NPTE Final Frontier Boot camp: Path to passing the NPTE

APTA, TN

NPTE FINAL FRONTIER!

- **NPTE Final Frontier was launched by Bhupinder Singh, PT, PhD, founder and lead instructor**
- Team of 50+ licensed professionals
- We strive to provide innovative, high-quality educational tools and personalized support to ensure that every candidate can successfully pass the NPTE

My Profile!

- **Licensed Physical Therapist (TX, NJ and VA)**
- **Outpatient clinic in Northern Virginia**
- **Board-Certified Specialist in Orthopedic and Women's healthPhysical Therapy**
- **Doctor of Physical Therapy from Touro University in NY, Bachelor's & Master's degrees in Physical Therapy from India**
- **Lead instructor at NPTE final frontier and OCS Final frontier**

STRUCTURE OF THE NPTE!

NPTE-PTA

180 questions
140 scored / 40 pretest
Up to 145 texts + graphics +videos
Up to 35 scenario based

NPTE-PT

225 questions
180 scored / 45 pretest
Up to 185 texts + graphics +videos
Up to 40 scenario based

NPTE- Types of Questions

- Level 1- Level 3 Questions
- Direct Questions
- Prevention/Emphasis Questions
- Concept Questions
- Think Gold Questions

Day 1 – Schedule

- **8:00 a.m. - 12:00 p.m. - Examination, Differential Diagnosis**
- **12:00 – 1:00 p.m. - Lunch**
- **1:00 - 5:00 p.m. – Interventions, Non systems and exam strategies**
- **Questions**

Let’s TEST the Polls!

PollEv.com/priyams737

Differential Diagnosis

MSK DD – General Rules

Tendonitis	Bursitis	Capsulitis
• Pain with muscle contraction - **AROM** • Pain with stretching of the muscle • Tender on palpation throughout the muscle or tendon • Ex: Achilles tendonitis, Rotator cuff tendonitis	• Pain with **AROM, PROM** and at rest if acute • Pain with pressure on the bursa, felt as a palpable mass if superficial • Tender to palpation of bursa • Ex: Subacromial bursitis, Trochanteric bursitis	• Pain with AROM/ PROM when the capsule is **stretched** • Limitations in the joints **capsular pattern** (AROM or PROM) • Ex. Adhesive capsulitis: ER > AB > IR

Practice Question 1

A patient is being seen in a physical therapy clinic for a diagnosis of peroneal tendonitis. Which of the following findings are MOST likely to be seen on examining this patient?

A. Pain with active ankle inversion
B. Pain with passive end range ankle eversion
C. Pain with passive end range ankle inversion
D. Pain with isometric ankle inversion

MSK – Pediatric Hip Pain

	Legg-Calve-Perthes (LCPD)	Slipped Capital Femoral Epiphysis (SCFE)	Congenital Hip Dysplasia (CDH)
Age	2 - 10 years	10 - 18 years	Birth, can be diagnosed later
Definition	Deformity/flattening of femoral head: AVN	Displacement of femoral head due to slippage from the growth plate	Subluxation or dislocation of the hips
Cause	Reduced blood supply	Traumatic, obesity	Abnormal development of the femoral head and acetabulum in utero
Movements Limited	Extension, abduction and IR (EXABIR)	Flexion, abduction and IR (FABIR)	Abduction limited most, flexion over 90°
Tests	Radiographs	Radiographs	Barlow: FADDIR, Ortolani: FABER, Galeazzi sign
Intervention	Conservative treatment, bracing	Surgical treatment to stabilize the fracture	Pavlik harness, Frejka pillow – 23 to 24 hours a day

SCENARIO BASED QUESTION 2

Setting: Outpatient clinic
Sex: Male
Age: 32 years

Presenting Problem / Current Condition:
Pain and stiffness in R hip, thigh and groin region that worsens with sitting for longer duration.
He works out every morning; Cycling, squatting and deadlifts increase the hip pain.

Medical History: No related medical conditions, takes NSAIDS to relieve pain as needed

Other Information: He is a software engineer and sits for over 8 hours a day. He lives in a 2-floor townhouse with his wife.

Physical Therapy Examination:
X ray normal
PROM R hip: Flexion 110 deg, Extension 10 deg, Abduction 25 deg, Internal rotation 15 deg, External rotation 45 deg
MMT: Hip flexors, Abductors, Internal and External rotators: 4/5 on Right, 5/5 on Left
Positive Thomas test on the Right, clicking sound with hip movements

Practice Question 2.1

Setting: Outpatient clinic
Sex: Male
Age: 32 years

Presenting Problem / Current Condition:
Pain and stiffness in R hip, thigh and groin region that worsens with sitting for longer duration. He works out every morning; Cycling, squatting and dead lifts increase the hip pain.

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MMT: Hip flexors, Abductors, Internal and External rotators: 4/5 on Right, 5/5 on Left
Positive Thomas test on the Right, clicking sound with hip movements

What is the MOST LIKELY diagnosis for the patient?

A. Femoral neck fracture
B. Hip osteoarthritis
C. Slipped capital femoral epiphysis
D. Femoroacetabular impingement

Practice Question 2.2

Setting: Outpatient clinic
Sex: Male
Age: 32 years

Presenting Problem / Current Condition:
Pain and stiffness in R hip, thigh and groin region that worsens with sitting for longer duration. He works out every morning; Cycling, squatting and dead lifts increase the hip pain.

Medical History: No related medical conditions, takes NSAIDS to relieve pain as needed

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Physical Therapy Examination:
X ray normal
PROM R hip: Flexion 110 deg, Extension 10 deg, Abduction 25 deg, Internal rotation 15 deg, External rotation 45 deg
MMT: Hip flexors, Abductors, Internal and External rotators: 4/5 on Right, 5/5 on Left
Positive Thomas test on the Right, clicking sound with hip movements

Which of the following movements will MOST likely aggravate the pain?

A. Internal rotation with hip flexed and adducted
B. External rotation with hip flexed and abducted
C. Internal rotation with hip extended and adducted
D. External rotation with hip extended and abducted

Practice Question 2.3

Setting: Outpatient clinic
Sex: Male
Age: 32 years

Presenting Problem / Current Condition:
Pain and stiffness in R hip, thigh and groin region that worsens with sitting for longer duration. He works out every morning; Cycling, squatting and dead lifts increase the hip pain.

Medical History: No related medical conditions, takes NSAIDS to relieve pain as needed

Other Information: He is a software engineer and sits for over 8 hours a day. He lives in a 2-floor townhouse with his wife.

Physical Therapy Examination:
X ray normal
PROM R hip: Flexion 110 deg, Extension 10 deg, Abduction 25 deg, Internal rotation 15 deg, External rotation 45 deg
MMT: Hip flexors, Abductors, Internal and External rotators: 4/5 on Right, 5/5 on Left
Positive Thomas test on the Right, clicking sound with hip movements

Which of the following is MOST likely to be included in the plan of care ?

A. Lunges
B. Higher seat positions when cycling
C. Leg press exercise
D. End range stretching into internal rotation and flexion

Hip Diagnosis – Know your keywords!

- **Femoroacetabular Impingement:**
  Active individual, hip and groin discomfort, pain with squatting, (+) FADDIR
- **Labral Tear:**
  Traumatic, pop at time of injury, clicking and catching with movements, limited in FADDIR
- **Trochanteric Bursitis:**
  Lateral hip pain, tenderness over greater trochanter, pain with IR and ER
- **Ischial Bursitis:**
  Localized pain with sitting
- **Hip OA:**
  Age >50, morning stiffness <30 min, pain with weight bearing, pain and loss of IR

Contest Time!

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Practice Question 3

A patient who is three months post-myocardial infarction has been coming to a PT clinic for cardiac rehabilitation. They report an increase in fatigue over the last few days. During examination, the therapist notes that the patient displays dyspnea with activities, and orthopnea. Auscultation findings reveal ventricular gallop and crackles. These signs should lead the therapist to suspect which condition?

A. Pneumothorax
B. Left-sided heart failure
C. Myocardial infarction
D. Right-sided heart failure

Cardiac Diagnosis – LHF vs RHF

Left Ventricular Failure	Right Ventricular Failure
Signs and symptoms of pulmonary congestion: • Dyspnea, dry cough • Orthopnea • Paroxysmal nocturnal dyspnea (PND) • Pulmonary rales, wheezing **Signs and symptoms of low cardiac output:** • Hypotension • Tachycardia • Lightheadedness, dizziness • Cerebral hypoxia: irritability, restlessness, confusion, impaired memory, sleep disturbances • Fatigue, weakness • Poor exercise tolerance • S3 heart sound, possibly S4	• Dependent edema • Weight gain • Ascites • Liver engorgement (hepatomegaly) • Anorexia, nausea, bloating • Cyanosis (nail beds) • Jugular vein distension • Right-sided S3 heart sounds

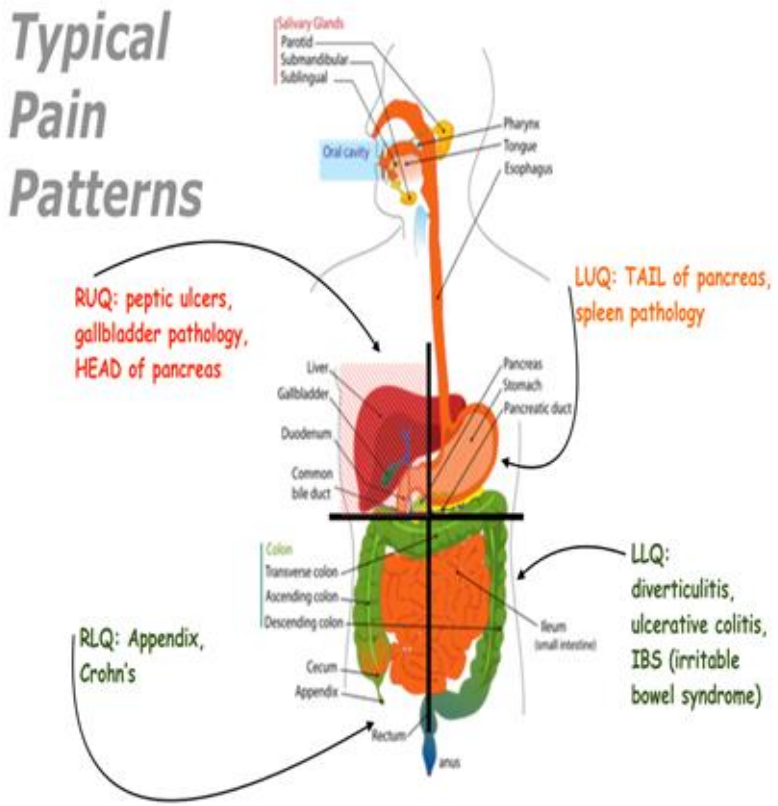
Practice Question 4 – Pediatric Neuro

A clinician is evaluating a two-year-old diagnosed with brachial plexus injury on the right side. The position of the extremity is as shown in the picture. At what level is the brachial plexus injured to result in this deformity?

A. C8-T1
B. C3-C4
C. C5-C6
D. C1-C2

Other System Examination – Referred Pain Patterns

LEFT UPPER QUADRANT	RIGHT UPPER QUADRANT
• Hiatal hernia • Pericarditis • Spleen pathology • Tail of pancreas • Left kidney	• Liver pathology • Peptic ulcers • Gallbladder pathology • Head of pancreas • Right kidney
LEFT LOWER QUADRANT	**RIGHT LOWER QUADRANT**
• Diverticulitis • Ulcerative colitis (IBD) • Irritable bowel syndrome	• Appendicitis • Crohn's disease (IBD)



Practice Question 5

A patient presents for an initial evaluation and reports of right sided mid-back pain and right shoulder pain. On examination, the patient has costovertebral tenderness. Patient also reports having fever, and blood in the urine. Which of the following organ is MOST likely the cause of this finding?

A. Kidney
B. Gallbladder
C. Liver
D. Urinary bladder

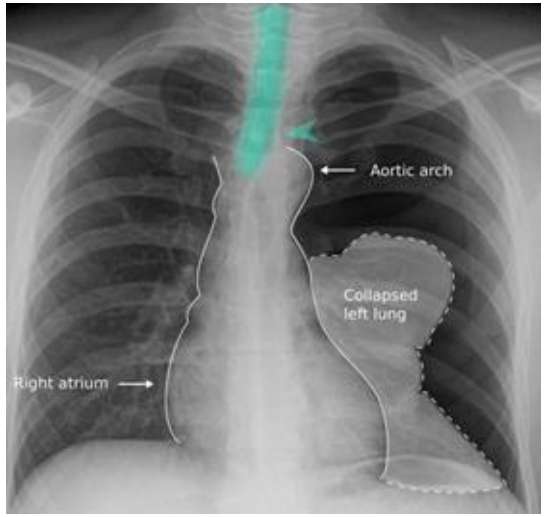
Activity – Match the Column!

Gallbladder	A. Right shoulder pain, dark color urine, light colored stools
Liver	B. Right lower quadrant pain, nausea, vomiting, fever, foul breath, tenderness at McBurney's point
Kidney	C. Right scapula and thoracic pain, pain between shoulder blades, pain can start few mins after eating fatty meals
Appendix	D. T10 – T12 tenderness, costovertebral tenderness (Murphy's Punch Sign), pain on ipsilateral shoulder, flank pain, blood in urine

Practice Question 6 - Pulmonary

A clinician is examining a patient a who sustained a left rib fracture post MVA. Patient demonstrates chest pain, dyspnea, shallow breathing and has decreased breath sounds on the left side. The X-ray shows tracheal deviation to the Right side. What would be the MOST appropriate diagnosis for this patient?

A. Atelectasis
B. Tension pneumothorax
C. Emphysema
D. Lung fibrosis



Tracheal Deviation

TRACHEAL DEVIATION TO AFFECTED SIDE SEEN:

- Atelectasis
- Lung fibrosis
- Lobectomy

TRACHEAL DEVIATION TO UNAFFECTED SIDE SEEN:

- Tension pneumothorax
- Hemothorax
- Pleural effusion
- Tumor/large mass in lung

Integumentary - Classification of Burns

DEPTH	CHARACTERISTICS	HEALING	KEY POINTS!
Superficial Burn: Only epidermis	• Pink, red and dry • No blisters • Minimal pain • Minimal edema	• Heals in a 3-5 days without scarring	• Intact skin • Pinkish • Dry
Superficial Partial Thickness: Epidermis and upper dermis	• Bright Pink/red • Intact blisters, moist surface • Most painful/sensitive • Moderate edema • Blanching with brisk capillary refill	• Heals in 3 weeks with no or minimal scarring	**SPT:** • Sensitive to touch • **Painful** • Temperature
Deep Partial thickness: Epidermis and entire dermis	• Mixed red/waxy white • Broken blisters, wet surface • Painful to pressure only • Marked edema • Blanching with slow capillary refill	• Slow healing • Excessive scarring • May need grafting	**DPT:** • **Painful to only pressure** • Slow capillary refill • Scarring starts HERE
Full thickness: Epidermis, dermis, subcutaneous tissue	• White, charred, tanned • No pain • No Blanching • Dry, leathery, hair pulls out	• Heals slowly with scarring • May require surgeries • Grafting	• **NO blanching, NO pain**, scarring seen
Subdermal: All the layers, may extend to organs and blood vessels	• Charred • Anesthetic, dry • Muscle and nerve involvement	• Requires surgical interventions • Amputation	• Extensive involvement

Practice Question 7

A clinician is examining a patient who sustained an arm burn at work. The area of the burn is extremely painful, appears bright pink in color and has intact blisters. Based on this presentation which of the following additional characteristics would MOST likely be seen in this patient?

A. Sensitive to changes in temperature, light touch and air
B. No blanching
C. Slow capillary refill
D. Severe edema

MSK Diagnosis – Shoulder

Subacromial Impingement	Rotator Cuff Tear	Slap Lesion
• Anterior/lateral shoulder pain, pain with motions at or above shoulder height **FINDINGS :** • Painful arc (60-120°) **Special test (+):** • Neer, Hawkins Kennedy, Yocum, Jobe [Empty Can]	• Anterior or lateral shoulder pain, with loss of strength **FINDINGS:** • Age >40 (overuse cases) • Weakness • Atrophy **Special test (+):** • ER lag sign, Drop arm, Hornblower's sign, IR lag sign, Lift off sign, Belly press, Bear hug	• Traumatic sudden onset, deep anterior shoulder pain **FINDINGS:** • Clicking/clunking/joint locking, pain with throwing or biceps loading (shoulder flexion and forearm supination, elbow flexion) **Special test (+):** • Active O'Brien test, Biceps load, Clunk test

Practice Question 8

A patient presents to the clinic with right shoulder pain that started few months ago. They have pain and difficulty with ADLs like combing hair. On examination, patient's PROM of ER 30°, IR 70°, Abd 60°. Hawkins Kennedy Test, biceps load test, and belly press test were negative. This finding is MOST indicative of which shoulder pathology?

A. Subacromial impingement
B. SLAP lesion
C. Adhesive capsulitis
D. Rotator cuff tear

Practice Question 9 – System Interactions

A patient presents to a PT clinic with pain and stiffness in the right hand at the base of the thumb and index finger. The stiffness in the morning lasts for 30 minutes. The therapist observes nodules on the PIP and DIP joints of the index finger of the right hand. Which of the conditions below are these symptoms directly associated with?

A. Osteoarthritis
B. Reiter's syndrome
C. Rheumatoid arthritis
D. Gout

QUESTIONS!

Basic Foundations and Examination

Practice Question 10

A patient is being seen in PT with the symptoms of low back pain. The clinician decides that the patient would respond well to core stabilization exercises as the patient had tested positive on the special test shown in the image. Which of the following would indicate a positive test?

A **B**

A. PA pressure over spinous process increases pain in position B
B. PA pressure over spinous process does not cause any change in pain
C. PA pressure over spinous process decreases pain in position A
D. PA pressure over spinous process decreases pain in position B

Let’s identify these special tests!

Test: _____
Purpose:_____

Test: _____
Purpose:_____

Special Test- Mix and Match!

1. Clarke's Sign
2. Thompson Test
3. Speed's Test
4. Hornblower Sign
5. Adson's Test
6. Apley's Test
7. Froment's Sign
8. Ober's test
9. Finkelstein Test
10. Lachman's test

A. Thoracic Outlet Syndrome
B. Ulnar nerve
C. ACL tear
D. Teres Minor tear
E. DeQuervain's Tenosynovitis
F. Achille's Tendon Tear
G. Meniscus
H. IT band tightness
I. PFPS
J. Biceps Tendonitis

Practice Question 11

A therapist is performing manual muscle testing for the gluteus maximus muscle on a patient. To test for a grade 3 MMT, which of the following is the MOST appropriate technique?

A. Ask the patient to lay prone, perform hip extension with knees extended
B. Ask the patient to lay in side-lying position and perform hip extension
C. Ask the patient to lay prone, bend his knees to 90° and perform hip extension
D. Ask the patient to stand and abduct while stabilizing the pelvis

MSK Examination – which muscle MMT is tested?

A. _____

B. _____

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Practice Question 12

A patient reports of radiating pain in the upper limbs and tingling in the first three digits on the palmar side. Which of the following test position is MOST likely to reproduce patient's symptoms?

A. Shoulder depressed and 110° abduction, elbow, wrist and fingers extended, forearm pronated, shoulder IR
B. Shoulder depressed and 110° abduction, elbow, wrist and fingers flexed, forearm supinated, shoulder ER
C. Shoulder depressed and 10° abduction, elbow, wrist and fingers extended, forearm supinated, shoulder ER
D. Shoulder depressed and 10° abduction, elbow, wrist and fingers flexed, forearm pronated, Shoulder IR

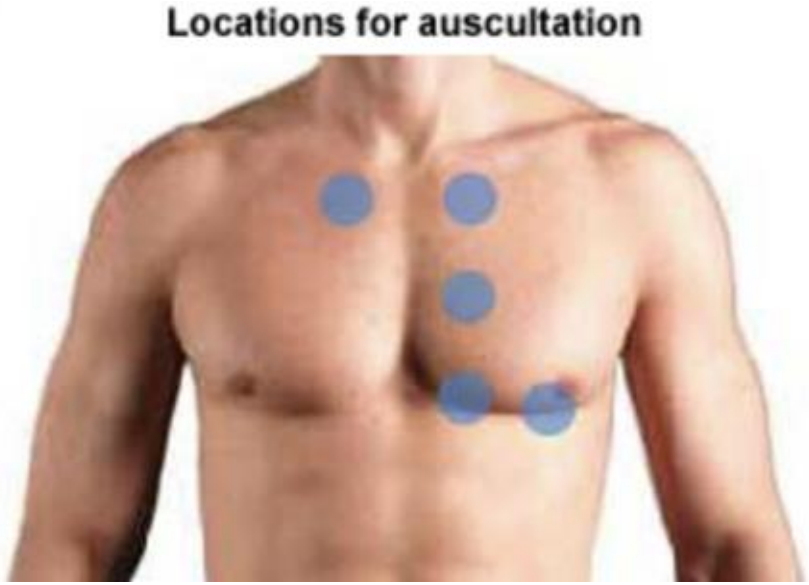
Upper Limb Tension Tests

	ULTT1	ULTT2	ULTT3	ULTT4
Shoulder	Depression and Abd (110°)	Depression and Abd (10°)	Depression and Abd (40°), Ext (25°)	Depression and Abd (10° to 90°)
Elbow	Extension	Extension	Extension	Flexion
Forearm	Supination	Supination	Pronation	Supination
Wrist	Extension	Extension	Flexion and UD	Extension and RD
Fingers	Extension	Extension	Flexion	Extension
Shoulder	-	Lateral rotation	Medial rotation	Lateral rotation
Nerve bias	Median, AIN	Median, Axillary, Musculocutaneous	Radial	Ulnar nerve

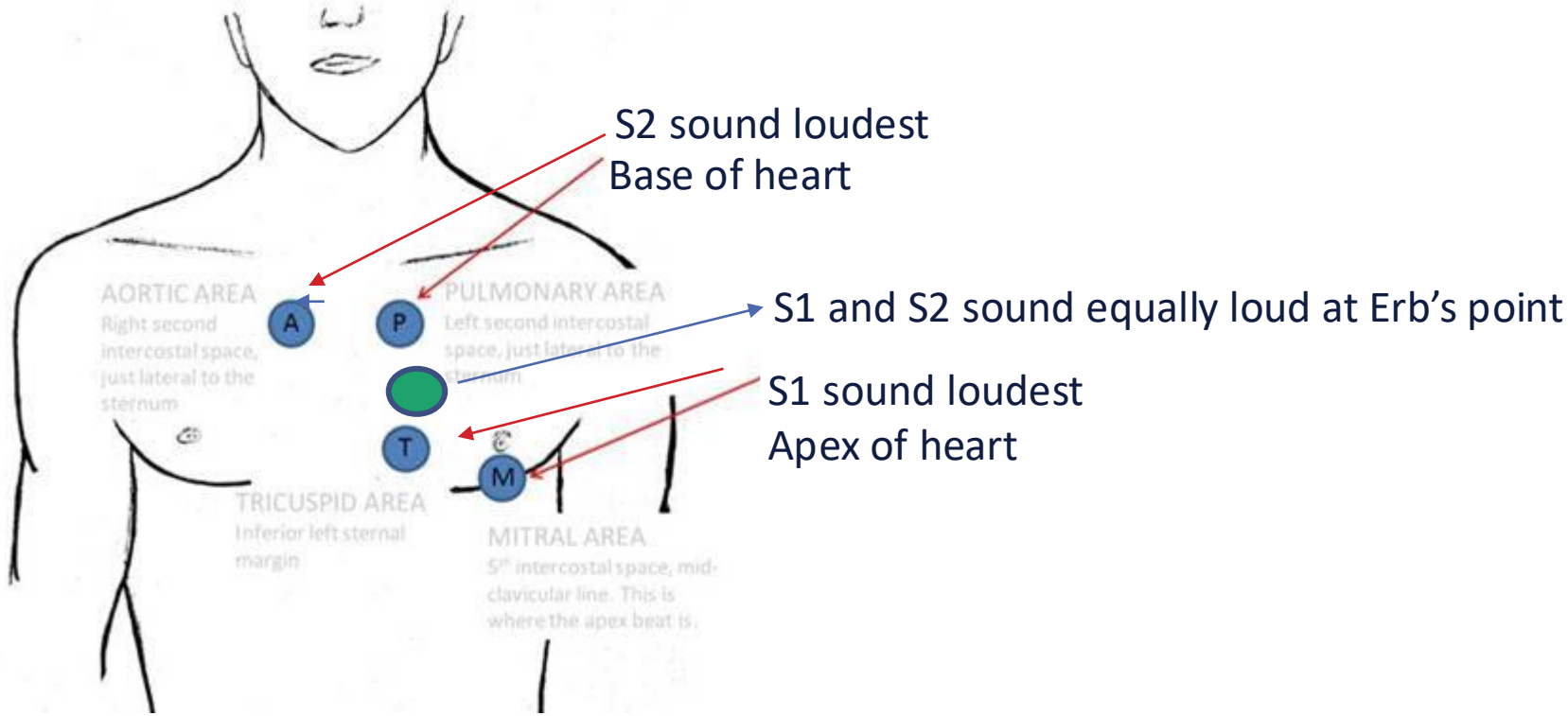
Practice Question 13

While auscultating heart sounds in a patient, the clinician hears a "Ventricular Gallop" sound. Which of the following locations would the ventricular gallop be BEST heard?

A. Right 2nd intercostal space
B. Left 5th intercostal space
C. Left 3rd intercostal space
D. Left 2nd intercostal space



Cardiac Examination: Heart Sounds



- **S1 "Lub" sound:** Heard at Mitral and Tricuspid valve during systole
- **S2 "Dub" sound:** Heard at Aortic and Pulmonic valve during diastole
- **S3 (Ventricular gallop) and S4 (Atrial gallop):** Heard at mitral valve (apex of heart) during early diastole and late diastole respectively

Neuro Examination – UMN vs LMN

	UMN	LMN
Location/Diagnosis	Central nervous system	Peripheral nervous system
Structures Involved	Cortex, brainstem, spinal cord	Peripheral nerves, nerve roots, cranial nerves
Tone	Increased- Hypertonia Velocity dependent	Decreased- Hypotonia
Reflexes	Hyperreflexia and abnormal reflexes- Clonus, Babinski	Hyporeflexia or absent
Sensation	Decrease	Decrease
Involuntary Movements	Muscle spasms- Flexor or extensor	Denervation- Fasciculations
Strength	Weakness or paralysis of affected side	Depends on nerve innervation
Muscle Bulk	Disuse atrophy	Neurogenic atrophy
Voluntary Movements	Movements in synergic patterns	Weak or absent

Practice Question 14

On assessment, a patient is found to have decreased tone and sensation with muscle atrophy. Which of the following could be the MOST likely cause of this finding?

A. Acute Cerebrovascular accident
B. Tumor in the cerebellum
C. Guillain Barre syndrome
D. Chronic spinal cord injury

Practice Question 15 – Integumentary Examination

An adult patient has burns over posterior trunk, posterior surface of the bilateral lower extremity. According to the rule of nines, what percentage of the total body surface area is MOST likely involved?

A. 36%
B. 16%
C. 48%
D. 68%

Rule of 9

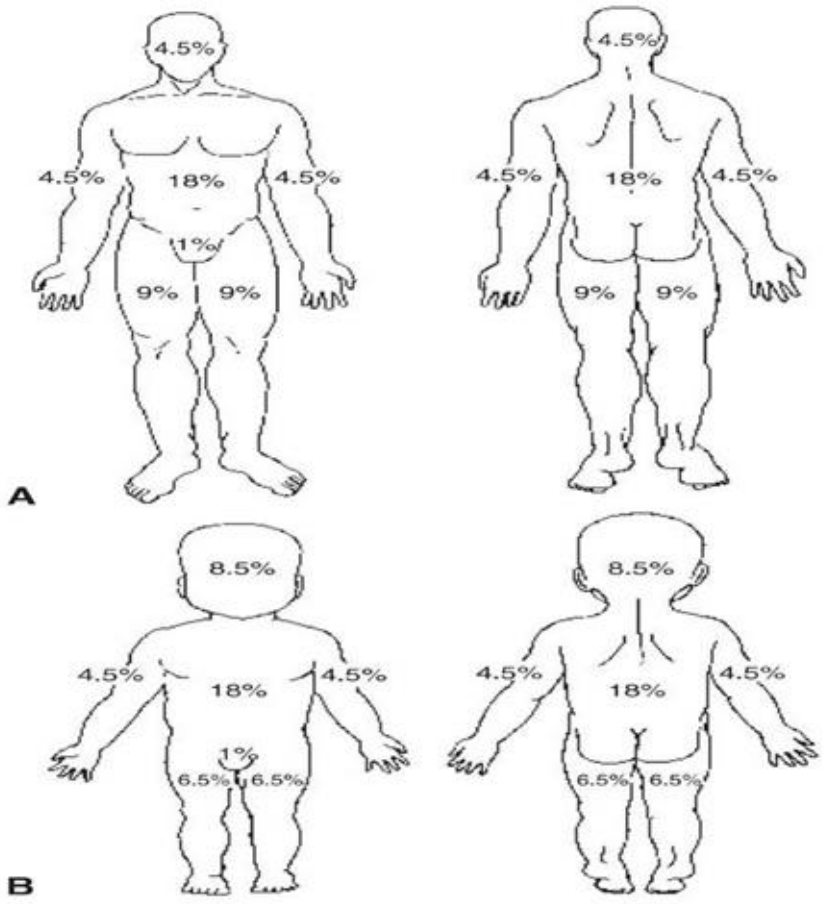


Figure 24.9 Rule of Nines to determine percentage of body surface area burn in adults **(A)** and children **(B)**.

Practice Question 16 – Lymphatic Examination

When examining a patient with lymphedema, the therapist uses water displacement method for measurement. This technique is used to best examine which of the following?

A. Edema around the wrist and hand
B. Edema around the arm
C. Lymphatic insufficiency
D. STAGE 2 lymphedema

Lymphatic Examination

To Examine:	Tools Used:
Proximal edema	Girth measurement
Distal (UE/LE) edema	Volumetric measurement
Pre-post surgery	Bioelectric impedance
Lymphatic insufficiency	Lymphoscintigraphy

Questions

BREAK FOR LUNCH!

EXAM STRATEGIES!

- Rule of Opposites
- Rule of Similarity
- Rule of Extremes
- Keywords
- Identify stereotypes
- Elimination

Ex. Rule of Opposites

Which of the following changes is MOST likely expected in a patient that is 33 weeks pregnant?

A. Increased cardiac output
B. Decreased cardiac output
C. Increased vital capacity
D. Decreased blood pressure

Ex. Rule of Similarity

Which of the following joint mobilizations will be MOST effective in improving wrist ulnar deviation?

A. Radial glide of the carpals
B. Ulnar glide of the carpals
C. Medial glide of the carpals
D. Distraction of the carpals

Ex. Rule of Extremes

Which of the following lab values for total white blood cell count is normal?

A. 2,000 mm3
B. 8,200 mm3
C. 12,500 mm3
D. 20,000 mm3

Keywords

INITIAL=

CHALLENGE=

STRENGTH=

STABILITY=

MOBILITY=

FUNCTION=

And Finally…Stereotypes

Are bad…. BUT Who do you expect to have a diagnosis of….

- Multiple Sclerosis ?
- Achille's tendinopathy?
- Leg calve Perthes disease ?
- Stress incontinence?
- PFPS?
- Osteoarthritis

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Interventions

Practice Question 17 – Lymphedema Intervention

A patient with lymphedema secondary to lymph node removal presents to an outpatient clinic to get wrapped as a part of complete decongestive therapy. Which type of compression bandages should be used for wrapping the limb?

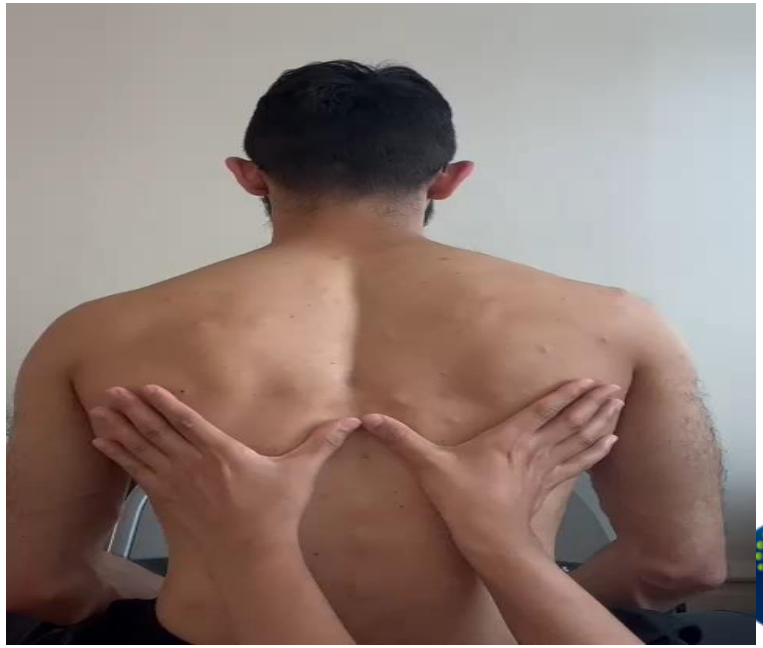
A. High-stretch bandages; high resting pressure and high working pressure
B. Low-stretch bandages; low resting pressure and high working pressure
C. Low-stretch bandages; high resting pressure and low working pressure
D. High stretch bandages; low resting pressure and low working pressure

Lymphedema Intervention

Components of Decongestive Lymphatic Therapy	
Phase 1 (Active reduction phase):	**Phase 2 (Maintenance phase):**
• **Manual Lymphatic Drainage (MLD)** – Direction: **Proximal-to-Distal** – Direction of stroking: **Distal-to-Proximal** • **Skin and nail care** • **Multi layer compression bandaging** – **Low stretch bandages** used, **Distal-to-Proximal direction** – Used during **day and night** • **Exercises** – **Proximal-to-Distal direction**	• **Manual Lymphatic Drainage (MLD)** – **Self massage** • **Skin and nail care** • **Compression therapy** – Compression garment during the day – **Low stretch bandages** at night • **Exercises** – **Proximal to distal direction**

Practice Question 18

A clinician is performing chest assessment of a patient with pneumonia. The findings of the assessment are as shown in the picture. What is the MOST appropriate intervention for this patient?



A. Pursed lip breathing
B. Lateral costal breathing on right side
C. Inspiratory hold technique
D. Lateral costal breathing on left side

Pulmonary Intervention

Indications for Breathing Techniques

- **Diaphragmatic breathing:** Hypoxemia, anxiety, atelectasis, excess secretions, tachypnea
- **Lateral Costal breathing:** Asymmetric chest wall and posture, localized consolidation
- **Stacked breathing:** Pain, uncoordinated breathing, ineffective cough, hypoventilation
- **Pursed lip breathing:** COPD - Dyspnea at rest and with exertion, wheezing
- **Paced breathing:** Dyspnea with activities, exertion, fatigue, low endurance
- **Upper chest inhibiting:** Excess accessory muscle use during breathing
- **Inspiratory hold technique:** Post-operative, atelectasis, ineffective cough

SCENARIO BASED QUESTION 19

Setting: Outpatient
Sex: Female
Age: 30
Presenting Problem / Current Condition:
Neck pain and discomfort for 2 weeks
Low back pain with numbness and tingling down her R LE
The pain started gradually, but the numbness and tingling has increased in the past one week
Medical History:
Previous Left knee ACL reconstruction 5 years ago with full recovery, no other significant history
Other Information:
Works from home as a software engineer, uses her laptop 8 hours a day; Time spent on computer has increased in the last month to meet deadlines

Physical Therapy Examination:
Pain on NPRS:
Lower back : 8/10 while sitting and bending; 1/10 on standing and walking
Neck : Constant, dull and achy rated at 4/5, demonstrates a forward head posture.
ROM:
Lumbar AROM: trunk flexion and right side-bending are limited by 25%.
Cervical AROM: Limited at end ranges with all movements
Sensory assessment: Diminished sensation at the Right anteromedial lower leg.
Special Tests: Positive SLR and slump test on the Right side, Spurling's test negative.

Practice Question 19.1

Setting: Outpatient
Sex: Female
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Presenting Problem / Current Condition:
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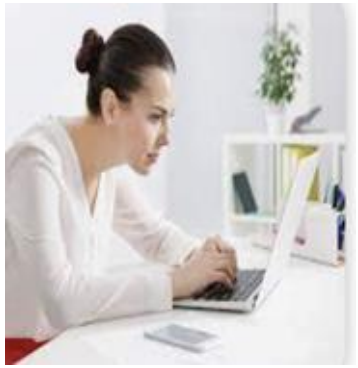
Other Information:
Works from home as a software engineer, uses her laptop 8 hours a day; Time spent on computer has increased in the last month to meet deadlines

Physical Therapy Examination:
Pain on NPRS:
Lower back : 8/10 while sitting and bending; 1/10 on standing and waking
Neck : Constant, dull and achy rated at 4/5, demonstrates a forward head posture.
ROM:
Lumbar AROM: trunk flexion and right side-bending are limited by 25%.
Cervical AROM: Limited at end ranges with all movements
Sensory assessment: Diminished sensation at the Right anteromedial lower leg.
Special Tests: Positive SLR and slump test on the Right side, Spurling's test negative.

Which of the following interventions is MOST appropriate to include in initial treatment?

A. Bench press exercise
B. Cervical retraction exercises
C. Resisted cervical flexion exercises
D. Shoulder shrugs



Crossed Syndromes

Lower Crossed Syndrome

- **Tight**: Erector spinae and Iliopsoas
- **Weak:** Abdominals and Gluteus max
- Anterior pelvic tilt, increased lumbar lordosis, hip flexion

Upper Crossed Syndrome

- **Tight:** Levator scapulae, Upper traps, sub-occipitals, Pec major and minor, SCM
- **Weak:** Deep neck flexors (longus colli and longus capitis), scapula stabilizers

Treatment?

- Stretch tight muscles
- Strengthen weak muscles
- Posture training
- Ergonomics

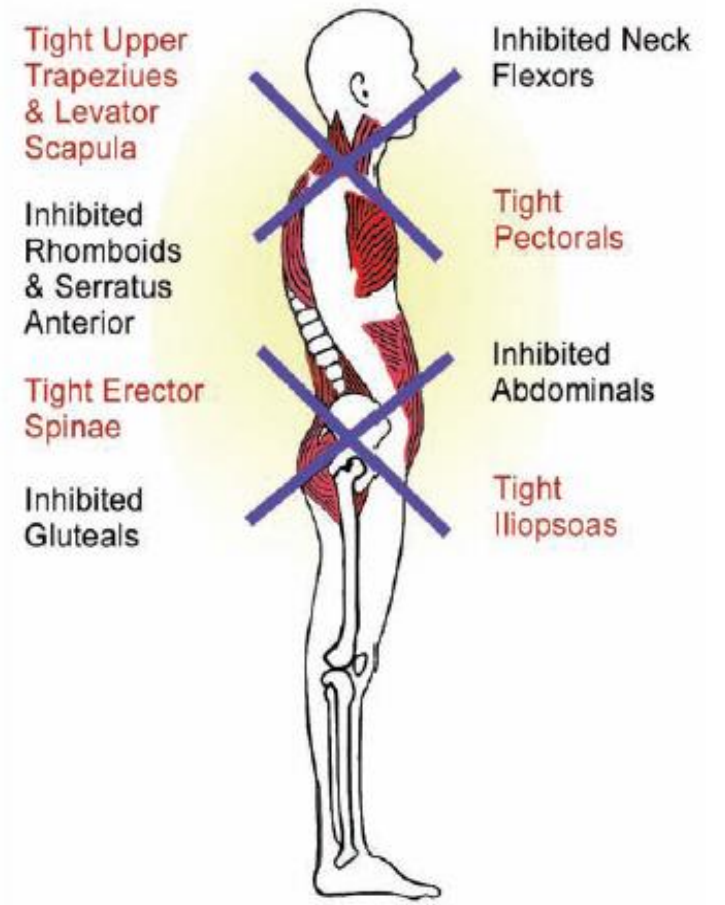


Figure 5.V. Janda's upper and lower crossed syndromes.
MediClip, Lippincott, Williams & Wilkins, 2005 with permission.

Practice Question 19.2

Setting: Outpatient
Sex: Female
Age: 30
Presenting Problem / Current Condition:
Neck pain and discomfort for 2 weeks
Low back pain with numbness and tingling down her R LE
The pain started gradually, but the numbness and tingling has increased in the past one week
Medical History:
Previous Left knee ACL reconstruction 5 years ago with full recovery, no other significant history
Other Information:
Works from home as a software engineer, uses her laptop 8 hours a day; Time spent on computer has increased in the last month to meet deadlines

Physical Therapy Examination:
Pain on NPRS:
Lower back : 8/10 while sitting and bending; 1/10 on standing and waking
Neck : Constant, dull and achy rated at 4/5, demonstrates a forward head posture.
ROM:
Lumbar AROM: trunk flexion and right side-bending are limited by 25%.
Cervical AROM: Limited at end ranges with all movements
Sensory assessment: Diminished sensation at the Right anteromedial lower leg.
Special Tests: Positive SLR and slump test on the Right side, Spurling's test negative.

Which of the following will MOST likely be seen in this patient?

A. Weakness of ankle dorsiflexors
B. Clonus
C. Weakness of ankle plantarflexors
D. Hyperactive knee jerk

Practice Question 19.3

Setting: Outpatient
Sex: Female
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Cervical AROM: Limited at end ranges with all movements
Sensory assessment: Diminished sensation at the Right anteromedial lower leg.
Special Tests: Positive SLR and slump test on the Right side, Spurling's test negative.

Which of the following exercises will help in reducing the Lower back pain radiating to the Right LE ?

A. Prone press ups
B. Single leg knee to chest
C. Childs pose
D. Posterior pelvic tilts

Directional Bias of Exercise

Patient prefers one direction (flexion or extension) and has CENTRALIZATION of symptoms with this movement

Flexion Bias Exercises	Extension Bias Exercises
• Single knee to chest • Double knee to chest • Sitting trunk flexion stretch • PPT • Incline treadmill • Child's pose	• Prone lying • Prone on elbows • Prone press ups • Bridges • APT • Downhill walking • Prone lumbar extension

Practice Question 20

Which of the following is the MOST appropriate intervention for the impairments shown in the image?

A. Vigorous, intense stretching of the left SCM
B. No intervention needed as it will heal on its own
C. Prolonged passive stretching of the right SCM
D. Gently massaging bilateral suboccipital muscles

Practice Question 21

A patient is exercising on a treadmill in a cardiac rehab unit while being monitored on an ECG. During the exercise, an ECG pattern appears as shown in the image below. What is the MOST appropriate response to the ECG?

A. Stop the treadmill and refer to the physician
B. Decrease the speed of the treadmill
C. Stop the treadmill and call 911
D. Stop the treadmill and let the patient rest

Joint Mobilizations – Convex / Concave

- **Step 1:** Identify the articulating surfaces
- **Step 2:** What is the roll?
- **Step 3:** What is the glide (intervention)?

Convex on concave: Roll and glide is in **OPPOSITE** direction

Concave on convex: Roll and glide is in the **SAME** direction

Practice Question 22

A patient comes to a clinic with difficulty in opening door locks. He has a history of radial head fracture three months ago which was managed conservatively. Supination AROM is 20 degrees and pronation is 60 degrees. The therapist is performing the mobilization glide as shown in the image. Which of the following is the MOST appropriate description ?

A. Volar glide at proximal radioulnar joint, to increase pronation
B. Dorsal glide at proximal radioulnar joint, to increase pronation
C. Volar glide at proximal radioulnar joint, to increase supination
D. Dorsal glide at proximal radioulnar joint, to increase supination

What mobilization improves….

Open Chain:

Shoulder abduction:

Hip extension:

Elbow flexion:

Closed Chain:

Knee extension:

Ankle dorsiflexion:

Practice Question 23

A patient sustained a right sided tibial fracture and a right sided Colles fracture after falling on an outstretched arm during a game of softball. They underwent an ORIF surgery for the tibia and a plaster cast was applied to the R wrist area. The patient has been advised to start partial weight bearing. Which is the MOST appropriate walking aid for this patient?

A. Unilateral cane
B. Unilateral axillary crutch
C. Bilateral axillary crutches with platform attachments
D. Bilateral lofstrand crutches

Let's do these gait patterns!

PATTERN	INDICATION	WALKING AID	HOW TO USE
2 POINT	WBAT to FWB	Walker, bilateral crutches, bilateral canes	• Assistive device + Opposite LE advance together
3 POINT	**NWB**	Walker, bilateral crutches	• Assistive device + NWB LE together • Followed by FWB LE
4 POINT	WBAT to FWB	Walker, bilateral crutches and canes	• Assistive device – Opposite extremity – Assistive device – Opposite LE
MODIFIED 2-POINT	FWB or WBAT	One crutch or cane	• Good LE first –followed by aid + affected LE
MODIFIED 3-POINT OR THREE-1 POINT	**PWB**	Walker, bilateral crutches	• Assistive device + PWB LE together • Then FWB LE Steps through the aids
MODIFIED 4-POINT	FWB or WBAT	One crutch or cane	• Affected LE – Unaffected LE – Assistive device

HIPAA

- Protects information such as individuals' health condition, health care to the individual and payment for the health care
- PHI includes many common identifiers such as name, address, date of birth, and Social Security Number
- Avoid leaving paperwork that includes patient identifiers and avoid discussion of patients in a public area
- Privacy screens should be added to computers that are in public patient treatment areas

HIPAA VIOLATIONS:

- **Sharing** PHI with other health care workers who are not involved in the care of the patient
- Accessing patient information when **NOT** involved in the patient's care
- **NOT** providing a patient with access to his or her medical record within 30 days of the patient's request for such

Practice Question 24

Which of the following BEST describes adherence to the HIPAA Act?

A. Discussing a patient's case and personal details with another therapist in the facility gym during treating hours
B. Adding privacy screens on computers that are in public patient treatment areas
C. Having an uncovered sign in sheet at the reception desk with patients' full names and date of birth
D. Providing a patient with access to his/her medical records within 60 days of patient's request for the information

BE GOLD

- Don't get sued
- Follow the protocol
- Follow your brain (not heart)
- Protect your license

Practice Question 25

A therapist is in a grocery store and witnesses an adult collapse suddenly and become unresponsive. What is the FIRST step to be taken by the therapist in this situation?

A. Activate emergency medical services (EMS)
B. Perform chest compressions
C. Deliver a shock using an automated external defibrillator (AED)
D. Open the airway and give rescue breaths

Steps for CPR

SCENE SAFETY → **VICTIM IS UNRESPONSIVE** → **CHECK BREATHING AND PULSE**
Within 10 secs

Safe environment for victim and rescuer

Activate EMS, send to get AED

NO BREATHING, ONLY GASPING, NO PULSE

Begin CPR

- **Adults** (1 or 2 rescuers) – **30:2**
- **Children and infants** (1 rescuers) – **30:2**
- **Children and infants** (2 rescuers) – **15:2**
- Minimize pauses between compressions
- **Compression depth**: **2 inches** (adults and children)
  1 1⁄2 inches (infants)
- Use AED as soon as it is available.

NO NORMAL BREATHING, HAS PULSE

- Rescue breathing: **About 10-12 breaths/min**.
- Check pulse about every 2 minutes. If no pulse, begin CPR.

NORMAL BREATHING, HAS PULSE

- Monitor until EMS arrives

Our GOAL

FOLLOW OUR FREE RESOURCES!

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- Free Podcast https://podcasts.apple.com/us/podcast/npte-final-frontier-podcast/id1541743380
- https://linktr.ee/npteff

NPTE Final Frontier Team, Alumni, & Friends

QUESTIONS!

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Enrollment@nptefinalfrontier.com