

**GIT & Hepatic/Biliary**

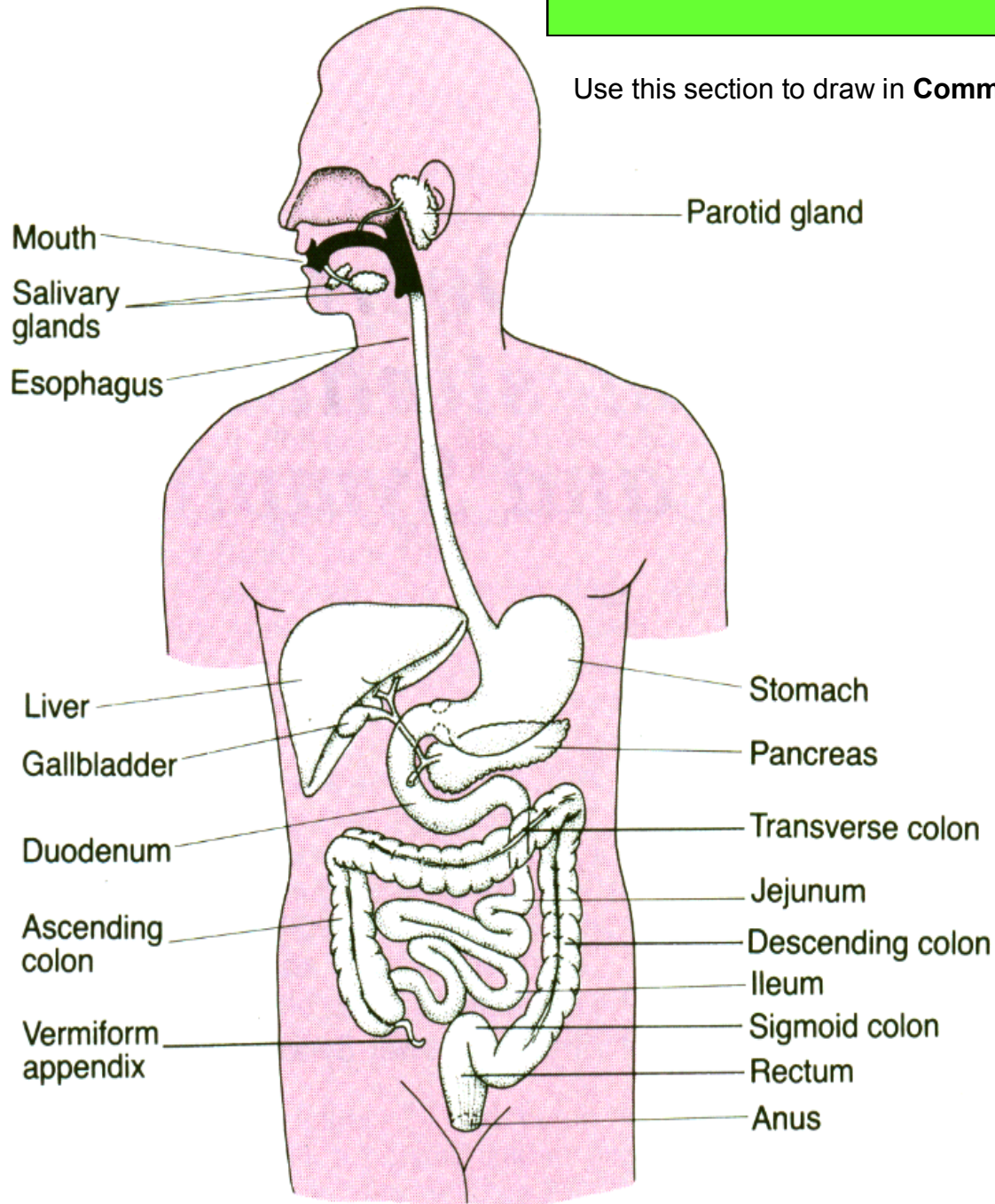
**Referral Patterns**

**&**

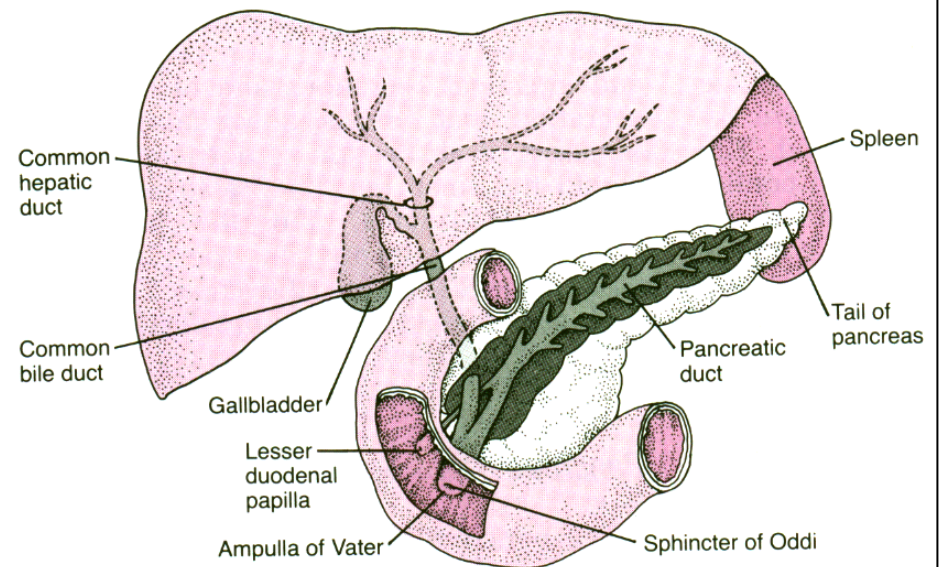
**Follow Up Questions**

# Quick Anatomy Review

Use this section to draw in **Common Pathologies** affecting the GIT & Hepatic and Billiary Systems



Notes:



# Causes Of Abdominal Pain

## Intraabdominal

### Generalised Peritonitis

Perforated viscus: peptic ulcer  
Primary bacterial peritonitis  
    Pneumococcal  
    Streptococcal  
    Enteric Bacillus  
    Tuberculosis  
Nonbacterial peritonitis  
    Ruptured ovarian cyst  
    Ruptured follicle cyst

### Localised Peritonitis

Appendicitis  
Cholecystitis  
Peptic ulcer  
Regional enteritis (Chron's Disease)  
Colitis (ulcerative, amebic, bacterial)  
Abdominal abscess  
    Post op  
    Hepatic  
    Pancreatic  
    Splenic  
    Diverticular  
    Tuboovarian  
Pancreatitis  
Hepatitis (viral, toxic)  
P.I.D  
Endometriosis  
Lymphadenitis

### Pain From Increased Visceral Tension

Intestinal Obstructions  
    Adhesions  
    Herniation  
    Tumour  
    Fecal Impaction  
Intestinal hypermobility  
    Irritable colon  
    Gastroenteritis  
Billiary Obstruction  
    Gallstones  
    Strictures  
    Tumour  
    Parsites  
Ureteral Obstructions (renal calculi (stones))  
Hepatic capsular distention  
    Acute hepatitis (viral, toxic)  
    Common duct obstruction  
    Budd-Chiari Syndrome (hepatic vein)  
Renal capsule distention  
    Pyelonephritis  
    Ureteral obstruction  
Uterine obstruction  
    Neoplasm  
    Pregnancy/childbirth  
Ruptured ectopic pregnacny  
Rupturing arterial aneurysm  
    Aortic  
    Iliac  
    Visceral

### Ischemia

Interstitial angina or infarction  
    Arterial stenosis  
    Embolisim  
    Polyarteritis  
Splenic infarction  
Torsion  
    Galballader  
    Spleen  
    Ovarian cyst  
    Testicle  
    Appendix  
Hepatic infarction (toxemia)  
Tissue necrosis (uterine fibroid, hepatoma)

# Causes Of Abdominal Pain

## Thoracic

Pneumonitis  
Pulmonary embolism  
Pneumothorax  
Empyema (pus infection)  
Myocardial ischemia  
Myocarditis  
Endocarditis  
Esophagitis  
Esophageal spasm  
Esophageal rupture

## Neurogenic

Radiculitis  
    Spinal cord tumours  
    Peripheral nerve tumours  
    Spinal arthritis  
    Herpes Zoster  
Tabes dorsalis

## Metabolic

Uremia  
DM  
Prophyria  
Acute renal insufficiency

## Hematological

Sickle cell anemia (abnormal RBC leads to infarct, Painful crisis)  
Hemolytic anemia (abnormal RBC - post infection...)

## Miscellaneous

Muscular contusion  
Hematoma  
Tumour  
Toxins  
    Hypersensitivity reactions  
    Insect bites  
    Reptile venoms  
    Drugs  
    Lead poisoning

Notes

# CONSTIPATION

## Definition:

Constipation is defined as the infrequent or difficult evacuation of Faeces. Acceptable norm within the working population varies from 3 times a day to 3 times a week. The causes of constipation are multifactorial but serious caused are rare.

## Red Flags:

- ⊗ Constipation in the elderly is rarely sinister unless accompanied by other systemic signs (wt loss, rectal bleeding etc)
- ⊗ Dont attribute abdominal pain to constipation
- ⊗ Dont assume that known pathology in an individual is causing their constipation
- ⊗ Beware of changes within the normal patern
- ⊗ Consider Hirschsprung's disease in the young (swollen abdomen, empty rectum)

## Notes:

### Differential Diagnosis Constipation Common, Occasional & Rare Causes

Common	Occasional	Rare
Diet and lifestyle - not enough fibre	Dehydration	Space occupying lessions (extracolonic)
Inactivity - especially elderly	Acuired megacolon (laxitive abuse)	Acute bowel obstructions
IBS	Diverticulosis	Hypercalcemia
Painful perianal conditions	Hypothyroidism	Crohn's disease with strictures
Nearly all drugs	Ca rectum/colon	Behavioural (stool holding)

# DIARRHOEA

## Definition:

Defined as the abnormal passage of liquid and frequent stools. Diarrhoea is referred to as chronic if it persists for longer than 2 weeks.

## Red Flags:

- ⊖ Weight loss in chronic diarrhoea is suggestive of pathology
- ⊖ Beware of dehydration in chronic diarrhoea (Diaralyte sachets)

## Notes:

### Differential Diagnosis Diarrhoea Common, Occasional & Rare Causes

Common	Occasional	Rare
Gastroenteritis (food poisoning, campylobacter)	lactose intolerance (1 in 4 babies)	appendicitis
Antibiotics	Chronic infection	Laxative misuse
IBS	Bowel neoplasm	Thyrotoxicosis
Diverticulitis	IBD (UC/Crohn's disease)	Malabsorption (coeliac disease)
Overflow constipation (elderly)	Excessive Alcohol	Allergy
	Toddler diarrhoea	

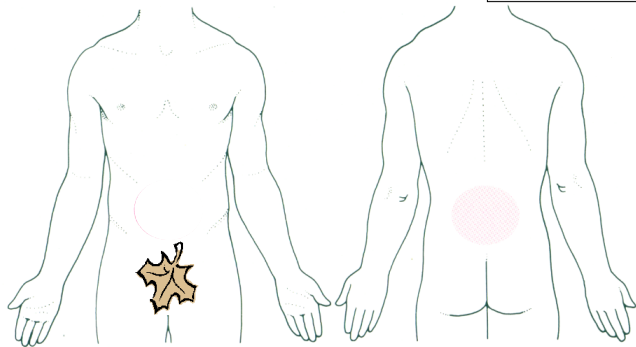
## Causes of Constipation

Neurogenic	Muscular	Mechanical	Rectal lesions	Drugs/Diet
Cortical voluntary or involuntary evacuation	Atony (loss of tone)	Bowel Obstruction	Thrombosed hemorrhoids	Anesthetic agents (post op)
Central nervous system lesions	Severe malnutrition	Neoplasm	Perirectal abscess	Antacids (containing aluminium or calcium)
Multiple sclerosis	Metabolic defects	Volvulus (gut twisting)		Anticholinergics
Cord tumours	Hypothyroidism	Diverticulitis		Anticonvulsants
Tabes dorsalis	Hypercalcemia	Extraalimentary tumours		Antidepressants
Traumatic spinal lesions	Potassium depletion	Pregnancy		Antihistamines
	Hyperparathyroidism	Colostomy		Antipsychotics
	Inactivity			Barium sulfates
				Diuretics
				Fe compounds
				Narcotics
				lack of fibre
				Renal failure
				Myocardial infarction (due to narcotic painkillers)

## Causes Of Diarrhea

Malabsorbtion	Neuromuscular	Mechanical	Infectious	Nonspecific
Pancreatitis	IBS	Incomplete obstruction	Viral	UC
Pancreatic carcinoma	Diabetic enteropathy	Neoplasm	Bacterial	Diverticulitis
Chron's disease	Hyperthyroidism	Adhessions	Parasitic	Diet
	Caffeine	Stenosis	Protozoal	Laxitives
		Fecal impaction		Food allergy
		Muscular incompetancy		Antibiotic
		Postsurgical effect		Lactose intolerance

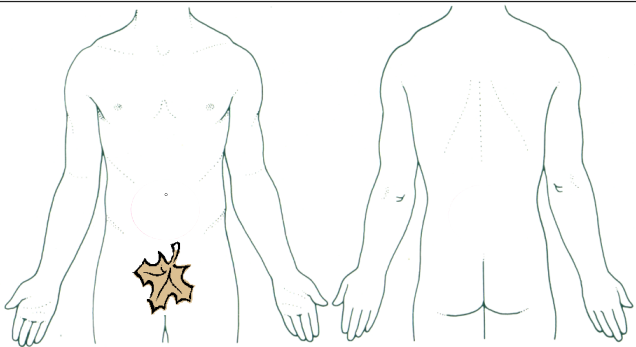
# SIGNS, SYMPTOMS AND REFERRAL PATTERNS



## Peptic Ulcer

Epigastric pain 45/60 min after meals BF: food, vomiting, milk and antacids  
 PM pain 12-3am BF: above  
 Radiating back pain  
 Right shoulder pain (rare)  
 Nausea  
 Anorexia  
 Wt loss  
 Bloody stools  
 Black tarry stools

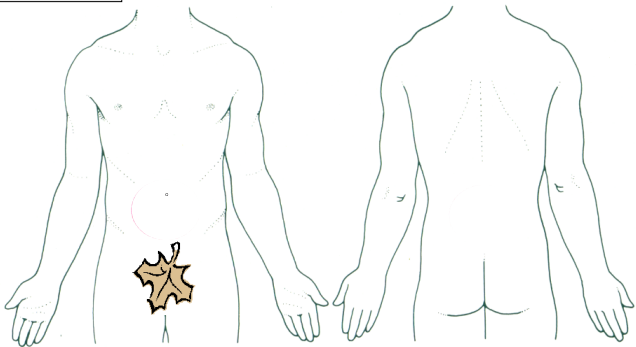
## Notes



## Appendicitis

Periumbilical and/or epigastric pain  
 RT lower quadrant pain  
 RT thigh or testicular pain  
 Positive McBurney's point  
 Nausea and vomiting  
 Dysuria (painful pissing)  
 Fever  
 Coated tongue and bad breath

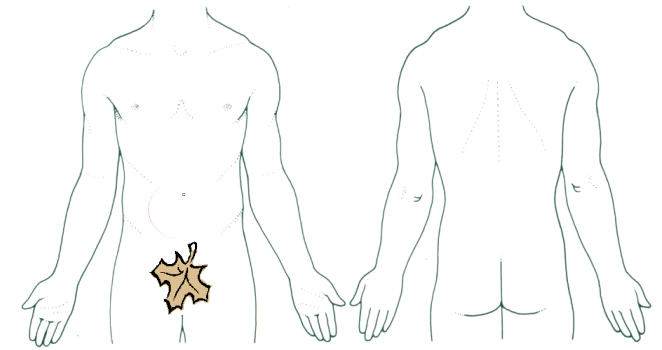
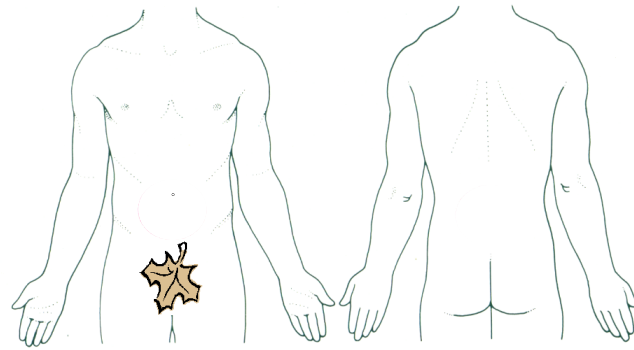
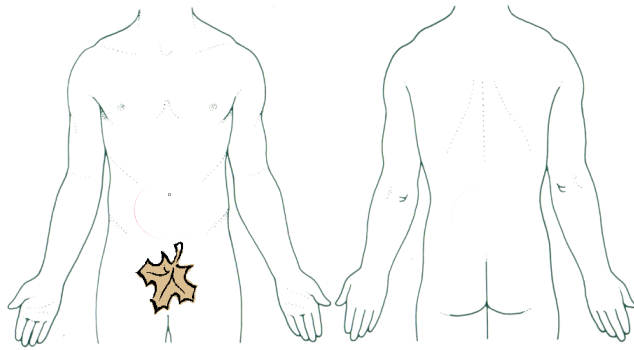
## Notes



## IBS

Painful abdominal Cramps  
 Constipation  
 Diarrhea  
 Nausea and vomiting  
 Anorexia  
 Flatulence  
 Foul breath

## Notes



**UC & Chron's Disease**

- Diarrhea
- Constipation
- Fever
- Abdominal Pain
- Rectal bleeding
- Night Sweats
- Decreased appetite/wt. loss, nausea
- Skin lesions
- Uveitis
- Arthritis
- Migratory arthralgia

**Chronic Pancreatitis**

- Epigastric pain radiating to the back
- Upper LT lumbar region pain
- Nausea & vomiting
- Constipation
- Flatulence
- Weight loss

**Acute Pancreatitis**

- Epigastric pain radiating to back
- Fever & sweating
- Nausea & vomiting
- Tachycardia
- Malaise
- Weakness
- Jaundice

**Notes**

Blank area for notes related to UC & Chron's Disease.

**Notes**

Blank area for notes related to Chronic Pancreatitis.

**Notes**

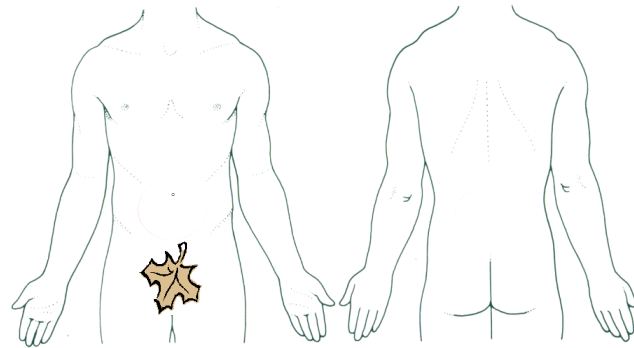
Blank area for notes related to Acute Pancreatitis.



### Pancreatic Carcinoma

Epigastric/upper abdominal pain radiating to the back  
 Back pain may be the only symptom  
 Jaundice  
 Wt. loss  
 Pale faeces  
 Constipation  
 Vomiting  
 Weakness

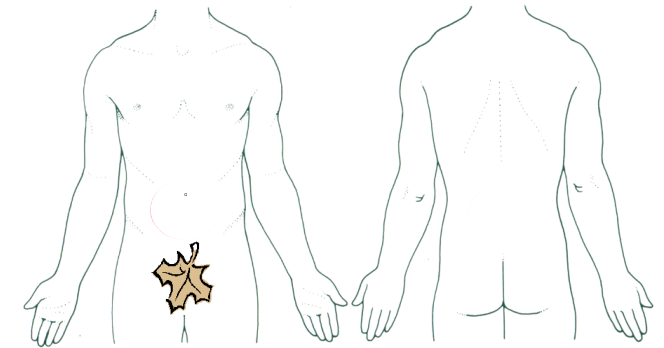
### Notes



### Acute Cholecystitis

Chills, low grade Fever  
 Jaundice  
 GI symptoms  
     Nausea  
     Vomiting  
     Anorexia  
 Positive Murphy's sign  
 Severe pain Rt upper quadrant WF: breathing/  
 movement  
 Pain Radiating to Rt shoulder and between Scapula

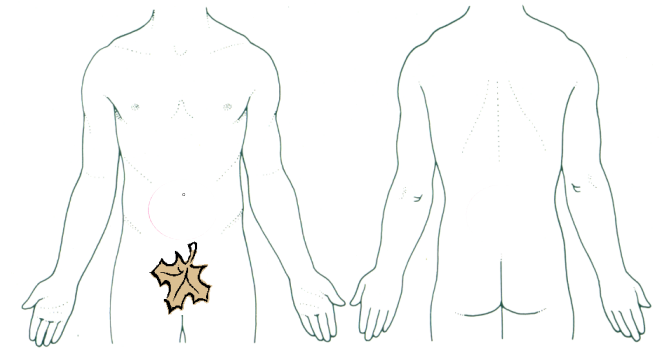
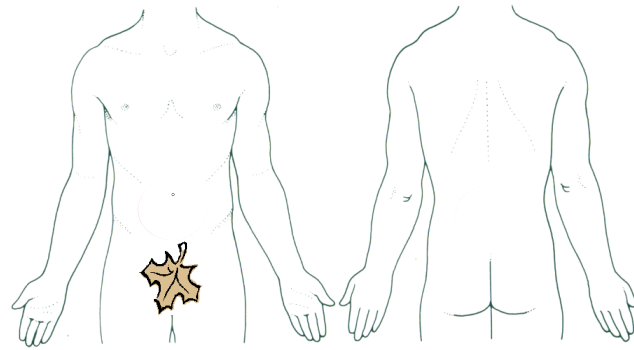
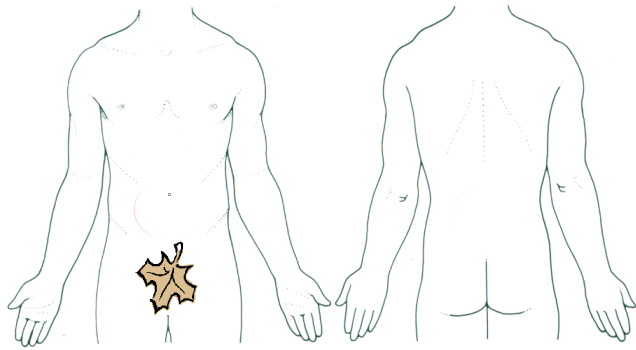
### Notes



### Chronic Cholecystitis

Biliary colic: severe pain 3-4 hrs Rt upper quadrant  
 Pain: may radiate to mid back between scapulae  
     (Due to ans synapsing with phrenic N.)  
 Nausea  
 Abdominal fullness  
 Heartburn  
 Excessive Belching  
 Constipation and Diarrhoea  
**Watch For Steatorrhea**

### Notes

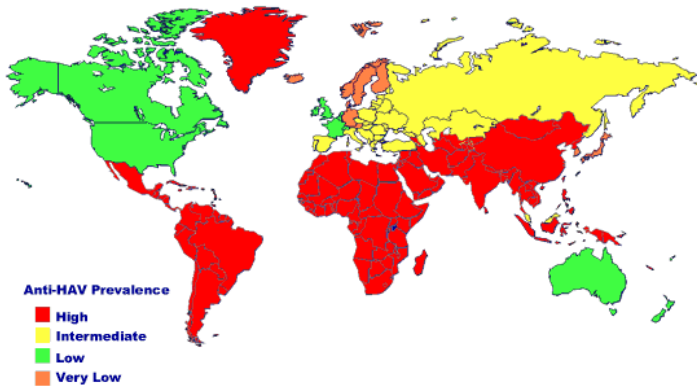


Hepatitis A
Extreme Fatigue
Anorexia
Generalised arthralgia / myalgias
Rt upper abdominal pain
Steatrrhoea / dark urine
Jaundice
Low grade fever
Indigestion
Headache / pharyngitis

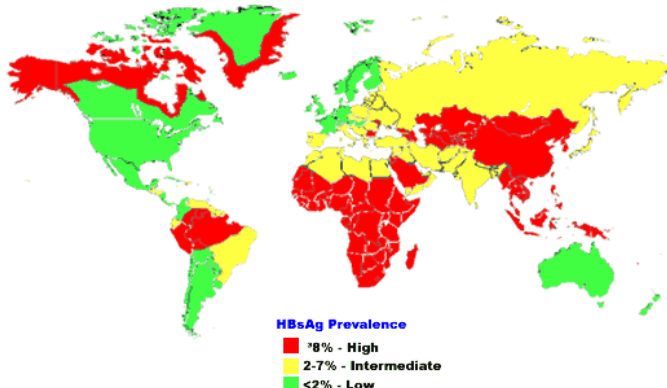
Hepatitis B
Jaundice
Arthralgias
Rash
Hep B may be asymptomatic

Cirrhosis
Mild Rt upper quadrant pain
GI Symptoms
Anorexia
Indigestion
Weight loss
Nausea and vomiting
Diarrhoea or constipation
Dull abdominal pain
Easily fatigued
Weakness / fever

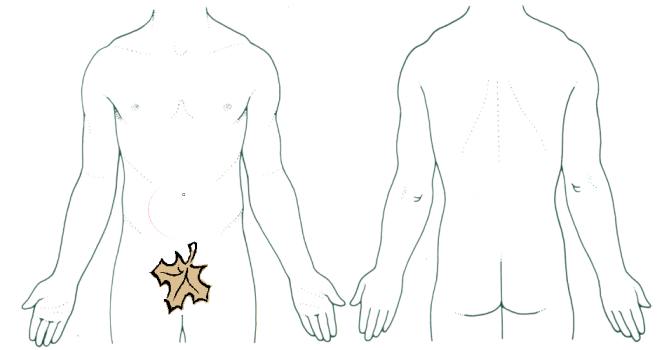
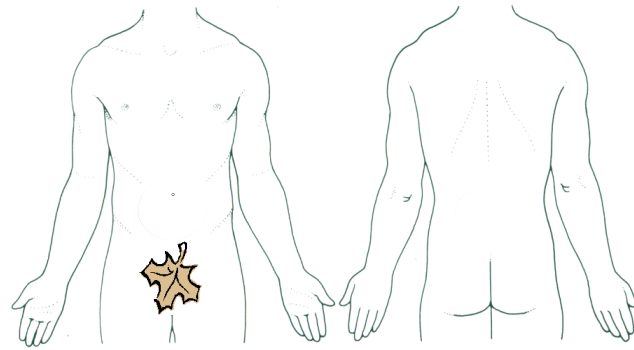
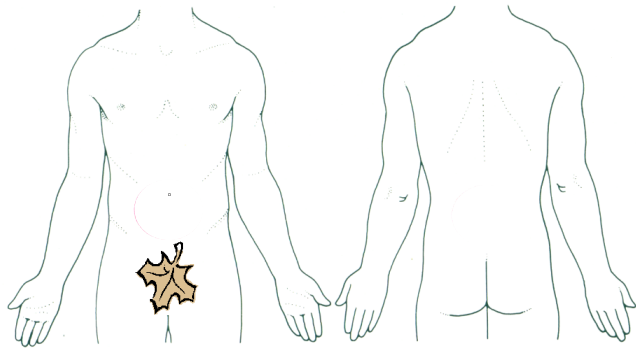
**Geographic Distribution of HAV Infection**



**Geographic Distribution of Chronic HBV Infection**



Notes



**Liver Abscess**

Rt abdominal pain  
 Rt shoulder pain  
 Weight loss  
 Fever, Chills  
 Diaphoresis  
 Nausea & vomiting  
 Anemia  
 Signs & symptoms very depending on the degree of Involvement & type of abscess

**Liver Neoplasm**

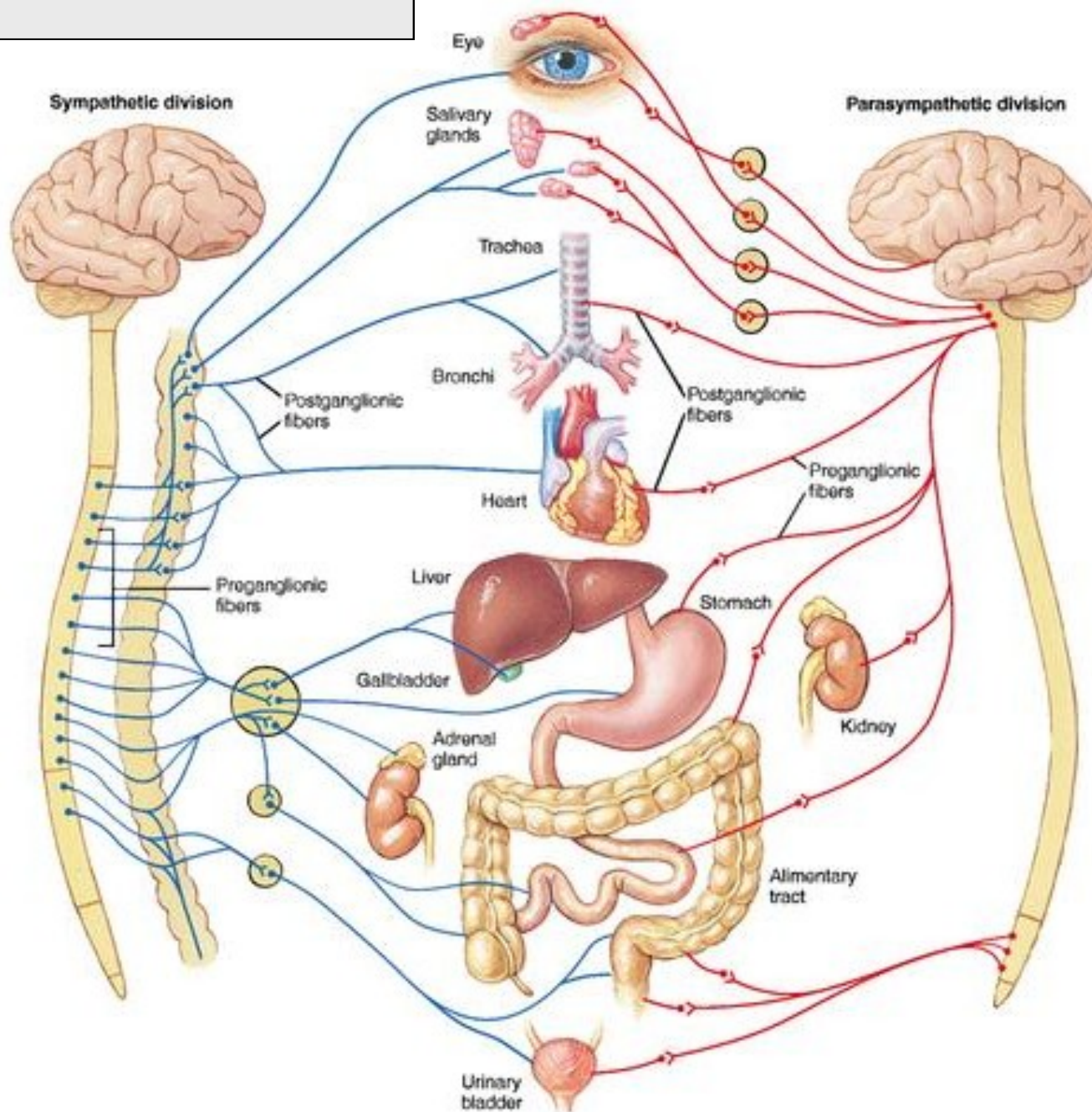
Jaundice  
 Progressive failing health  
 Anorexia & weight loss  
 Global muscle fatigue  
 Epigastric pain / feeling of fullness  
 Constant ache in epigastrium or midback  
 Early satiety

**Notes**

**Notes**

**Notes**

# ANS Levels



Area	Atonomic Supply
Head & Neck	T1 - T5
Upper Extremity	T2 - T5
Lungs	T2 - T4
Heart	T1 - T5
Oesophagus	T5 - T6
Stomach	T6 - T10
Liver/Gallbladder	T7 - T9
Spleen	T6 - T10
Pancreas	T6 - T10
Adrenals	T8 - L1
Small Intestine	T9 - T10
Large Intestine	T11 - L1 (to splenic flexure)
Large Intestine	L1 - L2 (splenic flexure to rectum)
Kidney	T10 - L1
Ureter	T11 - L2
Bladder	T11 - L2
Prostate	T11 - L1
Testis/Ovary	T10 - T11
Epididymus	T11 - T12
Ductus Deferens	
Seminal vesicles	
Uterus	T12 - L1
Fallopian Tubes	T10 - L1
Lower Extremity	T10 - L2

## Hepatic & Biliary Follow Up Questions

Do you notice that you get full quickly when eating? **Early Satiety: Potential RED FLAG For Neoplasm**

Do you have any abdominal pain? **Referred from internal organ...dull, poorly localised**

Do you notice any association between your pain and when you eat.... Is your pain altered or modified by eating

**Aggravated:** gastric ulcer, gallbladder disease

Any particular foods make it worse? **Greasy foods...gallbladder!!**

**Relieved:** Duodenal ulcer..... Milk

How much do you drink?

Noticed any changes in your bowel & bladder habits... pale, greasy, floating & foul smelling faeces....Dark coloured urine

Have you noticed any fluctuations in your weight recently? **RED FLAG (cancer/cirrhosis)**

Noticed your clothes getting tight around your tummy? (**bloatedness / ascites**)

Have you ever had an ulcer, anaemia, gallbladder disease, hepatitis/ jaundice or a splenectomy

Yes to hepatitis or jaundice

Any idea how you got it... (look at the obvious first... foreign travel in dodgy countries...)

Profession (healthcare workers in contact with high risk groups & laboratory workers with blood products )

Oral faecal route ie food contamination.....

sexually transmitted (gay men, use of prostitutes)

Recent foreign travel to risk areas, (**South America, America, Africa and India... but HEP P very common**)

Are you exposed to any toxic chemicals in your job?

Have you ever had contact with someone known to have hepatitis? (**Cross infection**)

Have you ever had any transfusions of blood, acupuncture, tattoo's, body piercing or recent dental work?

Ever had any trauma to abdomen (**damage to spleen/liver**)

Ever had any long courses of medication.... Regular blood tests to test your liver function?

## GIT Follow Up Questions

Have you seen your GP about this abdominal pain?

Yes...

tra What was his opinion? What is his treatment plan? What has he prescribed? Has he made any referral for further investigations/ultra scan/blood test/endoscopy/specialist

Have you had any recent changes in your bowel habit?

Yes... Establish what is the normal pattern is ,

What the variation is, compare it with the common causes of altered bowel function **RED FLAG: Neoplasm??**

Any blood in you stools? **RED FLAG: Neoplasm??**

If so what colour is it?

Red, (suggests fresh bleed) (**Haemorrhoids, ulcerative colitis, Chron's, Colonic cancer**)

Dark brown, black (suggests digested blood) **Peptic ulceration**

Steatorrhea (**hepatic or Biliary cause**)

How often?

Mixed in with the stool or coating the surface? (Rectum or high up colonic)

What is the shape of your stool (pencil stool suggestive of obstruction)

Does having a bowel movement or farting give you pain relief?

Check medication history as a source of bowel disturbance... laxative abuse, long term NSAIDS, long term antibiotics, FE tablets

Do you have a sense of urgency? (IBS)

Ever had haemorrhoids? How were they treated?

Ever have any stool smears on your underwear? (may suggest faecal incontinence)

Any recent foreign travel? (parasitic infections, Hep A/B)

Do you get any pain at night? **RED FLAG: Neoplasm??**

Yes... Roughly what time are you woken? ( 12-3 ulcer), Can you relieve the pain?

Do you ever have episodes of PM sweats? (hallmark of systemic disease)

Have you had any recent weight loss? (Rapid weight loss over a relatively short period = **RED FLAG: Neoplasm??**)

## **GIT Continued:**

Do you ever suffer from nausea or vomiting?

Nausea:

How often? How long does it last? Any recognised patterns or food?

Vomiting:

How often? Describe it!!! How much? When? How long for? Any known triggers? Any recognised pattern?

Any blood in your vomit?

If so what colour is it?

Red, (suggests fresh bleed) **Oesophageal varicies**

Dark brown, black (suggests digested blood) **Peptic ulceration**

Have you been prescribed any medication for your vomiting? What's been prescribed? By who? Helped?

What's your appetite like at the moment?.... Any loss of appetite at the moment?

Have you ever been treated for an ulcer before? **Why?, When?, Where, Who? How?**

Does eating relieve or aggravate your symptoms? **Stomach ulcer WF: food Duodenal ulcer BF:**

Does your pain get worse 1-3 hours after eating or between meals? **Duodenal (WF: eating 1-3, stomach, gallstones, pancreatitis BF: eating)**

Do you feel full after a couple of mouthfuls? (Early satiety may indicate pathology of stomach, duo, gallbladder)

Have you ever had liver or gallbladder problems?

Yes... **Why?, When?, Where, Who? How?**

Have you noticed any changes in your symptoms if you drink? (Pancreas ??)

## Case Study

A 45 year old part time receptionist, part time mum of 6, presents at the clinic complaining 2 sights of pain. She appears to be slightly over weight for her height and of middle European ethnic origin.

Firstly she describes pain in between and over her right / left shoulders blades with pain radiating up to her occiput which finally culminates in an occipital headache at the end of every day.

She Describes a point of maximum intensity (**PMI**) over the superior angle of both shoulders but particularly over the right. This she attributes to the fact that she is right handed and accepts that a lot of her pain is associated with her job as a legal secretary for a local conveyanceing company for the last 20 years with short breaks of maternity leave to have her 6 children.

She reports **no neurological symptoms** associated with this complaint.

The most recent **onset was 3 weeks** previously when she had to load and unload a number of case notes onto a trolley and then wheel them to the local court. When prompted to reflect on the history she reports the initial episode came on 10yrs ago during a period of full time employment. She has episodes on and off since depending on her work load.

In terms of progression “It just doesn’t seem to be settling down this time and is now a constant dull ache”. Prompted to describe it as a **5 on VAS**

She hasn’t had time to consult the GP as she’s too busy and “you can never get an appointment any way”. She has never sought the advice of an Osteopath, Physio or Chiropractor before...

It’s **relieved by** rest, painkillers (brufen), hot bath, hot water bottle gentle massage for the kids/husband and Volterol gel her eldest son had prescribed for a sports injury.

**Worse for** work, driving, and anything the involves sitting for long periods of time...

Secondly the patient, only when prompted about associated pain, mentions a mild to moderate discomfort over the ziphoid which is slightly tender to the touch.

Discuss!