

# General Diagnosis 'Board Review' Notes

## Head and Neck

### Hyperthyroidism

- Thyroid enlargement (goiter)
- Exophthalmos
- Tremors, Tachycardia
- Increased appetite, Weight loss
- Lid lag
- Amenorrhea
- Nervousness
- Heat intolerance

### Hypothyroidism (Myxedema)

- Weakness, Fatigue
- Weight gain
- Non-pitting pseudoedema, Periorbital edema
- Decreased body temperature
- Dry skin
- Loss of outer portion of eyebrows
- Depression
- Heavy menstrual bleeding
- Bilaterally decreased Achilles DTR

### Addison's disease (adrenal insufficiency)

- Fatigue, Generalized muscle weakness
- Anorexia, Weight loss
- Hypotension
- Abdominal pain
- Skin hyperpigmentation

### Cushing's syndrome

- Central truncal obesity with thin limbs
- Buffalo hump
- Moon facies
- Capillary fragility, Purple abdominal striae
- Increased body hair (hypertrichosis)
- Chronic steroid use is the most common cause

### Parkinson's disease

- Resting tremor, diminishes with use (pill rolling of thumb and fingers)
- Shuffling festination gait
- Expressionless mask like facial appearance
- Decreased eye blinking
- Stooped flexion posture
- Cog wheel rigidity

### Bell's Palsy

- Unilateral facial paralysis of sudden onset (affects entire half of face, upper and lower)

### Stroke

- Causes weakness and numbness of the face (Bells Palsy does not cause numbness)
- Bilateral innervation of upper muscles retains ability to wrinkle forehead & close eyes
- Paralysis of the arm and leg on the same side

### Tension headache (muscle contraction headache)

- Most common cause of headache at any age, Affects both sexes equally
- Usually bilateral
- May be generalized or localized to the back of the head and upper neck
- May be described as a constrictive band around head
- Stressful life, anxiety, tension, and depression may be present
- May last for hours to days
- No pre-headache prodrome, No associated symptoms

## Migraine headache

- Unilateral, may begin around the eye or temple
- Throbbing or pounding quality
- Often begins in childhood or early adolescence
- May be familial, More common in females
- Pre-headache aura
- Nausea, vomiting
- Transient vision loss which returns to normal, Zig zag flashes of light at periphery of vision
- Hypersensitivity to light (photophobia), Seeks dark room for relief

## Cluster headache

- Tearing of eye, nasal congestion, and possibly ptosis and miosis
- Unilateral eye pain that may be described as sharp and stabbing, or 'boring'
- Spring or Fall seasonal predilection
- Occurs in clusters for several months, then suddenly disappears
- More common in males (may be a smoker)
- No familial tendency
- No visual prodrome, or nausea and vomiting

## Meningitis

- Headache
- Neck pain and stiffness
- Exposure to infectious organism, Fever
- Cervical flexion painful and restricted (Brudzinski's sign)
- Extension of the leg from the 90-90 position is painful and restricted (Kernig's sign)

## Eyes

### Dacrocystitis

- Tender red swelling beneath the medial canthus of the eye

### Blepharitis

- Inflammation of the eyelids, usually caused by a staphylococcal infection
- Accumulation of greasy flakes or scales around the base of the eyelashes

### Hordeolum (stye)

- Small red infection of a hair follicle at the eyelid margin

### Chalazion

- Appears similar to a sty, however the swelling is not at the lid margin
- Contents of the cyst are sebaceous, rather than infectious

### Ectropion and Entropion

- Ectropion = turning out of the lower eyelid
- Entropion = the eyelid is turned in

### Ptosis

- Droopy upper eyelid that covers all or part of the pupil
- May occur with myasthenia gravis, Horner's syndrome, or CN III damage

### Xanthelasma

- Fatty, yellowish lesions on the upper or lower eyelids
- Most commonly seen with aging

### Conjunctivitis

- 'Pink eye' - conjunctival redness around periphery of eyeball
- Eye pain and tearing of the eye

### Trachoma

- Chronic conjunctivitis caused by Chlamydia infection
- 15% of blindness worldwide is caused by trachoma

### Scleritis

- Severe boring eye pain
- Redness of sclera
- Hx of autoimmune inflammatory disorder

## Iritis

- Eye pain with photophobia
- Red halo around the iris
- Decreased vision
- May be associated with autoimmune arthritides, such as ankylosing spondylitis

## Pinguecula and Pterygium

- Yellowish thickening on nasal side of the bulbar conjunctiva
- Pterygium more serious when the growth grows across the cornea, may interfere with vision

## Hyphema

- Blood in the anterior chamber of the eye

## Hypopyon

- Pus in the anterior chamber of the eye

## Subconjunctival hemorrhage

- Bright red area of localized hemorrhage beneath the conjunctival membranes
- Does not cause eye pain or interfere with vision

## Herpes Zoster Ophthalmicus

- Shingles vesicles on the V1 branch of the trigeminal nerve

## Keratoconjunctivitis Sicca

- 'Dry eye syndrome' often associated with Sjögren's syndrome

## Arcus senilis

- Grayish white deposit of lipoid material around the limbus of the iris
- 'Normal variant' of the elderly

## Anisocoria

- Unequal pupil size

## Miosis

- Pupils fixed and constricted (< 2 mm)

## Mydriasis

- Pupils fixed and dilated (> 6 mm)

## Oculomotor (CN III) damage

- Dilated pupil that fails to respond to light or accommodation
- Ptosis of the upper eyelid and lateral deviation of the eye may be present

## Argyll Robertson pupil

- Small irregular shaped pupils (not PERRLA)
- React to near vision (accommodation), but fail to constrict to light
- Classically associated with untreated neurosyphilis

## Adie's tonic pupil

- Unilateral dilated pupil that reacts sluggishly to both light and accommodation

## Horner's syndrome

- Ptosis, miosis, and anhidrosis of one eye
- May be caused by a Pancoast lung cancer

## Cataract

- Clouding of the lens will cause gradual painless loss of vision
- Ophthalmoscopic exam reveals opacity
- Usually seen with the elderly, Juvenile diabetes is another cause

## Papilledema (Choked disk)

- Bilateral swelling of the optic nerve heads due to increased intracranial pressure

## Papillitis (Optic Neuritis)

- Unilateral inflammation of the optic nerve head
- May be caused by temporal arteritis or MS

## Optic Atrophy

- Pale white disc due to death of optic nerve tissue

## Primary open angle glaucoma

- Most common type of glaucoma, accounting for approximately 70-90% of all glaucoma
- Usually bilateral and symptoms develop gradually

### Acute angle-closure glaucoma

- Outflow of aqueous humor is blocked by a narrow angle where the iris meets the cornea
- Acute onset of red eye around the iris
- Unilateral eye pain
- Large pupils, or pupil may be fixed between dilated and constricted
- Headache, Dizziness, Decreased vision
- Eyeball palpates hard and firm compared to normal eye

### Hypertensive Retinopathy

- 'Copper wire' deformity (widened light reflex)
- A-V nicking
- Flame and splinter hemorrhages
- 'Cotton wool' soft exudates (local ischemic infarcts)

### Diabetic Retinopathy

- Microaneurysms
- Dot & blot hemorrhages
- Soft exudates
- Hard exudates (lipid remains of vascular leakage)

### Amaurosis fugax

- Temporary painless loss of vision in one eye

### Age-related macular degeneration

- Loss of central vision, retention of peripheral vision
- Affects elderly
- Fundoscopy exam may reveal yellow spots (drusen) over the macula

### Retinal detachment

- Sudden onset of visual flashes of light or new 'floaters'
- Partial loss of vision in one eye as if a gray cloud appeared over a part of the visual field

### Retinitis Pigmentosa

- Hereditary disorder
- Areas of dark pigmentation in a bone spicule pattern against the red retinal background
- Vision is lost first at the periphery resulting in 'tunnel vision'

### Emmetropia

- Normal vision, the cornea and lens focus light correctly on the retina

### Myopia

- Nearsighted, globe is elongated in the AP dimension resulting in light being focused anterior to the retina

### Hyperopia

- Farsighted, globe is flattened in the AP dimension resulting in light being focused posterior to the retina

### Astigmatism

- The cornea and lens are not symmetric (Light entering the eye focuses at several different points within the eye)

### Drusen

- Small yellow dots at the macula associated with macular degeneration

### Myelinated nerve fibers

- Fine feathery patches that may obscure the disc margin and retinal vessels
- Normal variant - Usually unilateral and are present at birth

## **Ears, Nose, and Throat**

### Conductive hearing loss

- Weber test - sound is heard louder in (lateralizes toward) the bad ear
- Rinné negative - AC < BC or AC = BC
- Causes: Impacted cerumen, Perforated TM, Otitis media, Otosclerosis

### Sensorineural hearing loss

- Weber test - sound is heard louder in (lateralizes toward) the good ear
- Rinné positive - AC > BC
- Causes: Congenital, Presbycusis, Occupational, Ototoxic drugs

## Presbycusis

High frequency sensorineural hearing loss that occurs as we age

## Tophi

Small, white yellow, non-tender nodules located at the helix or antihelix

Contains uric acid caused by gout

## External ear obstruction

Unilateral loss of hearing

Visual exam reveals cerumen in auditory canal

Immediately improved upon removal of obstruction

## Perforated tympanic membrane

Ear pain

Unilateral loss of hearing

Otoscopic exam reveals perforation of TM (and blood if the perforation is recent)

## Tympanosclerosis

Dense white patches on TM from healed damage to drum

## Otitis externa

Infection and pain of the outer ear, usually caused by Pseudomonas or Staphylococcus

Often associated with swimming, especially if the water is contaminated

Tugging on the pinna will be painful

Conduction hearing loss if canal is obstructed

## Acute mastoiditis

Pain upon pressure on the mastoid process

Bacterial infection of the mastoid air cells

May be fever and elevated WBC count

## Acute otitis media

Most common in children

Bacterial infection of the middle ear, usually preceded by an upper respiratory infection

Tympanic membrane is inflamed with an 'angry red' appearance

Bulging TM with altered cone of light reflex

Conduction hearing loss is usually unilateral

## Secretory Otitis media with effusion

May be seen in adults with a Hx of allergies

Amber tympanic membrane with possible air fluid level visible behind TM

Fluid is not infectious, usually non-febrile

'Glue ear' - popping or crackling sound with swallowing or yawning

Conduction hearing loss is usually unilateral

## Cholesteatoma

Malignant overgrowth of epidermal tissue through perforated TM

White or yellow-gray cheesy infection with a purulent foul smelling discharge

## Otosclerosis

Ankylosis of the malleus, incus, or stapes

Unilateral conduction hearing loss

## Meniere's disease

Accumulation of endolymph fluid

Causes vertigo, sensory hearing loss, tinnitus, and possibly nausea and vomiting

Episodic attacks may last for minutes to hours

## Herpes Zoster Oticus (Ramsay Hunt's Syndrome)

Shingles of the 8th CN ganglia

## Epistaxis

Nosebleed

## Sinusitis

Pain with pressure or percussion over maxillary and frontal sinuses

Caused by allergies or an upper respiratory infection

Transillumination may show fluid instead of air in the sinus

## Angular Stomatitis

Red sores at the corner of the mouth

May be caused by B vitamin deficiency or poorly fitting dentures

Apthous Stomatitis (Canker Sores)

Small (< 1 cm), white circular lesion, with red border on tongue, gum, cheek, or lip

Pharyngitis

Can lead to rheumatic fever and acute glomerulonephritis if caused by Group A beta-hemolytic streptococci (GABHS)

Peritonsillar Abscess

Also known as Quinsy

Acute Necrotizing Ulcerative Gingivitis (Trench Mouth)

A noncontagious infection associated with a fusiform bacillus and spirochete

Gingival hyperplasia

Can be seen as a side effect of long term use of anti-seizure medicine (Dilantin)

Lead line

A thin black line at the gum margin, which is a sign of lead poisoning

Oral candidiasis (Thrush)

Manifests thick white fungal patches are easily scraped off

Leukoplakia

Similar in appearance to candidiasis, but leukoplakia patches do not easily scrape off

The lesions are pre-cancerous and the patient should be referred for follow-up

Hairy Tongue

The filiform tongue papillae are elongated and have a brown or black discoloration

Thought to be related to poor oral hygiene

Atrophic Glossitis

A smooth glossy appearance to the tongue suggests a deficiency of certain B vitamins

Fissured Tongue (Scrotal Tongue)

Deep furrows on the tongue surface - a normal variant, or possibly due to dehydration

Geographic Tongue

Discrete areas of increased redness that are visible where the papillae are missing

The cause of this condition, also known as migratory glossitis, is unknown

## **Lungs and Respiratory**

Viral upper respiratory infection (The common cold)

Usually caused by either rhinovirus or coronavirus

About 10-15% of colds are caused by flu viruses (longer lasting and more severe)

Sneezing, watery eyes, sore throat, general malaise

Cervical lymph nodes may be enlarged

If a fever is present, it is low grade (with flu, a fever usually is present)

Acute Bronchitis

Acute inflammation of the tracheobronchial tree

Usually caused by a prior upper respiratory infection or cigarette smoking

Causes a burning pain in the upper chest

Hacking cough that is usually dry and nonproductive

Pneumonia

Lower respiratory infection that frequently follows a cold or the flu

Consolidation = accumulation of bacteria, blood cells, fluid, and cellular debris in the alveoli

The patient will appear ill, and may manifest fever and chills

Increased respiratory rate with labored breathing

Possible cyanosis

Possible blood tinged sputum

Inspection: Asymmetric chest expansion

Palpation: Increased tactile fremitus

Percussion: Dull over fluid accumulation

Auscultation: inspiratory rales, with bronchophony over areas having consolidation

Chest x-ray: increased density from consolidation and an 'air bronchogram' sign

## Tuberculosis

Chronic, recurrent lung infection caused by *Mycobacterium tuberculosis*  
Individuals with a mild case of TB may remark that they are "not feeling well"  
As the condition progresses, a cough that "does not go away" may develop  
Eventually, the cough becomes productive of yellow or green phlegm  
May develop a fever and night sweats  
Auscultation: Rales in the upper posterior chest may be heard  
A chest x-ray is usually diagnostic

## Pleurisy (Pleural effusion)

Excess fluid collects in the intrapleural space  
Caused by conditions such as infection, lung cancer, congestive heart failure  
Pleuritic chest pain, described as a severe 'stabbing' sensation, worse with a deep breath  
Decreased tactile fremitus  
The area of effusion will percuss dull to flat  
Breath sounds are decreased to absent over the fluid accumulation  
A pleural friction rub while not frequent, is characteristic when heard  
A chest x-ray may show blunting of the costophrenic angles

## Pneumothorax

Free air between the visceral and parietal pleura  
Chest expansion is decreased on the affected side  
Tactile fremitus is decreased or absent  
When the air expansion is large the trachea will deviate away from involved side  
Over the areas of air expansion, the chest is hyperresonant to percussion  
Breath sounds are decreased or absent over the intrapleural air expansion  
A chest x-ray will show signs of radiolucency adjacent to areas of increased lung density  
Pneumothorax is a medical emergency, requiring immediate referral

## Asthma

Hypersensitivity reaction triggered by allergens such as dust, animal dander, or pollen  
Individual appears anxious and experiences wheezing, labored breathing, and 'air hunger' as a result of difficulty with exhalation  
Chest will feel 'tight' and the individual may cough  
High pitched expiratory wheeze as air exits past narrowed bronchial airways  
Possible intercostal retraction  
Possible cyanosis

## COPD (Chronic obstructive pulmonary disease)

Includes emphysema (COPD type A) and chronic bronchitis (COPD type B)  
Usually the result of a lifetime of cigarette smoking  
Emphysema - 'pink puffer'  
Dyspnea with prolonged expiration  
May assume the tripod position and unconsciously perform 'purse lip' breathing  
Individual may be thin, without cyanosis or edema  
Barrel shape chest, due to chronic over inflation of the lungs  
X-ray - increased radiolucency of the lung parenchyma, and a flat diaphragm  
Lung examination: decreased tactile fremitus, hyperresonant percussion, and decreased breath sounds on auscultation  
Chronic bronchitis - 'blue bloater' (cyanotic with digital clubbing of fingernails, pitting edema of legs)

## Bronchiectasis

Chronic cough with purulent and foul smelling sputum  
Hypoxia may result in clubbing of the fingernails  
Bronchiectasis is common in children with cystic fibrosis

## Atelectasis

Collapsed lung usually the result of bronchial obstruction by a mucous plug  
When the collapse is large, symptoms of tachypnea, dyspnea, and chest pain manifest  
Cyanosis and a fever may be present

### Pulmonary embolism

- Blood clot in a pulmonary artery causing obstruction of blood supply to lung parenchyma
- Recent surgery, fracture, and immobilization may cause a pre-embolic condition
- With a large lung embolism, the pain may be severe and 'knife-like', with hemoptysis
- Pulmonary embolism does **not** show up on plain chest x-ray

### Lung cancer

- Leading cause of cancer death in the US for both men and women
- 90% of lung cancer is the direct result of cigarette smoking
- Hacking 'smoker's cough', chest pain, dyspnea, hemoptysis, and weight loss
- With severe hypoxia, digital clubbing of the fingernails may be seen
- A superior sulcus (Pancoast) tumor may manifest symptoms of Horner's syndrome
- Supraclavicular lymph nodes may be enlarged

### Costochondritis

- Pain at the 2nd to 5th costosternal articulations
- Pain increased with a deep breath (cardiac pain is not made worse with deep breathing)

### Herpes zoster

- Pain and a band of vesicles in the dermatomal nerve band between two ribs
- Hypersensitivity pain
- Allodynia - pain from a normally nonpainful stimulus, such as the shirt rubbing the skin

## Cardiovascular

### Angina pectoris

- Brief episode of substernal chest pressure or discomfort, usually brought on by exercise
- Unstable angina - the attacks may become more frequent, severe, and longer lasting, or occur while at rest

### Myocardial infarction

- Crushing substernal chest pain, which may radiate to the neck or either shoulder
- Levin's sign - Clenched fist held against the chest when describing the pain
- May be pale or sweating, and experiencing nausea and shortness of breath
- Pulse may be weak and thready
- Blood pressure is high if there is also hypertension, or low if approaching heart failure
- ECG may show an inverted T wave, ST elevation, and a deep Q wave
- Cardiac enzymes are elevated (Sequence: Troponin & CPK; AST; LDH)

### Congestive heart failure

- May appear pale, with gray or cyanotic skin
- May be weak and fatigued and appear anxious due to their 'air hunger'
- Uncomfortable laying flat and need to sleep propped up in bed (orthopnea)
- Lung congestion may awaken at night with paroxysmal nocturnal dyspnea (PND)
- Frothy pink productive cough
- Swollen abdomen due to ascitic fluid accumulation
- Jugular venous distention (JVD) may be visible
- Ankles usually show dependent, pitting edema
- Increased heart rate with a possible S3 gallop
- Crackles and wheezing will be heard on lung auscultation
- Liver and spleen may be palpably enlarged from venous congestion

### Hypertrophic Cardiomyopathy

- Congenital condition where the heart myocardium thickens inwardly
- Early warning symptoms include shortness of breath, angina, and dizziness or fainting

### Mitral Valve Prolapse

- Most common heart valve defect which causes a mid-systolic click and possibly a mitral regurgitation murmur

### Pericarditis

- Inflammation of the pericardial sac from infection or heart attack (Dressler's syndrome)
- Fluid accumulation may cause pericardial tamponade, a life threatening condition
- Pressure may cause pulsus paradoxus - decreased blood pressure during inspiration
- Pain is worse with motion and laying down, and better with sitting up and leaning forward
- A pericardial friction rub is heard about 60-70% of the time



## Aortic dissection

- A tear within the blood vessel which causes atrocious chest pain as if being 'torn in half'
- Intensity of the pain is maximal at the initial onset
- Hypertension is probable, and about two thirds of patients have peripheral pulse deficits
- With abdominal aneurysm, may be an abdominal bruit and a pulsating abdominal mass

## **Breast**

### Paget's Intraductal Carcinoma

- Dry, red, scaling of tissue surrounding the nipple; may appear similar to eczema
- Unlike eczema, intraductal carcinoma is usually unilateral

### Fibroadenoma

- Fibroadenoma is the most common benign tumor of the breast
- Usually occurs during the early years of menstruation
- Palpates as a unilateral nontender "small slippery marble"

### Fibrocystic breast disease

- Also known as benign breast disease
- Bilateral breast swelling and tenderness prior to menstrual flow
- Most common in 30-50 year age range

### Breast cancer

- Most common after age 50
- May cause dimpling or nipple retraction as the cancer grows into Cooper's ligaments
- 'Orange peel' texture is due to blocked lymphatic drainage

## **Abdomen and Gastrointestinal**

### Gastroesophageal reflux (GERD)

- Retrosternal heartburn, a bitter or sour taste in the mouth from reflux of stomach contents
- May experience dysphagia and laryngitis if the acid reflux is more than minimal
- Eating too large a meal or lying down after meals may trigger esophageal reflux
- May cause a night time cough while recumbent

### Gastritis

- Causes dyspepsia, epigastric pain, nausea, and upper abdominal bloating
- Constant epigastric pain

### Peptic ulcer disease

- Includes duodenal ulcers (most common) and gastric ulcers
- Causes 'burning' or 'gnawing' epigastric pain
- Pain worse with meals suggests gastric ulcer
- Duodenal ulcer pain initially relieved with eating, recurs two to three hours after the meal
- Vomiting after eating gives temporary relief of epigastric pain
- May have coffee grounds emesis
- H. pylori ulcers most common on lesser curvature
- NSAID ulcers most common on greater curvature

### Mechanical bowel obstruction

- Predominant symptom is severe abdominal pain, similar to baby 'colic'
- Obstipation (total lack of bowel movements) results with complete bowel obstruction
- Initially loud borborygmi, caused by hyperactive bowel motility
- In later stages of complete obstruction, decreased or absent bowel sounds
- KUB x-ray will disclose marked gaseous distention proximal to the obstruction

### Adynamic ileus

- A temporary arrest of intestinal peristalsis, possibly from a peritoneal infection
- In contrast to complete mechanical obstruction, the ability to pass gas is retained

## Appendicitis

- Manifests initially as dull periumbilical pain
- As infection progresses, the pain becomes sharp and localizes in the RLQ
- Fever, nausea, vomiting, and anorexia are common
- Abdominal pain precedes nausea and vomiting
- With peritonitis the abdomen may have involuntary rigidity
- Rebound tenderness is likely at McBurney's point
- Rovsing's sign: Rebound at the LLQ recreates the RLQ pain
- WBC values are typically elevated above 10,000, with a shift to the left

## Pancreatitis

- Most commonly caused by chronic alcohol abuse
- Severe upper abdominal pain that may radiate to the chest, back, or left shoulder
- Fever, nausea, vomiting
- Cullen's sign: periumbilical ecchymosis
- Grey Turner's sign: flank ecchymosis
- Ecchymosis skin discolorations caused by an accumulation of blood within the fascial planes
- Serum amylase and lipase are elevated
- Possible diabetes mellitus (pancreatic endocrine function)

## Gastroenteritis

- Inflammation of the lining of the stomach and intestines
- Gastroenteritis ('stomach flu'), is often caused by food poisoning (salmonella, E coli, etc.)
- Also caused by viruses, such as adenovirus or the Norwalk virus
- Anorexia, nausea, vomiting, diarrhea, and abdominal pain
- Nausea and vomiting precedes abdominal pain
- Fever suggests a more significant bacterial infection
- Inspection: visible peristalsis may be seen
- Auscultation: hyperactive bowel sounds

## Malabsorption syndrome

- Caused by a defect of digestion and absorption of food in the small intestine
- Celiac sprue: a gluten allergy that causes inflammation of the small intestine
- Tropical sprue: thought to be caused by a viral, bacterial, or parasitic infection
- Gas, bloating, crampy lower abdominal pain, and diarrhea
- With malnutrition, there may be weight loss and anemia
- Pale, foul smelling stool from fat that is not digested and absorbed

## Crohn's Disease

- Patchy inflammation creates 'cobblestone' full thickness lesions
- While it may occur in any part of the gastrointestinal tract, usually in the terminal ileum
- Abdominal pain and chronic, nonbloody diarrhea
- Associated symptoms: iritis, photophobia, symmetric arthritis, and perianal lesions

## Ulcerative Colitis

- Continuous surface inflammation of the large intestine
- Abdominal pain and frequent diarrhea as with Crohn's disease
- However, with ulcerative colitis the diarrhea is usually bloody
- May be associated rectal conditions such as fissures, abscess, or hemorrhoids
- Pain may temporarily be decreased with a BM

## Irritable bowel syndrome

- Also known as spastic colitis, causes crampy lower abdominal pain
- Diarrhea that alternates with periods of constipation
- Affects females more than males, most common in the late teens and early 20's
- Usually triggered by stressful life situations, such as taking exams
- Abdominal pain may be relieved with defecation
- Stool is not bloody but may reveal the presence of mucous

## Diverticulitis

- Very common condition after age 60
- Severe LLQ abdominal pain, nausea, vomiting, fever
- May be involuntary muscular rigidity and a very painful palpable LLQ mass

## Hepatitis

Inflammation of the liver, caused by a virus, toxins, or chronic alcohol abuse  
Symptoms similar to flu: nausea, vomiting, fever, loss of appetite, abdominal pain  
Liver palpates tender and enlarged, but the edge remains soft and smooth  
Jaundice of the skin, mucous membranes and sclera

## Cirrhosis

Usually caused by chronic alcohol abuse causing liver parenchymal cell damage  
Anorexia, malaise, weight loss, abdominal discomfort, and generalized weakness  
Cirrhotic liver palpates enlarged, and palpates with a smooth, firm, blunt edge  
Decreased albumin production may lead to swelling in the legs and abdomen (ascites)  
Jaundice develops as bile products are not processed by the liver  
Portal hypertension may cause enlargement of abdominal blood vessels (caput medusa)

## Liver cancer

Previous hepatitis or cirrhosis is a risk factor for primary liver cancer  
In the US, metastatic liver cancer is 20 times more common than primary liver cancer  
Vague and nonspecific symptoms, such as fatigue, malaise, unexplained fever  
As condition progresses, weight loss and abdominal pain  
Cancerous liver palpates as enlarged, with a hard irregular border  
Possible palpable supraclavicular lymph nodes

## Cholecystitis

Cholecystitis is most common cause of acute abdominal pain in patients over 50  
Severe RUQ pain, nausea, vomiting, and fever  
Pain may radiate to the tip of the right scapula  
May be precipitated by eating a large, fatty meal several hours earlier  
Positive Murphy's inspiratory arrest sign  
Chronic condition: may have had previous episodes, with periods of relief

## Colorectal carcinoma

Third leading cause of cancer in either sex; 90% occurs after age 50  
Abdominal pain, change in bowel habits, blood in stool, anemia, weight loss  
A stool guaiac test which shows occult blood is a screen for this cancer

## Genitourinary

### Urinary tract infection

Female:Male = 50:1 incidence  
Dysuria, frequency, urgency, nocturia, and low back pain  
Burning with passage of urine  
Male may notice a discolored discharge on the underwear  
Yellow discharge - gonorrhea infection; Nongonococcal infection - clear to white discharge  
Abdominal palpation may disclose suprapubic tenderness  
Possible new sexual contact

### Urinary calculi

Many stones are 'silent', passing without complication  
May have a history of previous stone formation  
A large stone lodged in the ureter causes extreme pain  
Costovertebral flank pain usually radiates to the groin region  
No relief of pain with change of position  
Nausea, vomiting, chills, and fever occur  
Urinalysis: hematuria, bacteriuria if infection is present

### Nephritic Syndrome (Acute Glomerulonephritis)

More common in children than adults  
Usually develops after a recent streptococcal infection  
May experience headaches (from hypertension)  
Costovertebral angle tenderness  
Face swells (periorbital edema)  
Proteinuria and hematuria, RBC casts in urine  
Possible elevated Antistreptolysin O titer  
Possible azotemia (increased serum creatinine and BUN)

### Chronic Nephritic-Proteinuric Syndrome (Chronic Glomerulonephritis)

Condition of adults, usually unrelated to previous acute glomerulonephritis episodes

Most common causes: atherosclerosis, diabetes, and hypertension

May be asymptomatic, discovered when proteinuria or hematuria, is found on routine UA

When the condition progresses to kidney failure: anorexia, fatigue, anemia, hypertension

CBC may show anemia; chem screen will show azotemia (increased BUN and creatinine)

Fine granular and waxy casts in urine sediment

### Nephrotic Syndrome

Minimal change disease, the most common cause, occurs primarily in children

Diabetes is the most common cause for nephrotic syndrome in adults

Kidney damage results in markedly increased protein loss in the urine (> 3.5 G / 24 hours)

Protein loss causes hypoalbuminemia, generalized edema, often 'mobile' edema

Serum albumin decreased, and uremia (increased serum BUN and creatinine)

Fluid accumulation in the lungs may cause shortness of breath, with crackles on auscultation

### Acute renal failure

Three main causes:

- Prerenal azotemia may occur with disorders having decreased renal perfusion, such as uncontrolled diarrhea or hemorrhage
- Intrinsic renal damage may result from drugs or other nephrotoxins, such as streptococcal infection
- Postrenal azotemia is seen with conditions that block urine outflow, such as ureteral or bladder obstruction

The patient may manifest oliguria and steadily decreasing renal function (azotemia)

### Chronic renal failure

Predominantly a condition of adults

Caused by diabetes, hypertension, polycystic kidney disease, or nephrotoxic drugs

Uremia may produce pruritus, dry skin, and a metallic taste in the mouth

Compromised erythropoietin production may cause pallor, anemia, fatigue

Increased serum BUN, creatinine, triglycerides, potassium, phosphorus, uric acid

### Polycystic kidney disease

Inherited condition - cysts cause greatly enlarged palpable kidneys

Cysts cause decreased renal function and hypertension

May also have cysts on liver or associated cerebral aneurysm

No treatment other than dialysis and kidney transplantation

### Benign prostatic hyperplasia

Very common in males over fifty

Frequency, urgency, sense of incomplete emptying of the bladder

Nocturia and back pain may manifest

Nontender, smooth, symmetrical enlargement with a rubbery consistency; median sulcus may be less palpable

### Prostatitis

May have signs of infection (fever, chills, malaise)

Urethral discharge, dysuria

Dull pain in the perineal area, or low back pain

May have testicular pain and painful ejaculation

Prostate very tender upon palpation, slightly enlarged, with a 'boggy' consistency

### Prostate cancer

Second leading cause of cancer in men; Rare before age 50

Frequency, urgency, dysuria, and low back pain

A hard nodule may be palpable on the prostate; lateral margins may be asymmetric; median sulcus less palpable

### Priapism

Prolonged, painful erection not associated with sexual stimulation

### Phimosis

Foreskin is constricted and will not easily retract

### Paraphimosis

Tightened foreskin retracts but will not return to the extended position

## Hypospadias

Birth defect - Urethral meatus is displaced ventrally toward the scrotum

## Epispadias

Birth defect - Urethral meatus is displaced dorsally toward the umbilicus

## Cryptorchidism

Undescended testicle

## Klinefelter's syndrome

XXY chromosomal anomaly that causes a feminized appearance in the male

Hypogonadism, poor beard growth, breast development, and small testicles

## Testicular Cancer

Rare overall (1% of all male cancer), but most common form of cancer in males age 20-34

Painless nodule on or within the testicle

Cancerous testicle will be larger (and may feel heavy) on that side

## Indirect Inguinal Hernia

Most common type of hernia, comprising 60% of all hernias

The hernia passes down the inguinal canal exiting at the external inguinal ring

Upon examination, the hernia presses the tip of the palpating finger

## Direct Inguinal Hernia

Second most common type of hernia

The hernia does not pass through the inguinal canal, but exits 'directly' through the external inguinal ring

The hernia presses palpating finger anteriorly when patient coughs or bears down

## Femoral Hernia

Femoral hernia is in the groin, but is not an inguinal hernia

Least common groin hernia, and occurs primarily in obese women after several pregnancies

Presents as a bulge at the site of the femoral pulse

## Gynecological

### Premenstrual Syndrome

Very common, affecting 20-90% of all women during their child bearing years

Nervousness, irritability, emotional instability, anxiety, depression, and possibly headaches, edema, and mastalgia

Occurs during the 7 to 10 days before the onset of menses

### Primary Dysmenorrhea (functional dysmenorrhea)

Crampy lower abdominal pain that starts 12-24 hours prior to the onset of menses

### Secondary Dysmenorrhea (acquired dysmenorrhea)

Caused by organic pathology, such as endometriosis, uterine fibroids, or PID

### Amenorrhea

Primary - Menarche delayed beyond about 16 years of age

Secondary - Cessation of periods in woman who was previously menstruating (pregnancy most common cause)

### Turner's syndrome

Genetic anomaly (missing X chromosome) causing a masculinized appearance in a female

Underdeveloped gonadal structures, amenorrhea, poor breast development

Short stature and webbing of the neck

### Polycystic ovarian syndrome

Ovaries enlarges with multiple cysts

Irregular periods or amenorrhea

Infertility, obesity, hirsutism

### Menopause

Typically occurs age 45-55; less than age 40 is considered premature

Hot flashes, night sweats

Vaginal dryness leading to painful intercourse

Nocturia and urge incontinence

Anxiety, nervousness, irritability

Speculum examination: pale, dry vaginal mucosa with abraded areas that bleed easily

Confirmed with elevated FSH lab test

## Endometriosis

Viable functioning endometrial tissue present outside the uterus  
Heavy menstrual bleeding (menorrhagia), perimenstrual pain, and painful intercourse (dyspareunia)  
Possible infertility

## Uterine fibroids

Benign firm lumpy tumor within the uterine wall  
Most common pelvic tumor in women; more common in African American women  
Most common symptom is heavy, possibly continuous menstrual bleeding

## Endometrial Cancer

Most common pelvic cancer, more common than cervical carcinoma  
Abnormal uterine bleeding

## Ovarian Cancer

Second most common gynecologic cancer  
Fourth highest cause of cancer death in American women  
Early ovarian cancer may be asymptomatic, or present with non-specific symptoms such as: back pain, fatigue, indigestion, constipation, abdominal pain  
Often fatal because it is detected late

## Cervical cancer

Third most common gynecologic cancer in women  
Intermenstrual bleeding or bleeding after intercourse  
May be picked up as a result of a routine PAP smear

## Ovarian Cyst

Menstrual irregularities, pelvic pain  
Possibly symptoms similar to pregnancy, i.e. morning sickness and breast tenderness

## Vulvovaginal infection

Vaginal discharge is the most common symptom cited by women seeking health care  
Candidiasis - thick 'cottage cheese' like discharge  
Gardnerella - gray white discharge, 'constant wetness', with a musty or fishy odor  
Trichomoniasis - frothy, yellow green, foul smelling discharge, 'strawberry' flea-bitten cervix

## Pelvic Inflammatory Disease (PID)

Most common among sexually active teenagers  
Purulent malodorous vaginal discharge  
CDC diagnosis guidelines require all of the following:

- Lower abdominal tenderness
- Adnexal tenderness
- Cervical motion tenderness (Chandelier's sign)
- Absence of a competing diagnosis (such as appendicitis)

May also have fever & elevated WBC count, but these may not be present with mild infection

## Ectopic Pregnancy

Approximately 1% of all pregnancies are ectopic  
At least one half of these women have a history of previous PID infection  
Initially signs of normal pregnancy: amenorrhea, morning sickness, breast tenderness  
After about six weeks, the increased embryo size will begin to cause severe abdominal pain, and possibly vaginal bleeding  
If rupture and hemorrhage occurs, the woman may manifest signs of shock: decreased BP, clammy skin, pallor, tachycardia  
It is impossible for an ectopic pregnancy to come to term; the pregnancy will be terminated by either surgery or miscarriage

## Cystocele ('dropped bladder')

Protrusion of the bladder through the anterior wall of the vagina

## Rectocele

Part of the rectum protrudes through the posterior wall of the vagina

## Pregnancy

- Missed period
- Morning sickness (nausea, vomiting) of 1-4 months duration
- Weight gain
- Breast tenderness and engorgement
- Areola enlarges and becomes darker
- Mongomery's tubercles become more prominent
- Blue network of mammary veins become more visible

## Vascular and Lymphatic

### Hodgkin's disease

- May present as a lump or swelling in their neck, groin, or axilla
- May be discovered when lung hilar lymph nodes are more visible on a routine chest x-ray
- Fever, night sweats, weight loss, fatigue and severe itching
- Enlarged lymph nodes may palpate as rubbery or matted
- Possible splenomegaly
- Anemia and lymphocytopenia may manifest
- Definitive diagnosis requires the presence of Reed-Sternberg cells (unusually large multinucleated white blood cells) in a lymph node biopsy

### Infectious mononucleosis

- Most often seen in adolescents
- Sometimes referred to as the 'kissing disease' because the virus can be spread via saliva
- Symptoms are similar to flu: fever, sore throat, headache, fatigue, malaise
- Often causes cervical lymphadenopathy
- Possible splenomegaly
- Confirmed via the Monospot test (the Paul-Bunnell test was an early version of this test)
- A blood smear will disclose large atypical lymphocytes (Downey cells)

### Human Immunodeficiency Virus (HIV) Infection

'Red flag' symptoms that should alert you to the possibility of AIDS:

- long term fatigue for no apparent cause
- lymph nodes swollen for over six months
- fever that lasts for more than ten days
- night sweats
- unexplained weight loss
- severe persistent diarrhea
- purplish or discolored lesions on the skin or mucous membranes that do not heal

ELISA lab test has false positives, so must be confirmed with Western Blot test

CD4 count is used to monitor the progression of the disorder

### Peripheral Arterial Occlusion

- Intermittent claudication - cramping muscle pain in the legs while walking, relieved with rest
- Decreased or absent pulses; Pale, cool skin with a possible absence of leg hair
- Sudden throbbing pain if a thrombus breaks loose and becomes lodged
- Leriche's syndrome: 'saddle thrombus' blockage at the bifurcation of the aorta
- Buerger's test may show 'elevation pallor, dependent rubor'
- Arterial insufficiency skin ulcers have well defined edges with no bleeding

### Thromboangitis Obliterans (Buerger's Disease)

A specialized form of peripheral arterial occlusion

Occurs primarily in men, age 20-40, who are smokers

### Raynaud's Syndrome

- Vasospasm of the small arterioles of the fingers resulting in impaired blood flow, primarily in young women
- Initially the fingers turn white from the lack of blood, then blue as the blood gradually returns, then red when the blood vessels undergo full dilation

#### Acrocyanosis

Similar to Raynaud's in that it causes a bluish discoloration of the hands

Differs from Raynaud's in that the fingers do not show white or red skin discoloration

#### Erythromelalgia

Arterial vasodilation that causes swelling, redness, and a burning pain in the feet

#### Superficial thrombophlebitis

Usually occurs in conjunction with varicose veins

Leg pain that may be burning or throbbing

A tender cord may be palpable and visible beneath the surface of the skin

#### Deep vein thrombosis (DVT)

Less common than superficial thrombophlebitis, but more serious due to larger clots

Most common location for DVT is the calf

Leg may be swollen and edematous, red, and hot to touch

Homans' foot dorsiflex test may be positive, although this test is often false positive

#### Venous Insufficiency

Risk factors include pregnancy, obesity, and occupations that involve prolonged standing

Decreased flow of blood back to the heart leads to pitting edema

Skin becomes thick and 'brawny' due to accumulation of waste products

In contrast to arterial insufficiency, pulses are normal

Venous insufficiency ulcers have bleeding uneven edges

Superficial varicosities present as bluish, ropelike cords beneath the skin

#### Lymphedema

Painless accumulation of excessive lymph fluid and swelling of subcutaneous tissues

Lymphedema produces non-pitting edema (vs. pitting edema seen with CHF)

Lymphedema skin may become thickened and harder than usual

#### Lymphangitis

May develop as a consequence of a wound such as an animal bite

Manifests as a painful red streak moving centrally from the site of infection

The infective organism is typically a strep or staph infection

Systemic symptoms such as fever, chills, headache, and myalgia may manifest