History and Physical Examination in the Emergency Department

COMPLETE YET FOCUSED

Principles of Emergency Care

► The immediate initial recognition, evaluation, care, and disposition of patients with acute illness and injury.

Emergency Department Care

Initial Approach and Stabilization

Clinical assessment

History and Physical exam

Clinical Reasoning

Preliminary differential diagnosis

Initiate management

Diagnostic Adjuncts

"Working diagnosis"

Disposition

History

- Patient
- Family
- Caregiver
- **EMS**
- Nursing Home
 - Transfer form
 - Call them
- Primary care physician

Language line if needed

Document where history is from



History

- Patient Comfort
 - Positioning
 - ► Fear/ pain
 - ► HOH
 - Noisy
- PA Comfort
 - Sit down if you can
 - Ask family to leave if disruptive
 - Safe distance



Chief Complaint

- Triage note
- Hopefully only one
- Start considering your differential diagnosis
- ▶ HPI based on this complaint



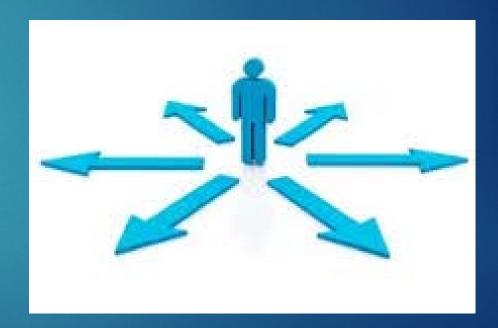
History of Present Illness (HPI)

- Open-ended question
 - "What problem are you having?"
 - Tell me about your headache."
 - Are you having stomach pain? Tell me about it."
 - "What brings you to the hospital today?"

HPI

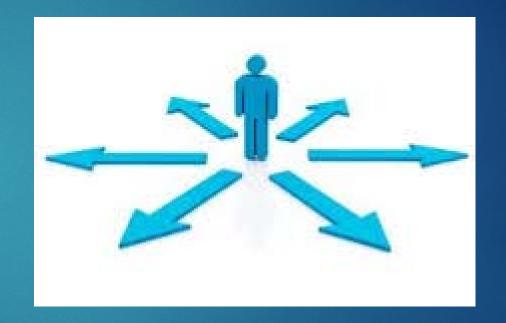
P-Q-R-S-T A-A-A

- Position
- Quality
- Radiation
- Severity
- Timing
 - Duration
 - Constant/ intermittent
- Alleviating factors
- Aggravating factors
- Associated symptoms



HPI

- Previous episode
- What Changed Today?



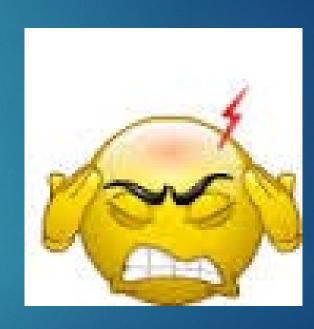
Neurologic History Altered Mental Status

- When was patient last seen normal?
- What is normal?
- Was change gradual or abrupt?
- Does the patient complain of anything?
 - Assess thorough R.O.S.
- Has condition changed since initially recognized?
- ► PMH?
- Current medications?
- Is there substance abuse?



Neurologic History Headache

- Severity
 - "Worst HA of my life"
- Onset of pain/Location
- History of headache
- History of head trauma
 - Anticoagulation
- Associated neurologic symptoms
- Infectious symptoms
- Age
- Prodrome
- Family History
- Exposure- travel v toxic



Neurologic History Seizure

- Prior history
 - ► How often?
 - Compliant with medication?
- What happened?
 - Onset-
 - Aura, trauma
 - Tongue biting
 - Incontinence
 - Focal v generalized
 - Post-ictal?
- Medication history
- Drug/ alcohol abuse
- Recent illness?
- PMH



Neurologic History Stroke

- Exact onset of symptoms
- Nature of symptoms
 - Weakness, speech, gait, vision, level of consciousness
- Associated symptoms
- History of similar in past?
- Baseline?
- Risk factors for stroke?
- Anticoagulants?



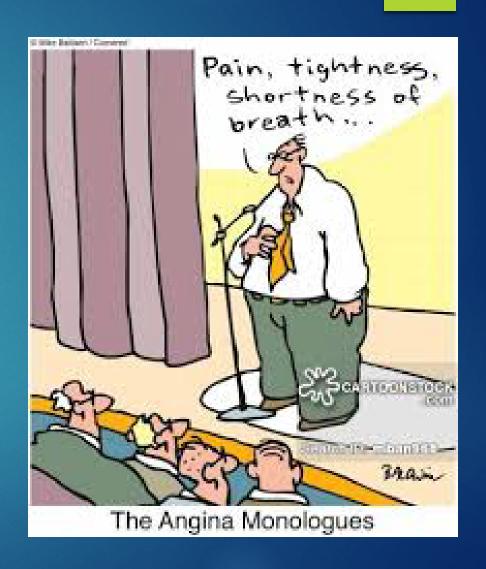
Cardiovascular History Chest pain

- Character of the pain
 - ► P-Q-R-S-T A-A-A
- Associated symptoms
 - ► SOB
 - Dizziness
 - Diaphoresis
 - Nausea/ vomiting



Cardiovascular History Chest pain

- Risk Factors
 - Age
 - Male
 - Hypertension
 - Diabetes
 - Smoker
 - Known h/o CAD
 - High cholesterol
 - ► Family History of CAD
 - Oral contraceptives in female >35yo



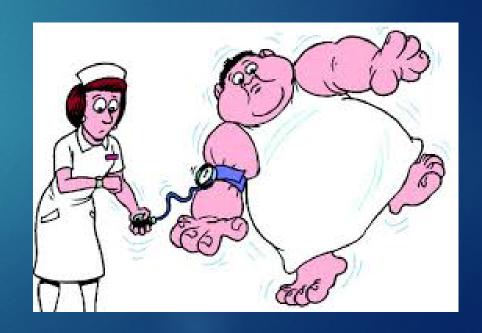
Cardiovascular History Syncope

- Inciting event?
- Prodrome?
- Urination/ defacation?
- Dehydration/blood loss?
- Chest pain / dyspnea/ palpitation?
- Seizure activity / neuro symptom?
- Pregnant?
- ► Trauma?
- ► H/o syncope?
- Diabetes?



Cardiovascular History Hypertension

- Neurologic symptoms
- Chest pain
- Congestive heart failure
- Hematuria
- Pregnancy
- Previous episode?
- Medication history / compliance
- Drug use



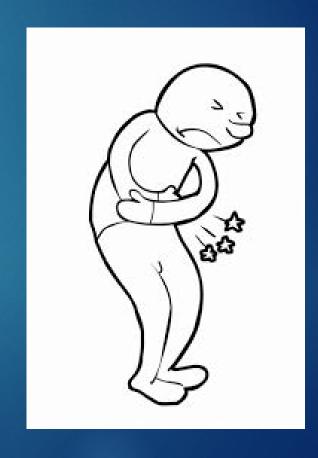
Gastrointestinal History Abdominal pain

- ▶ P-Q-R-S-T A-A-A
- Nausea/vomiting
- Change in bowel habits
- Anorexia
- Urgency to defecate
- Genitourinary symptoms



Gastrointestinal History Abdominal pain

- Extra-abdominal symptoms
 - Chest pain
 - ▶ SOB
- Fever
- Medical illness
- Past surgery
- Menstrual history
- Alcohol use
- Medication
 - Asa/ nsaids
 - corticosteroids



Gastrointestinal History Gl Bleeding

- How long?
- ► How frequent?
- Black stools / melena/ bright red blood?
- Estimate of blood loss?
- Syncope
- ► H/o Gi bleed?
- Related medical illness
 - Liver, PUD, etoh use, nsaid/ asa use
- Abdominal pain?
- Other bleeding?
- Extra-abdominal symptoms?
 - Chest pain, dizziness, sob

Gastrointestinal History Diarrhea

- Duration?
- Frequency?
- Appearance? Bloody?
- Worse with eating / drinking?
- Previous history of diarrhea?
- Fever
- Vomiting
- Abdominal pain
- Weight loss
- Travel history
- Recent antibiotics
- Unusual foods?- recent picnics??
- Sick contacts?
- Sexual orientation?



Pulmonary History Shortness of breath

- Sudden / gradual onset?
- ► How long?
- Pleuritic?
- Position?
- Exertional?
- ► H/o similar in past?
- Medication taken?
- Tobacco use?
- Associated symptoms-
 - ► Chest pain, cough, fever, hemoptysis, DOE
- Past Medical History
 - ▶ COPD, DVT, CHF, asthma, PE
- Recent travel/immobilization



Pulmonary History Wheezing

- History of asthma/ COPD?
- P-Q-R-S-T A-A-A
- Associated URI sx
- Fever
- Medications tried-?compliance
- Severity of underlying COPD / asthma
 - Hospitalizations
 - Intubations
- Weight gain
- Toxic exposure
- Tobacco use
- Foreign –body aspiration (peds patients)
- Cardiac history

Unstable Patient/ Trauma

A Allergies

M Medications

P Past Medical History

Past Surgical History

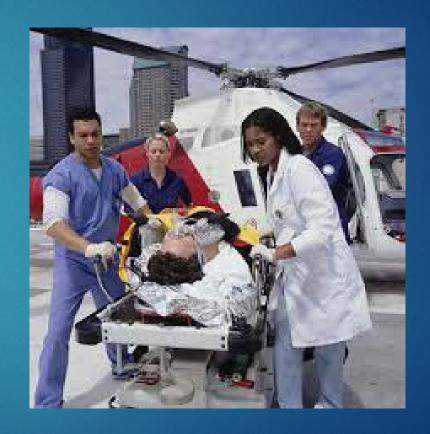
Pregnant

L Last meal

Last tetanus

LMP

E Events



Pediatric History

- Birth History
 - ► Term?
 - C-section/ vaginal
 - Complications
 - Perinatal infections
- Immunizations
- Feeding
- Wet diapers





Pregnant History

- Last menstrual period
- Vaginal bleeding
- Abdominal pain
- Fetal movement
- Previous pregnancy history
- Previous delivery history
- Complications this pregnancy
- STD history



Pregnant History G's and P's

- Gravida
 - Number of pregnancies
- Para
 - "Texas Power And Lighting"
 - ▶ T- term infants
 - ▶ P- preterm infants
 - A- abortions (both elective and spontaneous)
 - ► L- living children
- ► G3P1102

Psychiatric History

- Previous history
- Suicidal
- Homicidal
- Hallucinations
- Hospitalizations
- Compliance with medication
- Agitation, paranoia, delusions
- Flight of ideas
- Substance abuse
- Medical complaints



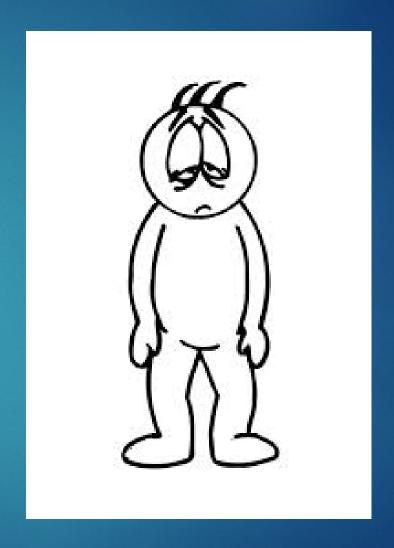
Wound History

- Force of injury
- Time since injury
- Contamination
- Tetanus status
- Handedness of patient (with UE injury)
- Medical illness
- Medication



Review of Systems General

- Fever
- ► Chills
- Change in weight
- Weakness
- Fatigue
- Sweats



Review of Systems Eyes

- Corrective lens/ contact lens
- Change in vision
- Double vision
- Tearing
- Pain
- Light sensitive
- Redness
- Discharge
- History of glaucoma
- Injury



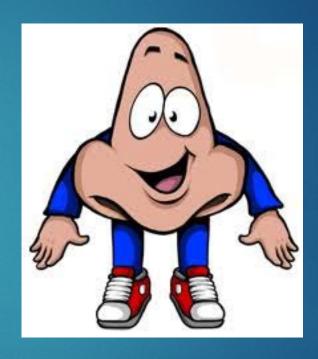
Review of Systems Ears

- Loss of hearing
- Discharge
- Dizziness
- Pain
- Ringing in ears
- Infection



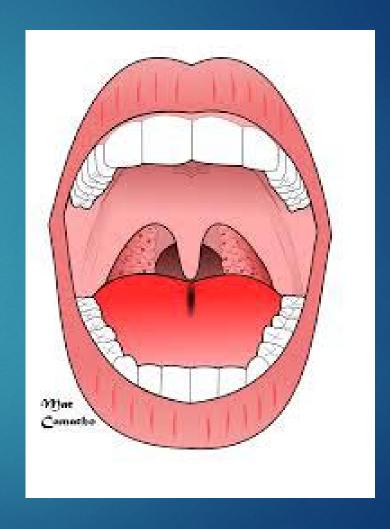
Review of Systems Nose

- Nosebleeds
- Infections
- Discharge
- History of injury
- Sinus infections
- Hay fever



Review of Systems Mouth/Throat

- Pain
- Hoarseness
- Voice change
- Difficulty swallowing
- Difficulty breathing
- Post nasal drainage
- Dental pain
- Bleeding gums



Review of Systems Neck

- Lumps/ swelling
- Goiter
- Pain on movement
- Tenderness



Review of Systems Respiratory

- Cough
- Pain
- Shortness of breath
- ► Sputum production-?color
- Pleuritic pain
- Hemoptysis
- Wheezing



Review of Systems Cardiovascular

- Chest pain
- Palpitations
- ► SOB with exertion
- Orthopnea
- High blood pressure
- Leg swelling
- Dizziness
- Pleuritic pain
- Pain in legs/ calves



Review of Systems Gastrointestinal

- Appetite
- Nausea
- Vomiting
- Diarrhea/ constipation
- Abdominal pain
- Change in stool
- Hematemesis
- Rectal bleeding
- Jaundice
- Abdominal distension



Review of Systems Genitourinary

- Dysuria
- Urinary frequency
- Urgency
- Hematuria
- Incontinence
- Flank pain
- Retention



Review of Systems Male Genitalia

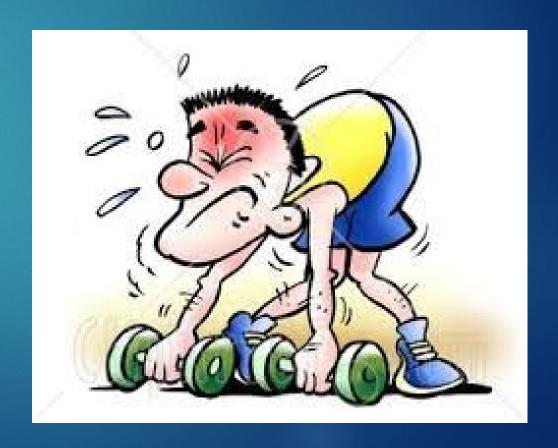
- Lesions on penis
- Discharge
- Impotence
- Pain
- Scrotal swelling or pain
- Bleeding

Review of Systems Female Genitalia

- ► Lesions/ Rash
- Discharge
- Vaginal bleeding
- Dyspareunia
- ▶ h/o STD

Review of Systems Musculoskeletal

- Weakness
- Paralysis
- Stiffness
- ▶ Limited ROM
- Joint pain



Review of Systems Neurologic

- Syncope
- Dizziness
- Weakness/ paralysis
- Numbness
- Tremor
- Amnesia
- Loss of consciousness
- Difficulty with speech
- Unsteady / change in gait
- Confusion



Review of Systems Skin

- Rash
- Pruritic/ Painful
- Hives
- Bruising
- Discoloration
- Warmth

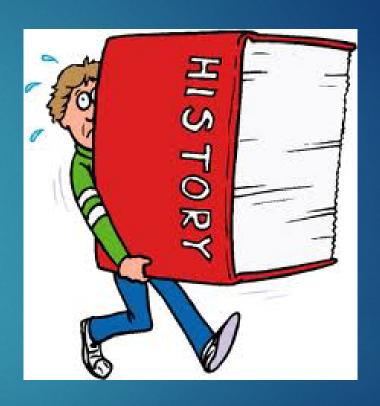
Review of Systems Psychiatric

- Depression
- Suicidal / homicidal
- Insomnia
- Hallucinations
- Anxiety
- Agitation



Past Medical History

- Medical illness
- Previous surgery
- Hospitalizations
- Immunizations
- Mental Health History



Medication

- Current medication
- Any recent changes
- Dosage not so important!!



Allergies

- Allergies to medication
- Ask reaction
 - ?anaphylaxis
 - > ?intolerance



Social History

- Alcohol
- Tobacco
- Illicit drugs
- Living situation



Family History

- Not always necessary
- Chest pain/ CAD
- Abdominal pain/ diarrhea
- ▶ DM
- Migraine
- ▶ Palpitations- sudden death



Physical Exam Getting Ready

- Lights
- Undress
- Equipment
- Wash Hands
- Gloves if necessary



PHYSICAL EXAM

- **►**Inspection
- **Palpation**
- Percussion
- Auscultation

Physical Exam

DEVELOP

A

ROUTINE!!

Physical Exam Vital Signs

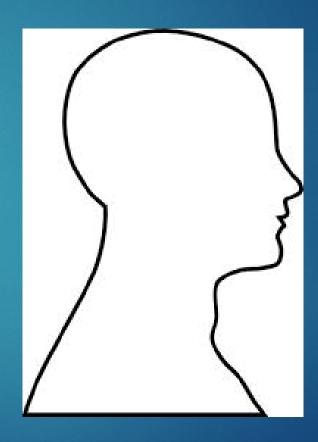
- Temperature
- Respiratory Rate
- Heart Rate
- Blood Pressure
- Oxygen Saturation
- Fetal Heart Tones (6th vital sign if pregnant)

Physical Exam General

- Appearance
- Level of consciousness
- Respiratory status
- Discomfort

Physical Exam HEENT

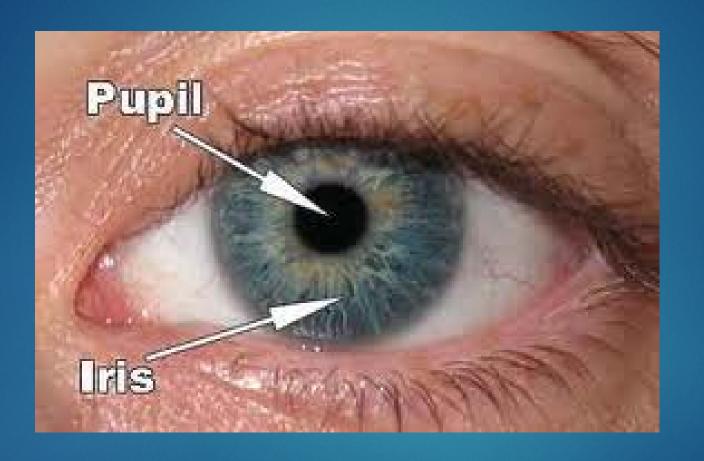
- ► HEAD
 - ▶ Inspect
 - Palpate



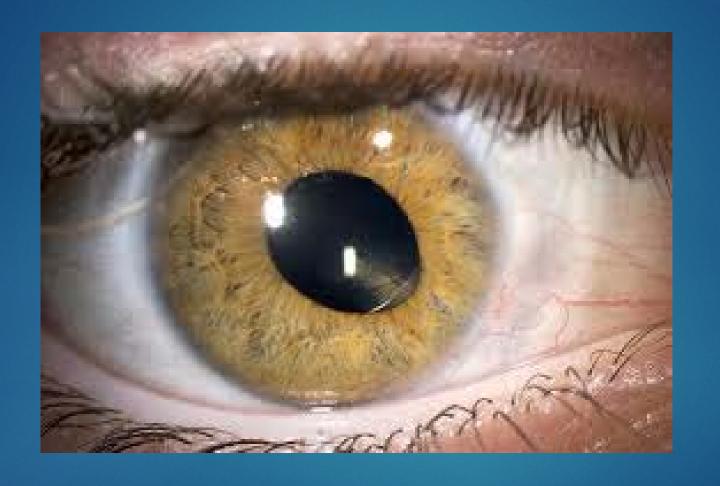
Physical Exam HEENT- EYE

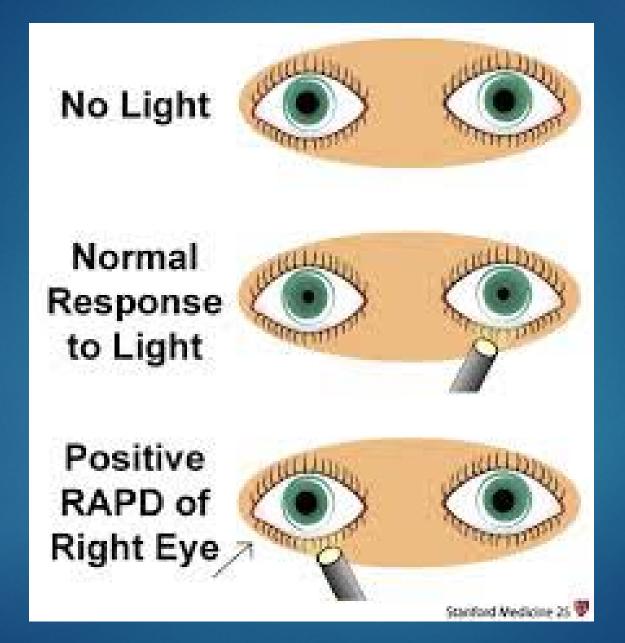
PUPIL

- ▶ Inspect
 - Miosis / Mydriasis
 - ► Irregular
- ▶ Reactive
 - ► Marcus Gunn Pupil









Physical Exam HEENT- EYE

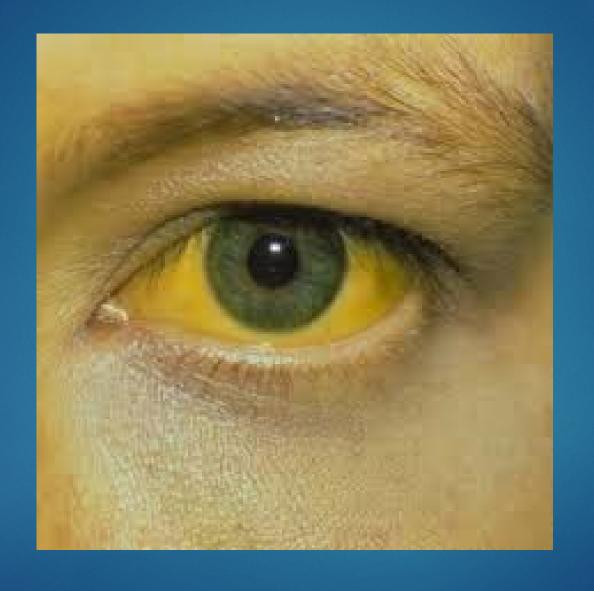
Sclera

▶ Lid

Conjunctiva









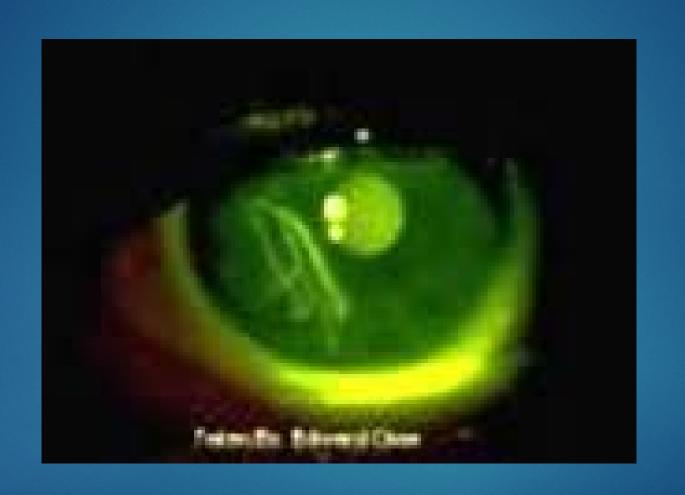


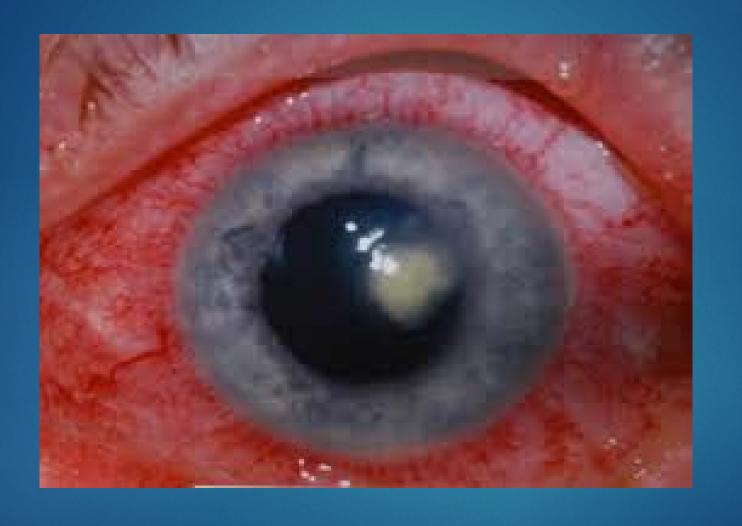


Physical Exam HEENT- EYE

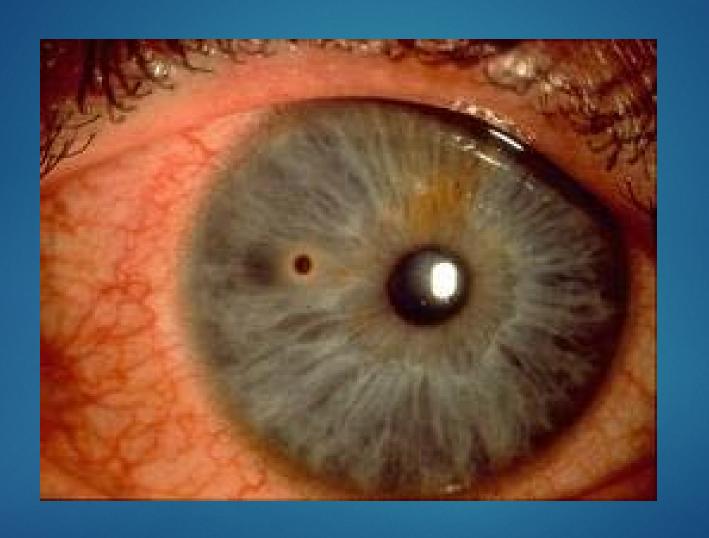
- Cornea
 - Clear
 - Foreign body
 - Abrasion
 - Ulceration

SLIT LAMP EXAM





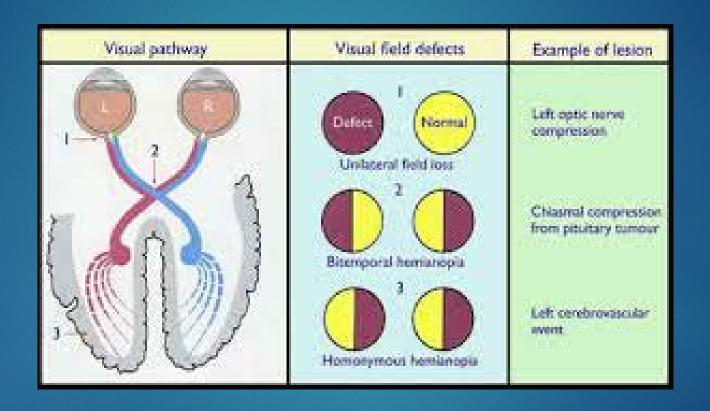




Physical Exam HEENT- EYE

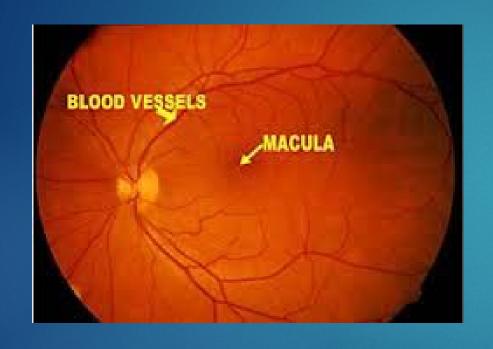
- Visual Acuity
- Visual Fields
- Ocular movements
 - Nystagmus
- Fundoscopic Exam
- Ocular pressure
 - Tonopen

AREGOIN GQUITE BLINDNOWT HATYOUREOLDASTHEHILLS MATREMOTSORADAFT ERALLIFYOU CANSTILLELADINGS







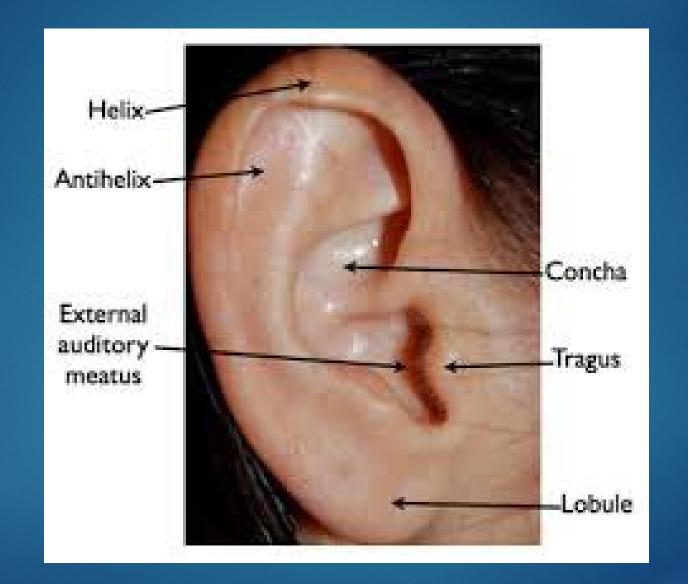




Physical Exam HEENT- EAR

- External Ear
 - Pinna
 - External auditory canal
- Middle Ear
 - ▶ Tympanic Membrane

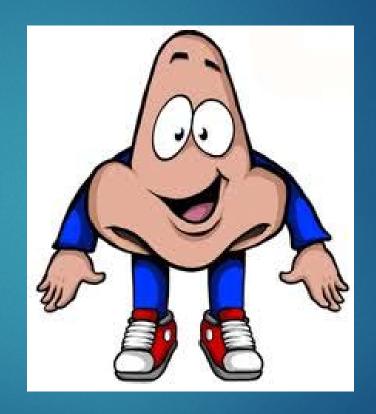






Physical Exam HEENT- Nose

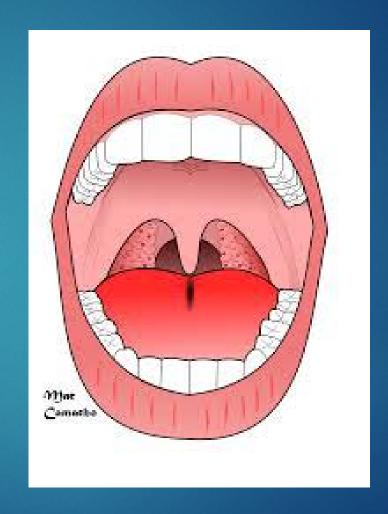
- Obstruction
- Discharge
- Bleeding

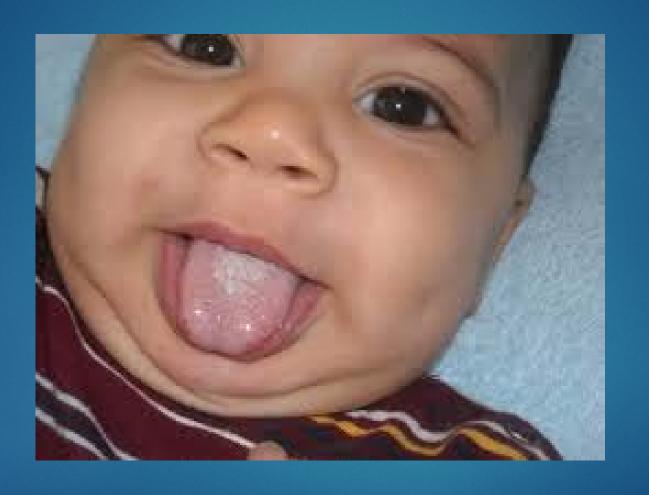




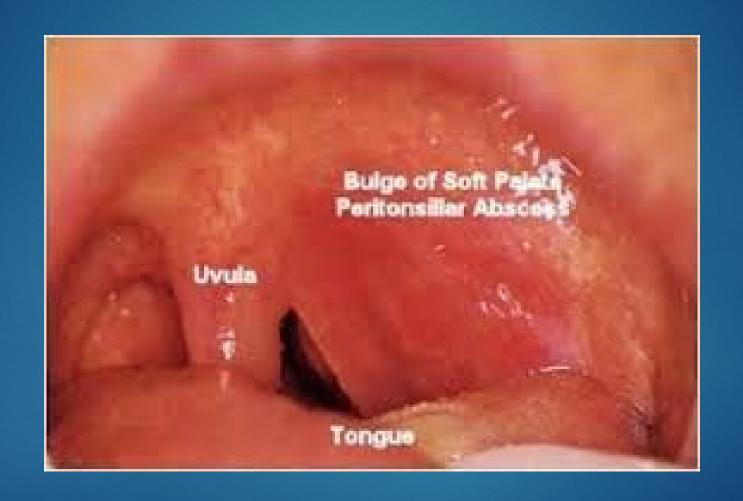
Physical Exam HEENT- THROAT

- Oral Cavity
 - Buccal mucosa
 - Lips
 - ▶ Tongue
 - ► Hard and soft palate
 - Teeth
- Pharynx
 - ► Tonsils
 - Uvula









Physical Exam NECK

- Lymphadenopathy
- Masses
- Symmetry
- ▶ Thyroid gland
- Carotid bruits



Physical Exam LUNGS

- INSPECTION
 - Retracting/ tugging
 - Symmetry
 - Respiratory rate
- PALPATION
 - Tenderness
 - Crepitus
 - Subcutaneous emphysema
- PERCUSSION



Physical Exam LUNGS

AUSCULTATION

- Stridor
- Crackles
- Wheezes
- Rhonchi
- Pleural Rub









Physical Exam Cardiovascular

- > AUSCULTATION
 - ► Rhythm
 - ▶ S1 and S2
 - ▶ S3 and S4
 - ► Murmurs
 - Graded 1-6
 - ► Systolic v diastolic
 - Rub



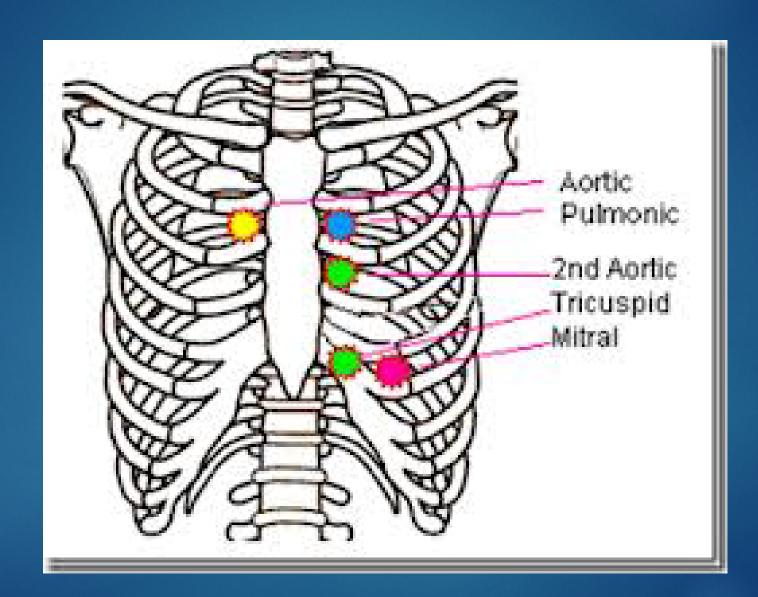
Physical Exam Cardiovascular

MURMURS

VI

Lowest	intensity,	often	not	heard	by	inexp	perienced	d
	<i>J</i> '							

- Il Low intensity, usually audible by experienced listeners
- III Medium intensity without a thrill
- IV Medium intensity with a thrill
- V Loudest murmur that is audible when the stethoscope is placed on the chest
 - Loudest intensity; audible when stethoscope is removed from the
 - chest



Physical Exam Cardiovascular

- ▶ JVD
- Hepatojugular Reflex
- Symmetrical Pulses
- Edema



- INSPECTION
 - Distention
 - Grey Turner's sign
 - ► Flank ecchymosis
 - ► Cullen's sign
 - Umbilical ecchymosis
 - Hernia
 - Surgical Scars







- AUSCULTATION
 - Bowel sounds
 - Abdominal bruits



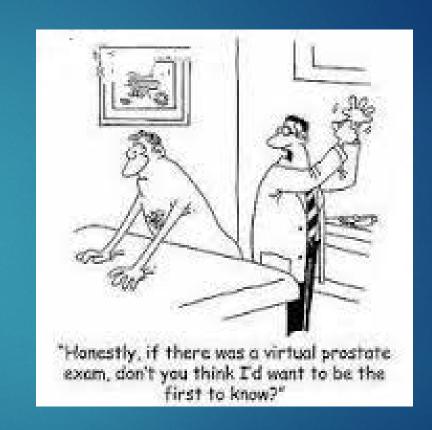
- PERCUSSION
 - Tympany
 - Ascites



- PALPATION
 - Rigidity
 - Tenderness
 - Murphy's Sign
 - Rebound
 - Guarding
 - Hepatomegaly
 - Splenomegaly
 - Masses



- Rectal Exam
 - External exam
 - Palpate rectal walls
 - Palpate prostate gland
 - Test for occult blood



Physical Exam Musculoskeletal

- Inspection
 - Deformity
 - Swelling/ Edema
 - ► Color
 - ► Ecchymosis
 - Erythema
 - ▶ Pale/ mottled
 - Wounds



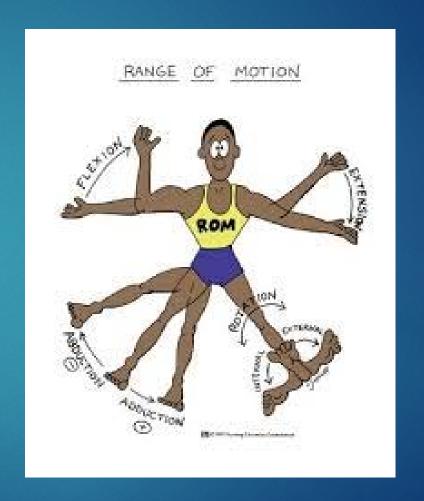
Physical Exam Musculoskeletal

- PALPATION
 - Tender
 - Swelling
 - Edema
 - Effusion
 - Warmth
 - Ecchymosis



Physical Exam Musculoskeletal

- RANGE OF MOTION
 - > ?Limited
 - Pain
 - Active v passive
- Pulses
- Neurologic Function



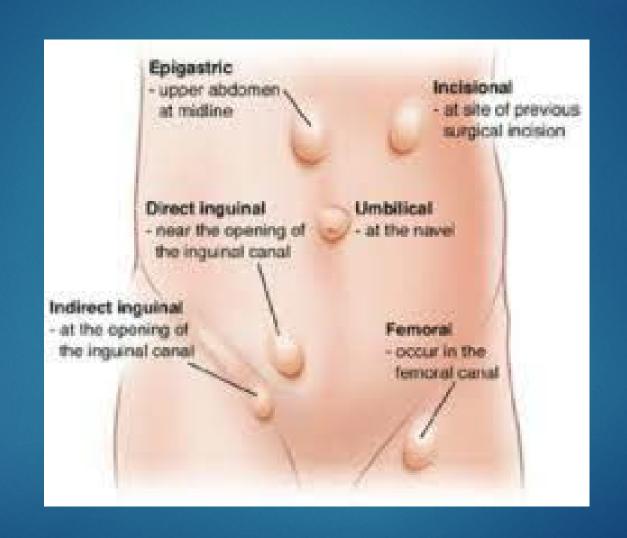
Physical Exam Musculoskeletal

- SPINE
 - C-spine
 - ▶ C-collar
 - ▶ Palpate midline
 - ► Thoracic and Lumbar Spine
 - ▶ Palpate midline
 - > ?Step-off
 - Swelling/ bruising

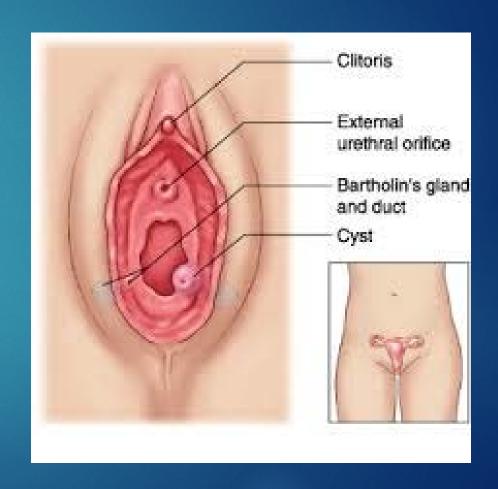


- MALE GENITALIA
 - Penis
 - ► Lesions/ rash
 - > ?circumcised
 - Edema
 - Discharge

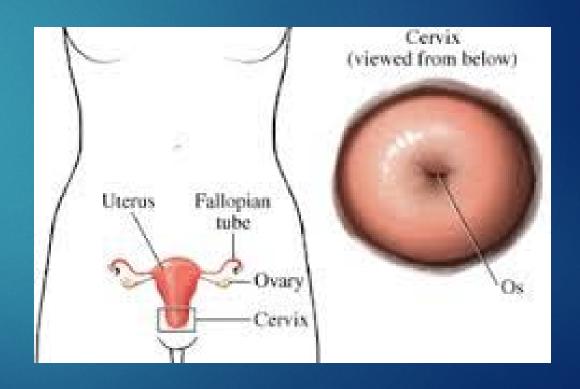
- MALE GENITALIA
 - ► SCROTUM
 - Palpate testes
 - ▶ Palpate epididymis
 - Palpate for inguinal hernias
 - ► INGUINAL LYMPHADENOPATHY



- FEMALE GENITALIA
 - External Genitalia
 - Lesions/ rash
 - Swelling
 - Discharge
 - ▶ Inspect Labia
 - ► Bartholin's abscess



- ► FEMALE GENITALIA
 - ► SPECULUM EXAM
 - ▶ Vagina
 - ▶ Cervix
 - Discharge
 - ▶ Bleeding
 - ▶ Lesions/ mass



- FEMALE GENITALIA
 - ► BIMANUAL PALPATION
 - ► Cervical Motion Tenderness
 - ▶Palpate uterus
 - ▶Palpate adnexa



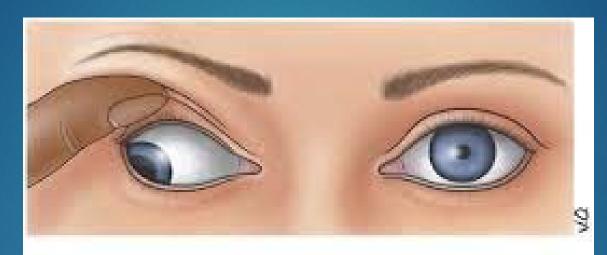
- MENTAL STATUS
 - ▶ Level of Consciousness
 - Speech
 - Orientation



Physical Exam Neurologic- CRANIAL NERVES

1	Olfactory	Smell
II	Optic	Vision
Ш	Oculomotor	Eye movement, pupil constriction
IV	Trochlear	Eye movement
V	Trigeminal	Sensation of face, scalp, teeth
VI	Abducens	Eye movement
VII	Facial	Taste; sensation of palate/ ear; facial expression
VIII	Vestibulocochlear	Hearing; equilibrium
IX	Glossopharyngeal	Taste; elevates palate
Χ	Vagus	Taste; swallowing; phonation; parasympathetic
XI	Spinal accessory	Phonation; head, neck, shoulder movement
XII	Hypoglossal	Tongue movement

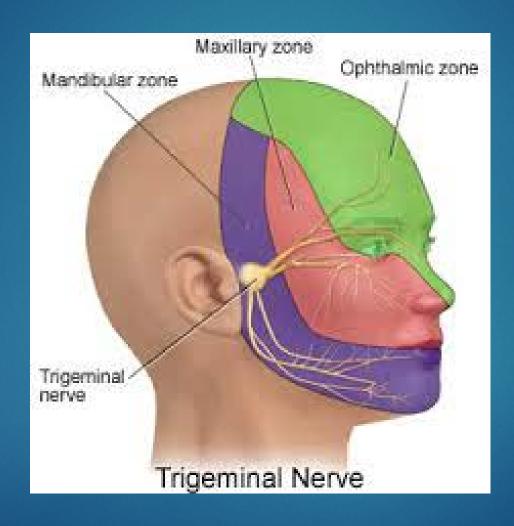
Third Cranial Nerve



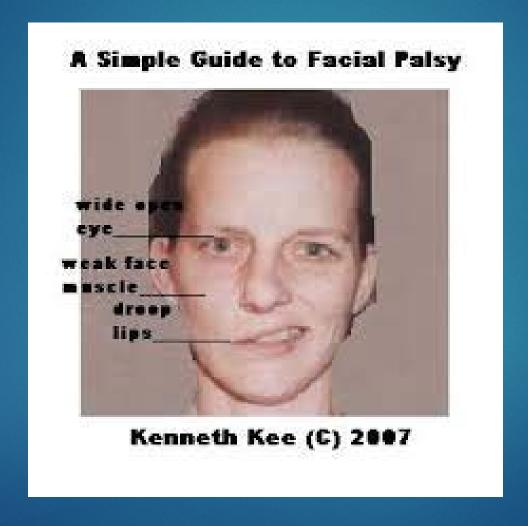
Right eye: Downward and outward gaze, dilated pupil, eyelid manually elevated due to ptosis Left: Normal

Desymptor (COLD William House Health) Lagranger Whitera & William

Trigeminal Nerve



Facial nerve palsy



- MOTOR FUNCTION
 - 0 No contraction detected
 - 1 Slight contraction detected
 - 2 Movement with gravity eliminated
 - 3 Movement against gravity
 - 4 Movement against gravity with some resistance
 - 5 Movement against gravity with full resistance

- MOTOR FUNCTION
 - Upper Extremity
 - Lower extremity

▶ Isolate each muscle group from proximal to distal

Physical Exam Neurologic- Motor Function

Nerve Root	Muscle	Primary Function	
C3, C4	Diaphragm	Respiration	
C5	Deltoid	Abduction of forearm	
C5	Bicep	Flexion of forearm	
C6	Brachioradialis	Flexion of forearm	
C7	Tricep	Extension of forearm	
L3, L4	Quadricep femoris	Extension of knee	
L5	Extensor hallucis longus	Dorsiflexion of great toe	
S1	Gastrocnemius	Plantar flexion	

- ► REFLEXES
 - O No response
 - 1+ Diminished
 - 2+ Normal
 - 3+ Increased
 - 4+ Hyperactive

► REFLEXES

▶ Bice	p	C5-6	6

- ▶ Brachioradialis C5-6
- ► Tricep C6-8
- ▶ Patellar L2-4
- ► Achilles S1-2





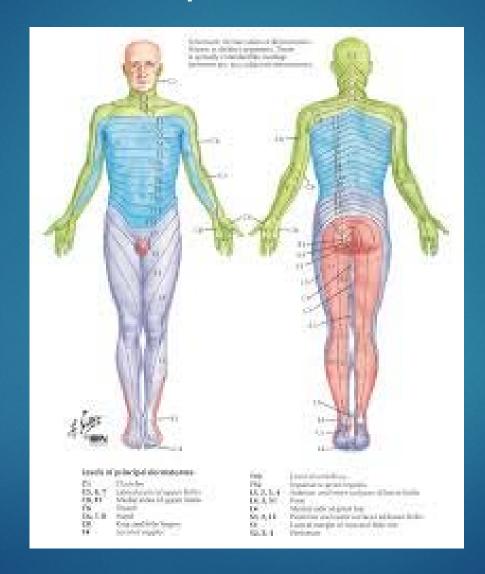






- > SENSORY FUNCTION
 - ► Light Touch
 - ▶ Pain Sensation- Sharp/ dull
 - ▶ Vibration Sense
 - ▶ Proprioception
 - ► Two-Point Discrimination

Dermatome Map



- > CEREBELLAR FUNCTION
 - ► Finger-to- Nose Test
 - ► Heel- to Shin Test
 - ► Romberg's Test
 - ▶ Gait

Not Quite....



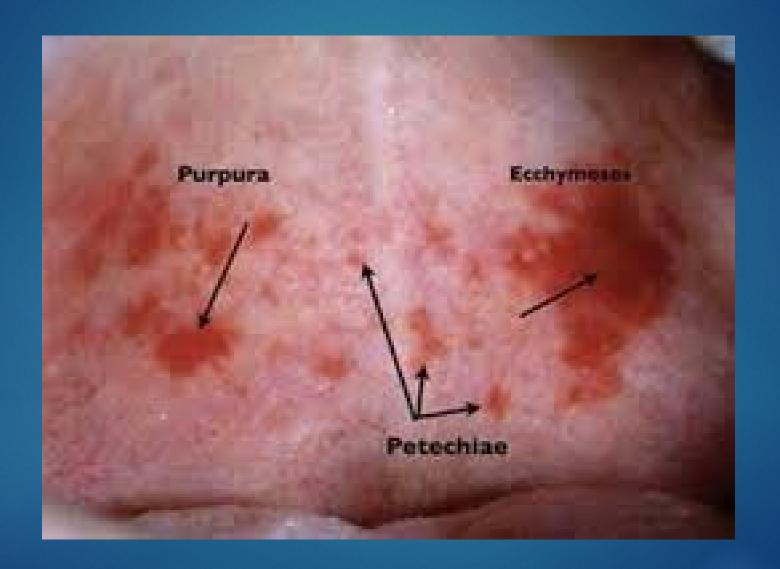




Physical Exam Skin

- General Condition
 - ► Color, turgor, moisture
- Rash description
 - Macular
 - Papular
 - Vesicular
 - Petechial
 - Urticarial
 - Pustule
 - Purpura

LESIONS	DESCRIPTION	EXAMPLES
Macule	Non-palpable, skin color change, < 1 cm	Freckle
Papule	Palpable, circumscribed, < 0.5 cm	Elevated nevi
Nodule/tumor	Palpable, circumscribed, 0.5 cm or >	Wart
Vesicle	Serous fluid-filled, < 1 cm	Blister
Pustule	Pus-filled	Acne
Wheal	Palpable, irregular borders	Mosquito bite



History and Physical Exam

- ► CHIEF COMPLAINT
- **FOCUS**
- ► ESTABLISH ROUTINE
- COMPILE INFORMATION

Presentation

- Concise
 - Present <3min</p>
 - State chief complaint first and stay focused on CC unless other concerning problems
- Essential information
 - Use clinical judgement to edit patient information
 - Emphasize findings that include/ exclude potential diagnosis

Oral Presentation

- Chief Complaint
- ► HPI
 - ► Include pertinent PMH / PSH in first line
 - Include pertinent ROS, Social Hx, Family Hx
- Meds
- Physical Exam
 - Pertinent positives/ negatives
- Summary Statement
 - ▶ 1-2 sentence clinical picture
- Problem Assessment
 - Opinion
 - ▶ Problems from most → least serious
- Plan



SUCCESS

Because you too can own this face of pure accomplishment