolves quicker than viral - 7-10 days
- Thick sticky discharge. gritty eye like viral

Bacterial conjunctivitis treatment. **Treatment**

medicine	Age	dose	S.E / cautions	Pregnancy / Bf.	extra.
Chloramphenicol	>2yrs	every 2 hrs for 48hrs then every 4 hrs for 5 days Refer if no improvement in 48hrs ointment: more appropriate to use overnight QDS	Burning/ stinging. Bone marrow blood problem (femur osteomyelitis)	Avoid	X contact lenses
Propamidine (Brolene)	no age	QDS ointment OD/BD	-	Avoid	X contact lenses

refer to RPS quick reference guide.

- \* Contact lenses should not be worn until all signs + symptoms have resolved + therapy has been completed for 24hrs
- \* Bacteria can survive on the lens + re-infect the eye.

# Stye

Bacterial infection of a single eyelash follicle. Symptoms eyelid: Red, Tender, Swollen, sore + tender. Usually resolves in 3-7 days.

Treatment: Warm compress 10 minutes 3-4 times daily } Allows pus to drain away

# Blepharitis

Can be staph - anterior or large eyelash posterior inside edge of lid - meibomian glands

- Inflammation of eye lid margin. due to blocked ducts
- Symptoms:
  - edges of eyelids inflamed + red + greasy
  - Thick wim scales + crusts, flaking, loss eye-lashes
  - Bilateral
  - Itching, itching + burning of lid margins
  - dry eyes (fewer tears produced): try carbomers or hypromellose
- condition can't be cured. Symptoms can be managed
- sight rarely affected
- Severe cases may require steroid and abx treatment (fusidic gel / oxytetracycline)

## Referal points: blepharitis + styes

- chalazion (painless lump): bothersome
- inward / outward turning lower lid
- Swollen eye lids + unwell (orbital cellulitis)
- middle aged / elderly: painless nodular lesion = cancer

Treatment: Warm compress 10 mins. Diluted mix of baby shampoo. Apply with cotton bud. BP. dilute 1 in 10.

# Dry eyes

reduction in tears production or excess evaporation of fluid } causes persistent dryness of conjunctiva

- Causes
- Ageing
  - Drugs
  - Trauma
  - prolonged time between blinking (computers)
  - low humidity (air con)

Distruption of tear film leaves eyes vulnerable to infection

- Symptoms:
  - Both eyes
  - Burn, feel tired (due to ↓ tear production)
  - gritty, irritated, RED
  - itchy
  - Blurred vision
  - may be sensitive to light

## Refer

- associated dryness of mouth + other mucus membranes
- outward turning lower lid children

Stjergens syndrome: unknown aetiology - associated with rheumatic conditions elderly + more commonly in women. Associated with dryness of other mucus membranes.

Dry eye questions: Daily persistent dry eyes > 3 months? Sensation of sand or gravel in eyes? Dry eye is worsened by dry air, wind, dust, smoke

Medicine induced: Diuretics, Anticholinergics (TCAs, antihistamines), SSRIs, beta blockers, HRT (oestrogens)

P

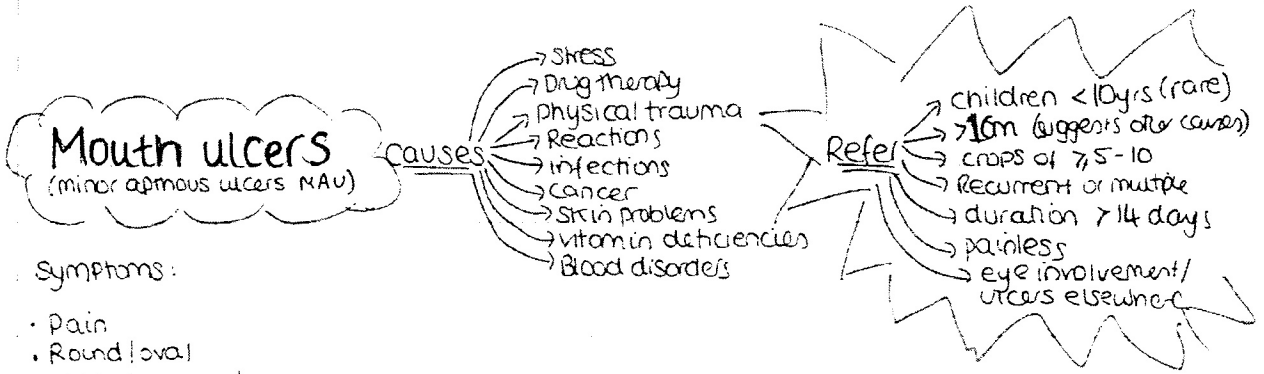
Medicine	dose	side effects	extra notes
Hypromellose Carmellose	every hr PRN	Transient stinging / burning	frequent application Soft X contact lenses
Carbomer 940	3-4 times / day		Use last ↑ viscosity Avoid pregnancy
Polyvinyl alcohol	4 times / day		X soft contact lenses
Wool fats (mixture of white soft paraffin, liquid paraffin + wool fat)	At night	Blurred vision	blur vision - use at night
Hyaluronate (hyalocare)	during day PRN		

get tears, liqui visc, viscoject →

liquifilm + sno tears →

Lacrilube + Simple eye ointment →

✓ contact lenses lubricates →



**Symptoms:**

- Pain
- Round/oval
- White/yellow/grey
- Inflamed around edge
- Inside lips / inside cheeks / floor of mouth / under tongue
- Can appear in crops 2-3

**Treatment**

	medicine	Age	dose	Side effects	extra notes
[GSL]	<u>Choline Salicylate (Bonjela)</u>	> 16yrs	1cm every 3hrs	irritate mucosa	Analgesic effect
Anesthetics	<u>Lidocaine (anbesol)</u>	> 12yrs	QDS	short duration hypersensitivity (more common with benzocaine)	care with hot food / drink
	<u>glu</u>	> 7yrs	PRN		
	<u>Benzocaine (cordajel)</u>	> 12yrs	QDS max		
[GSL]	<u>Chlorhexidine (Corsodyl) mouthwash</u>	> 12yrs	10ml BD	Yellow staining of tongue + tooth Burning tongue Taste disturbance	
	<u>Hexendine mlw (oraldene)</u>	> 6yrs			
	<u>Cetrimide</u>	> 12yrs			
	<u>Povidone-iodine</u>				
	<u>Aminocyclidine</u>				
[P]	<u>NSAID Benzylamine</u>				
	<u>Spy Rinse</u>	> 6 or under > 12yrs	1/2 - 3hrs when required		
Local use of previously diagnosed aphthous ulcer of mouth.	<u>Corticosteroid Hydrocortisone</u>	> 12yrs	1 QDS dissolve near ulcer		
	<u>Hyaluronan</u>				
	<u>Cellulose patch</u>				Acts as barrier

**REFER**

- > 2 weeks
- Inside mouth
- Severe
- Spread rapidly over face (impetigo)
- Immunocompromised

**Cold sores**

HSV 1. Acquired early childhood. Remains latent until triggered (menstruation, stress, sunlight, cold) *Herpes infection*

**Symptoms**

- pain
- fever
- blisters. Weep first then scab
- some place each time
- starts with tingling.

• Impetigo: itchy red patch, inflamed vesicles, crust. Angular cheilitis: cracked corners of mouth fissured + red doesn't itch or crust over

- [GSL] ← Aciclovir - can be used in all patients. **ASAP** five times daily. 4 days min. up to 10 days
- [P] ← Penciclovir - > 12yrs: Apply 8 times/day. **ASAP** (every 2hrs waking): 4 days.
- [GSL] ← Ammonia (blissex): Apply every hr as soon as symptoms felt.
- [GSL] ← Zinc + lidocaine (lypsyl): > 12yrs. 3-4 times daily
- urea (cymex): Apply sparingly every hr



## REFER

- Diabetics (poor control)
- > 3 weeks (unlikely to be thrush)
- immunocompromised patients
- painless (especially >50)

# Oral thrush

Symptoms → sore mouth: Affects tongue, cheeks + pharynx  
→ white milk flecks on tongue  
→ inflamed red patches  
→ irregularly shaped patches  
→ painful

common in: very young (especially breast fed)  
very old  
Antibiotics  
corticosteroid inhalers

Treatment: for oral treatment of fungal infections of mouth + throat

**Daktarin** (miconazole): > 4 months. QDS after meals. continue for 2 days after cleared  
only apply to FRONT of mouth not back (cholesterol)  
can be applied to nipples.

**Hexidine** + **chlorhexidine** not as effective as miconazole.

**Angular cheilitis**: corner of mouth become sore, inflamed + cracked

- cause unknown. could have presence of yeast (candida) or Staph
- Vitamin B, iron + zinc deficiency - malnutrition due to poor diet
- Treatment: antiseptic / antitungal cream
- Doesn't itch or crust over

## Fluoride:

- Helps re-mineralisation of teeth by linking calcium + plugging holes in matrix
- interferes with bacterial growth - reduces acid rate production
- strengthens enamel
- should only be used systemically if conc in water = < 0.7 mg/L
- children < 6 yrs should not use adult fluoride toothpaste
- ↑ fluoride = mottling (discoloration of enamel) - minor white spots to yellow brown patches
- Diet advice → S14 medicines  
→ Avoid acidic foods + drinks
- Sugar free = Saccharin  
Aspartame  
Sorbitol

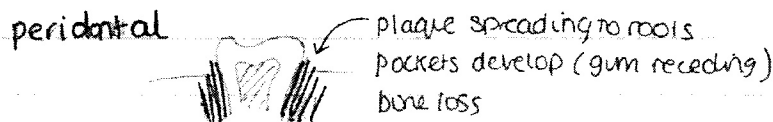
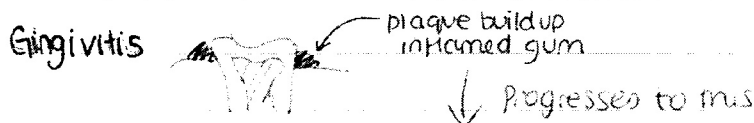
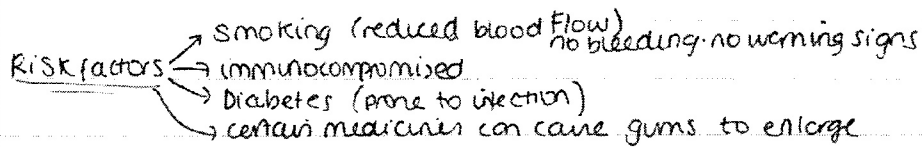
## Dry mouth (Xerostomia)

causes: radiation  
 damage/disease of salivary glands  
 drugs (antimuscarinics, antispasmodics, antidepressants + antihistamines)

Artificial saliva: contains fluoride, calcium + other minerals like natural saliva

## Periodontal disease (gum disease)

- Main cause of tooth loss > 40yrs
- plaque + chemicals spread to roots - attack gums → Bone loss
- Bleeding / inflamed gums (gingivitis): first signs → progresses to periodontitis



### Periodontitis vs gingivitis

gingivitis if untreated progresses to periodontitis

patient experiences

- Spontaneous bleeding (not with trauma only)
- taste disturbance
- Bad breath
- difficulty eating
- lose teeth.

swelling, red gums, bleed easily with slight trauma.  
 plaque visible

needs trauma

Treatment

- chlorhexidine 0.2% BD for 2 weeks. 30 min gap between toothpaste: staining
- Hexetidine (oralcare): 15ml BD / 7DS > 6yrs
- Triclosan - doesn't cause staining. Antiseptic. Helps to reduce plaque products containing xylitol can inhibit growth of bacteria.

Colson's > 12yrs antibacterial properties

# Babies

## Nappy Rash

- Form of dermatitis
- painful spotty + itchy skin
- cause = ↑ ammonia from urine, fungal infection or allergies
- Yellow cruris = bacterial nappy rash (metronidazole can septic)
- Red spots = fungal: clotrimazole

### Treatment

Barriers - Preventative measures

Zinc + castor oil : sudocrem . PRN

Petroleum jelly : unguentum M : TDS PRN

Antimicrobials - reduce bacteria + prevent secondary infection

cetrimide : cetavlex

Benzalkonium chloride : Drapolene cream

Antifungals - should be used when fungal infection - moist red rash on folds of skin with white/red pimples

clotrimazole

away from main skin involvement associated with candidiasis →

	irritant	candidal	seborrhoeic	psoriasisiform
flexure involvement	NO	YES	YES	YES
satellite lesions	NO	YES	NO	NO
other sites involved	NO	YES	YES	YES
Rash description	Red/raw	Bright red demarcated (separated, distinct)	shiny greasy	Atypical for psoriasis no scaling present within first 4 months

### Refer

OTC treatment failure  
Severe - requiring Coartocosteroids

Cradle cap infantile seborrhoeic dermatitis

Thick yellow scales + crusting on scalp.

first 3 months. resolves within a year

Salicylic acid + coal tar preparations help to remove scales

(Dentinox cradle cap shampoo)

Scales can be loosened by oil at night then shampoo morning

Don't pick off. condition ~~harmless~~ is harmless

NOT due to infection, allergy or poor hygiene

### Refer

- Spread to face  
- Skin broken/inflamed

Doesn't itchy

# children - continued

## Colic

- Excessive crying cannot be explained
- Late afternoon / evening
- frantic high pitched crying. baby brings knees to chest. fist clenching.
- bouts start 2-4 weeks of age and lasts 3/4 months. rare in >6 months.

**Refer**  
failing to put on weight  
medication failure  
over anxious patients

GSL

### Treatment

Simeticone (infacol, dentinox). Small bubbles → large bubbles

Lactase (colief). lactase enzyme: Lactose  $\xrightarrow{\text{lactase enzyme}}$  glucose + galactose

Sodium bicarbonate. (grape water) > 1 month

## Teething

- generally 6 months - 2 yrs
- Symptoms: ↑ salivation, drooling, pain, swollen tender gums, red cheeks  
sore patches around mouth + fever

**Refer**  
High fever / rash not  
confined to face

Treatment: Topical anesthetics + antiseptics

chlorocresol  
cetylpyridium

Lidocaine 0.9% **P**

Anbesol liquid: up to 8 times a day

cetylpyridinium

Lidocaine 1% **P**

Anbesol teething gel: up to QDS

Lidocaine 0.3%

cetalkonium **GSL**

Bonjela teething gel: > 2 months

Tricaine pt  
masticacia **GSL**

Ashton + Parsons infant powder > 3 months. max 6 in 24hrs

Lidocaine 0.3%

cetylpyridium 0.1% **GSL**

Calgel teething gel: > 3 months up to 6 times a day.

Lidocaine 0.3%

cetylpyridinium **GSL**

Dentinox teething gel: every 20 mins

## fever

36.5°C. fever  $\begin{cases} 0-3 \text{ months: } \geq 38^\circ\text{C} \\ 3-6 \text{ months: } \geq 39^\circ\text{C} \end{cases}$

Drink plenty  
fluids as  
they will  
sweat more

- Refer:
- < 3 months
  - fever with no other symptoms
  - > 5 days
  - Seizures: febrile
  - Tongue swelling
  - non-blanching rash
  - dehydration
  - stiff neck
  - > 39°C in children 3-6 months

**Paracetamol:**

> 3 months  
> 2 months (Post-immunised)  
pyrexia

**Ibuprofen**

> 3 months. S.E: GI disturbances

< 5 yrs. not to be used together.  
only use one if other fails

Meningitis: fever  
non-blanching rash (seen late)  
severe headache  
photophobia  
lethargy  
drowsiness  
neck stiffness

glandular: long standing fatigue  
low grade fever

# Children - continued

## Infectious childhood conditions

### Meningitis

- Bacterial or viral. viral = more common, less serious
- Peak = 6-12 months
- signs + symptoms: fever, nausea, headache, vomiting, irritability
  - ↳ infants: floppiness, dislike of being handled
  - ↳ older children: stiff neck, severe headache, photophobia
- Any child that has pain when putting chin to chest: immediately referred
- later stages: non-blanching rash: meningococcal infection
- Meningococcal C conjugate vaccine

### Chicken pox

- varicella zoster virus. Highly contagious.
- incubation period 10-20 days
- Before can include fever, headache, sore throat
- rash begins on face + scalp then trunk + limbs
- small red lumps → vesicles → crust after 3-5 days (NOT PUS UPTAKE) FILLED
- infective at all stages
- very itchy
- Secondary bacterial infection common e.g. from scratching / wounds
- re-infection ⇒ shingles

### Impetigo

- Bacterial infection: staph + streptococcus pyogenes. around nose + mouth
- mainly on face around nose + mouth
- starts with small itchy red patch of inflamed skin → vesicles → rupture + weep
- Dries to brown yellow sticky crust
- Contagious: keep off school
- Don't share towels. Cut nails.
- fusidic acid + flucloxacillin

## Measles

- RNA virus
- spread by droplet inhalation
- Respiratory complications, otitis media + pneumonia
- incubation period 7-14 days
- 3-4 days of prodromal symptoms: fever, cold, cough, conjunctivitis
- small white spots (like salt) on inner cheek + gums = Koplik spots
- Blotchy red rash around ears, trunk + limbs.
- immediate referral

Scarlett fever <10yrs. 2-8yrs 80% cases

- caused by streptococcus pyogenes
- pink red rash - chest + stomach then spreads
- sore throat
- High temperature.
- flushed cheeks, swollen tongue
- incubation 1-7 days.
- clears up in week
- Airborne droplets
- Treatment: penicillin 10 days

## German measles

- RNA virus
- close personal contact or airborne
- mild symptoms than measles
- incubation period 14-21 days
- 5 days prodromal symptoms: cold like, swollen neck glands
- Rash on face, trunk, extremities
- Rash = pinpoint + macular
- Danger: early pregnancy - foetal damage

## Mumps

- Paramyxovirus. airborne transmission
- requires close personal contact
- incubation period 16-21 days followed by fever, swelling of gland, pain opening mouth

## Glandular fever - kissing disease - salivary

- Epstein Barr virus
- 15-24 yrs. rare <5yrs
- transmitted from close salivary contact
- incubation period 4-7 weeks

- symptoms
  - fatigue
  - Headache
  - sore throat
  - swollen + tender lymph glands
  - macule rash in some pts

} can linger for many months

# Vitamins

→ fat soluble = ADEK  
 → water soluble = BC (cannot be stored in body) excreted in urine

Vitamin	Main functions	Main food sources	Toxicity
A (retinol) (deficiency rare in UK)	Health of mucosal membranes; Growth and night vision	Liver, kidney, dairy products, eggs, fortified margarine, butter, fish oils	Avoid in pregnancy; def leads to night blindness, xerophthalmia, keratomalacia and blindness
Beta-carotene	Antioxidant; possible role in cancer and CHD prevention	Dark green leafy vegs, carrots, peaches, Apricots, cantaloupe melon	
D (calciferol; cholecalciferol; ergocalciferol) Renally activated: 1,25-dihydroxyvitamin D3	Growth and development of bones by regulating calcium metabolism	Oily fish, fortified margarine, butter, eggs, fish and liver oils	Deficiency leads to decalcified bones, rickets and osteomalacia, can improve intestinal absorp of Ca and phos. synthesized in skin exposed to sun
E (alpha tocopherol)	Antioxidant; protects cells from free radical damage; possible role in CHD	Whole grain cereals, wheat germ, vegetables and oils, eggs, nuts	Rheumatism, cancer, atherosclerosis
K (menaphthone)	Blood clotting; energy metabolism	Green leafy vegetables, fruit, nuts, wholegrain cereals	Need for formation of prothrombin - essential for clotting. deficiency = haemorrhage
B1 (thiamin)	Energy metabolism, particularly carbohydrate	Bread, wholegrain cereals, fortified breakfast cereals, yeast extracts, pulses, nuts, pork, liver	Deficiency: fatigue, poor conc, poor memory, tender eye s
B2 (riboflavin)	Energy metabolism, particularly fat and protein	Milk and dairy products, fortified breakfast cereals, yeast extracts, meat, green vegetables	Deficiency causes arboflavinosis
B3 Niacin (nicotinic acid)	Energy metabolism/production	Meat, fish, nuts, fortified breakfast cereals, yeast extract, whole meal bread	Def = Pellagra = acute skin inflammation
B6 (pyridoxine)	Protein metabolism + fat	Meat, fish, nuts, fortified breakfast cereals, yeast extract, pulses	Deficiency rare but may occur with isoniazid therapy.
B12 (cyanocobalamin)	Red blood cell formation; important for health of nervous system	Meat, fish, eggs, milk, cheese, fortified yeast extract, fortified cereals	Def in patients leads to pernicious anemia (not absorbed), deg of CNS
B9 Folate ( folic acid)	Red blood cell formation; important for health of nervous system, prevention of neural tube defects	Liver and kidney, wholegrain cereals, pulses, green vegetables, yeast extract	def = megaloblastic anemia
Biotin	Protein and fat metabolism; energy metabolism	Asparagus, Spinach, Broccoli	
Pantothenic acid	Maintenance of all tissues	Liver and kidney, eggs, fish, pulses, vegs	
C (Ascorbic acid)	Wound healing; antioxidant	Citrus fruit, fruit juice, berries, potatoes, green vegetables	Aids intestinal absorp of iron from plant sources; def leads to scurvy, loose teeth

long term deficiency can cause heart failure

mood, behavior sleep, regulation of water balance  
 At risk: B6, B12, B9, C

Weakness, encephalopathy, Brown + NS - incontinence, eye movement, cerebellum, pupils, cortex, memory loss

Complex carbohydrates = starch foods: bread, cereal, potatoes, rice + pasta. provide fibre  
 Carbohydrates built from different sugars

Protein: 2 portions of oily fish per week

Fruit: 5 portions a day. one portion = apple/pear, banana, orange / large slice of melon = 2 small fruits

SUL: safe upper limit. written on side of pack. higher than RDA

Vitamin C + E: antioxidants. Control Energy (free radicals). free radicals cause oxidative damage DNA

## Minerals

- Calcium - dairy
- Magnesium - raw veg, green leafy, nuts
- Iron: to increase absorption - avoid tea + coffee with meals  
 Vitamin C assists absorption of iron
- Sodium
- Potassium. Deficiency = lack of energy: milk, bread, banana, nuts + seeds

health of bones + muscles  
 useful in elderly to prevent osteoporosis

## Trace elements

- Chromium: maintenance of blood sugar levels. cheese, kidney s, meat, broccoli
- Copper: helps body use vitamin C. found in liver, shell fish, nuts + mushrooms
- Selenium: antioxidant - protective against heart disease + cancer. liver, kidney, fish, eggs
- Zinc: important for growth + repair of body tissues - wound healing: milk, cereals, oysters  
 deficiency = ↓ sex drive, loss of taste/smell.
- Manganese: Antioxidant. Tea = biggest source. Bread, nuts, avocados

Vegetarians = removal meat  
 Vegans = no animal product inc cheese, milk, eggs  
 Alcoholics: vitamin Bs poorly absorbed

Need supplements  
 Vitamin B12 only found in animal products

$$\text{BMI} = \frac{\text{weight (kg)}}{(\text{Height (m)})^2}$$

< 18.5 = underweight

18.5 - 24.9 = healthy

25 - 29.9 = overweight

> 30 = obese

Salt = Adult < 6g  
child < 2g

### Alcohol

- small amounts (1-2 units/day), particularly red wine can reduce incidence of heart disease
- Excessive alcohol = ↑ cancer, HTN, strokes, vitamin deficiencies
- 1 unit of alcohol = 8g or 10ml of pure alcohol

$$\text{units} = \frac{\text{strength of drink (\% ABV alcohol by volume)} \times \text{mL of alcohol}}{1000}$$

- e.g. 175ml glass of wine = 2.3 units
- Half pint of beer = 1.2 units

Men = < 21 units / week  
< 4 units / ~~week~~ day.

women: < 14 units / week  
< 3 units / day.

### Smoking

- causes blood circulation problems
- ↑ in miscarriage or SIDS (or death), cleft palate

#### NRT

- Doubles cessation rates
- patch = easy: constant levels of nicotine
- Reduces withdrawal symptoms

Refer: < 12 yrs  
Severe cardiovascular disease  
Stomach ulcers  
Hyperthyroidism  
Recent heart attack / stroke

> 12 yrs. some are > 18 yrs

Side effects: GI disturbance  
Headache  
Dizziness  
Vivid dreams

Caution: Heart disease  
diabetes (monitor blood sugars more often)  
Carbohydrate metabolism affects  
• max 12 weeks  
• ✓ pregnancy, breastfeeding

Withdrawal symptoms: irritability, headaches  
conc problems  
restlessness  
sleeping difficulties

Patches: 16hr patch suitable for most patients

If craving within 20-30mins of waking then a 24hr patch should be given  
if sleep disturbances happen then switch to 16hr patch or remove before sleeping.

• SE - Sweating, palpitations, dyspnoea: reduce dose. Rotate sites due to irritation

chewing gum: Absorption reduced by coffee + fruit drinks (acidic substances)

Inhalator = single cartridge lasts 20 mins

Nasal spray = fastest absorption than all the formulations. twice an hr