TYPICAL PT

NPTE PRACTICE QUESTIONS

2024

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01 A 65-year-old female is seeking physical therapy for neck pain via direct access. She is an avid gardener and suffered a hard fall last week when she was pulling weeds. She has not seen a PCP or had any imaging done. Currently, she complains of persistent neck pain, bilateral numbness and tingling, and occasional dizziness, particularly during head turns. She has osteoporosis treated with calcium and alendronate. Physical examination reveals that she has limited ROM, primarily due to pain. Notably, the Sharp-Purser test had no symptom relief and she felt the numbness and tingling throughout the movement. Concerned, you ask her to go to the ER or see her PCP for imaging. What do you suspect is contributing to the patient's symptoms?

A. Dens fracture

B. C4 fracture

C. Transverse ligament injury

D. Brachial plexus injury

02 During a review of systems for an upcoming session, a physical therapist notes a significant decrease in a patient's hemoglobin levels, about 7.8g/dl, indicating anemia. The 68-year-old male patient has been on multiple medications, including warfarin, metformin, and lisinopril. What symptoms are typically NOT present in a patient with these findings?

A. Increased Diastolic Blood Pressure

B. Yellow-tingled skin (conjunctiva)

C. Dyspnea

D. Chest pain / Heart palpitations

03 A 12-year-old boy is brought to you, a pediatric physical therapist, for weakness and poor coordination skills. His mother notes that the child has been weakening in both his arms and legs over the last 2 years, resulting in him ambulating with a waddling gait and hyperextending his back to remain upright. His mother stated that these findings are not uncommon in his family as his cousins are also uncoordinated and frequently fall. In the history, it is noted that the patient had a creative kinase level of 386 U/L. During your physical examination, you notice the child has trace deep tendon reflexes. Based on the information provided, what do you suspect is MOST LIKELY causing the child's symptoms?

A. Type II Myotonic Dystrophy

B. Duchenne's Muscular Dystrophy

C. Kugelberg-Welander Syndrome

D. Myasthenia Gravis

04 You are evaluating a 68-year-old female patient in the acute care setting post-right hemicolectomy due to colon cancer. She now has a colostomy bag in place. You need to apply a gait belt to assist the patient with gait training during the session. Considering the patient's surgical history and current medical condition, where is the MOST APPROPRIATE placement for the gait belt.

A. Snugly around the waist

B. Loosely around the waist

C. A gait belt is contraindicated and the therapist should document that

D. Loosely around the armpit region

05 A 27-year-old man presents to the clinic with complaints of pain, weakness, and wrist drop in the right hand. During the subjective history, he reports that 2 nights ago, he fell asleep with his arm hanging over the back of a chair and woke up with the inability to extend his wrist. On physical examination, there is noticeable weakness in his hand and fingers; he struggles to fully extend them. Manual Muscle Test (MMT) shows weakness in wrist and finger extensors, primarily the extensor carpi radialis longus and brevis.. Range of Motion (ROM) scores show decreased wrist extension. His vital signs are all within normal limits. Lastly, he is currently taking ibuprofen for pain relief. Based on these findings, what do you suspect occurred?

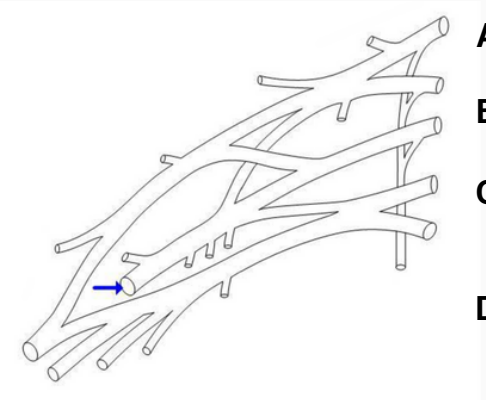
A. Saturday Night Palsy; Radial Nerve Affected

B. Thursday Night Palsy: Radial Nerve Affected

C. Cerebral Palsy; Ulnar Nerve Affected

D. Brachial Plexus Injury / Strain; Radial Nerve Affected

06 A 47-year-old patient who has been coming to you for back pain informs you that he had a bad fall this past weekend and would like you to assess him. He states that he fell off his skateboard while attempting to do a kickflip and landed on his right hand. He currently complains of pain and weakness in that arm. After your examination, you suspect an injury to the highlighted nerve in the brachial plexus. Based on the site of nerve injury, what movements do you expect to be limited?



A. Flexion of the Wrist

B. Extension of the Wrist

C. Opposition of the Thumb

D. Flexion of the Fingers

07 You are treating a 68-year-old male with a past medical history of multiple myeloma in the inpatient rehab facility. The patient presents with altered mental status and is oriented to person only. He has been experiencing progressive weakness (3/5 MMT in all four extremities), decreased ROM, constipation, and twitchiness. He is currently taking bortezomib and dexamethasone (cancer therapy), along with amlodipine, metformin, and atorvastatin. Lastly, MRI of the spine reveals multiple lytic lesions. Given these findings, what do you suspect is MOST LIKELY causing the patient's symptoms?

A. Hypokalemia

B. Hyponatremia

C. Hypercalcemia

D. Hypermagnesemia

08 A 68-year-old woman presents to the emergency department with severe right upper quadrant abdominal pain that radiates to the right shoulder. She reports that the pain intensifies after meals, especially fatty meals. She is currently on multiple medications including warfarin, metformin, and amlodipine. During the physical examination, you deduce that she is experiencing cholecystitis. What recommendations could you make to this patient to help relieve her symptoms?

A. Lean to the affected side

B. Lie supine and waiting for symptoms to pass

C. Lean forward

D. Apply Heat / Cold packs followed by stretching

09 A 45-year-old patient with a history of hypertension and diabetes is admitted to the neurology ward following a head injury. The patient's eyes open when the therapist calls out to him, he starts saying confusing things when asked questions, and his motor response is localized. Calculate the patient's Glasgow Coma Scale (GCS) score.

A. GCS score of 15

B. GCS score of 14

C. GCS score of 13

D. GCS score of 12

10 A 24-year-old woman presents to the physical therapy clinic with a referral for generalized weakness and chronic back pain. During the history, she states that in addition to the back pain and weakness, she has been experiencing nausea, vomiting, abdominal pain, increased thirst, and frequent urination for the past 2 days. She has a history of kidney stones, type 1 diabetes, and hypertension. On physical examination, she appears lethargic and dehydrated with dry mucous membranes and fruity-smelling breath. MMT reveals 4+/5 strength with thoracic flexion, extension, and side bending. Range of motion is within normal limits. Based on the given scenario, which of the following is the MOST LIKELY diagnosis?

A. Lactic acidosis

B. Hyperosmolar hyperglycemic state

C. Diabetic ketoacidosis

D. Nephrolithiasis (kidney stones)

11 Martina, a 8-year-old female, got burned from dropping a cup of boiling water on herself while attempting to make tea. She has burns on the right arm (upper and lower portions), right thigh, and right leg (below the knee). Calculate the percentage of burned surface area according to the Lund and Browder chart.

A. 20%

B. 23%

C. 24%

D. 27%

12 A 42-year-old female patient presents to your clinic with complaints of aching, heaviness and swelling in her lower legs. During your evaluation, you note that she has rusty brownish-yellow hemosiderin changes on her lower leg. Her vital signs are within normal limits and she reports no significant past medical history, other than Type II Diabetes Mellitus. She is currently taking Ozempic once per week for weight loss and DM management. Based on the given findings, which answer choice is MOST consistent with her symptoms?

A. Acute Arterial Insufficiency

B. Acute Venous Insufficiency

C. Chronic Arterial Insufficiency

D. Chronic Venous Insufficiency

13 A patient has been experiencing swelling and discomfort in her left arm for the past six months. She noticed that the swelling worsens throughout the day and is aggravated by prolonged use of her left arm. What should be a part of your Phase 1 Rehabilitation intervention?

A. Long-stretch compression bandages, worn 24 hours per day

B. Short-stretch compression bandages, worn 12 hours per day

C. Long-stretch compression bandages, worn 12 hours per day

D. Short-stretch compression bandages, worn 24 hours per day

14 A physical therapist is assessing a patient who has a history of paraplegia with some qualitative tests. The patient takes 23 seconds to complete TUG. The POMA score for this patient is 22, and the Berg Balance Score is 43. What is the MOST LIKELY score interpretation for this patient?

A. The patient has a normal TUG score. Their POMA score indicates a moderate risk of falls. Their Berg Balance score indicates a low risk of falls.

B. The patient is at an increased risk for falls based on their TUG score. Their POMA score indicates a moderate risk of falls. Their Berg Balance score indicates a high risk of falls.

C. The patient has a high risk for falls based on their TUG score. Their POMA score indicates a moderate risk of falls. Their Berg Balance score indicates a moderate risk of falls.

D. The patient is at high risk for falls based on their TUG score. Their POMA score indicates a high risk of falls. Their Berg Balance score indicates a high risk of falls.

15 A 40-year-old female presents to the clinic with a complaint of chronic low back and right hip pain. She reports a deep, achy pain, localized mainly around her right sacroiliac (SI) and hip joint, which intensifies with prolonged standing and sitting. Her medical history is significant for a past episode of kidney stones and ongoing treatment for endometriosis. There are no red flags, such as unexplained weight loss, fever, or changes in bowel or bladder function. Which of the following tests is the MOST sensitive and could be used to rule out an SI joint issue?

A. Scour Hip Test

B. Gaenslen Test

C. Patrick's Test

D. Ober's Test

16 A 68-year-old male with a history of hypertension, type 2 diabetes mellitus, and stage 3 chronic kidney disease presents to the emergency department (ED) with severe right-sided flank pain radiating to the groin for the past 6 hours. He also complains of nausea and a single episode of vomiting. His medications include metformin, lisinopril, and atorvastatin. On physical examination, there is right costovertebral angle tenderness. A CT reveals that the patient has a kidney stone. Based on the given information, what physical therapy recommendations can the PT prescribe to temporarily reduce pain?

A. Sitting upright and / or leaning forward

B. Leaning to the affected side

C. Lying supine and waiting for the pain to subside

D. Applying Hot / Cold packs followed by stretching

17 A study is conducted to determine whether a new drug reduces the time it takes to recover from a specific illness. The null hypothesis states that there is no difference in recovery time between the new drug and the standard treatment. After conducting the study with a large sample size, the researchers obtain a p-value of 0.047. Assuming a significance level of 0.05, which of the following is the MOST APPROPRIATE conclusion?

A. Reject the null hypothesis; the new drug significantly reduces recovery time.

B. Do not reject the null hypothesis; the new drug does not significantly reduce recovery time.

C. Reject the null hypothesis; the new drug does not significantly reduce recovery time.

D. Do not reject the null hypothesis; the new drug significantly reduces recovery time.

18 A 45-year-old patient with a past medical history of hypertension, hyperlipidemia, and osteoarthritis presents to physical therapy with complaints of joint pain in his right elbow. The patient works in construction and handles crane operations. His pain has been present for several months and has not improved with over-the-counter pain medication. On examination, the physical therapist identifies an active trigger point in the right elbow. The therapist decides to perform dry needling on the patient. During the procedure, the patient suddenly complains of pain in both the left and right arms. What mechanism is MOST LIKELY causing the pain in his left arm?

A. Referred pain due to trigger points

B. Puncture of the radial nerve with the needle

C. Activation of wide dynamic range neurons

D. Mismanagement of signals in the secondary interneuron

19 In an outpatient cardiac rehabilitation center, a 45-year-old male patient with a known history of cocaine use disorder presents for a routine evaluation. He reports experiencing shortness of breath and intermittent chest pain over the past few months. His vital signs are as follows: blood pressure 160/95 mmHg, heart rate 110 bpm, respiratory rate 22 breaths/min, and oxygen saturation 95% on room air. Physical examination reveals a mild systolic murmur best heard at the apex. Given the patient's history, which structure would you expect to be the MOST affected?

A. Left Atrium

B. Left Ventricle

C. Right Atrium

D. Right Ventricle

20 A 78-year-old woman, living with her daughter, is visited at home by a physical therapist for management of chronic lower back pain. The patient is usually upbeat but appears withdrawn and hesitant during the session. The therapist notes multiple bruises of different stages on her arms and a recent burn mark on her hand, which the patient dismissively attributes to "clumsiness." The therapist also observes that the patient flinches at sudden movements and seems fearful when her daughter speaks to her. The patient's blood pressure is higher than usual at 160/90 mmHg, and she appears malnourished. In this scenario, what is the MOST APPROPRIATE initial action for the physical therapist to take?

A. Directly confront the daughter about the suspected abuse.

B. Report the findings to a supervisor and discuss the need for a potential adult protective services referral.

C. Advise the patient to avoid situations leading to injuries.

D. Document the findings and continue monitoring in subsequent visits.

21 Damage to the ------ results in a positive Babinski sign, absent superficial abdominal reflexes and cremasteric reflex, and the loss of fine motor or skilled voluntary movement.

A. Corticospinal tract (Anterior)

B. Tectospinal tract (Anterior)

C. Corticospinal tract (Lateral)

D. Tectospinal tract (Lateral)

22 Which of the following is NOT true about the prosthetic device shown below?

A. The device does not allow plantar flexion during the early stance phase

B. The device cannot be effectively used on uneven terrain

C. The device should not be recommended if energy conservation is needed

D. The device allows for a small amount of mediolateral and transverse motion

23 A 32-year-old female, post-cesarean section, seeks consultation from a pelvic floor physical therapist. During the examination, she reveals that she is HIV-positive and effectively managing her condition with antiretroviral therapy (ART) including tenofovir, emtricitabine, and dolutegravir. Although she has had the disease for years, she expresses concerns about inadvertently transmitting the disease and would like your help in identifying which of the following actions is LEAST LIKELY to transmit the disease.

A. Breastfeeding her newborn infant

B. Sharing drinks with a family member

C. Donating blood

D. Kissing with the presence of oral lesions

24 In an outpatient physical therapy clinic, a 72-year-old female patient presents with a referral from her primary care physician (PCP) for conservative treatment of persistent musculoskeletal inflammation in the right shoulder. Examination reveals tenderness to palpation of the right shoulder, reduced range of motion (ROM) with active abduction limited to 90 degrees, and a manual muscle test (MMT) score of 4/5 in the affected area. MRI of the shoulder shows signs consistent with tendonitis without significant structural damage. Based on the given scenario, which therapeutic modality would be MOST appropriate?

A. Direct contact Iontophoresis with Hydrocortisone set to a negative polarity

B. Direct contact Iontophoresis with Dexamethasone set to a negative polarity

C. Direct contact Iontophoresis with Dexamethasone set to a positive polarity

D. Direct contact Iontophoresis with Acetone set to a positive polarity

25 In an outpatient pediatric physical therapy clinic, a 2-month-old premature infant, born at 30 weeks gestation, is evaluated for developmental therapy. The infant's mother reports increased extensor tone and difficulty in achieving midline orientation. The infant has not been on any medications since discharge from the neonatal intensive care unit. A recent MRI of the brain was unremarkable. Physical examination reveals increased extensor tone in both upper and lower extremities, with decreased flexor tone. The infant has difficulty in maintaining head control and exhibits a preference for turning the head to the right. Based on this clinical presentation, which of the following treatment options would NOT be appropriate for this patient?

A. Minimize the use of infant jumpers or walkers

B. Place the child in supine to influence the Tonic Labyrinthine Reflex to promote flexion

C. Place the child in prone to influence the Tonic Labyrinthine Reflex to promote flexion

D. Stress side-lying and prone with chin tucked

END OF PRACTICE EXAM

EXPLANATIONS CAN BE FOUND ON THE NEXT PAGE

01 A 65-year-old female is seeking physical therapy for neck pain via direct access. She is an avid gardener and suffered a hard fall last week when she was pulling weeds. She has not seen a PCP or had any imaging done. Currently, she complains of persistent neck pain, bilateral numbness and tingling, and occasional dizziness, particularly during head turns. She has osteoporosis treated with calcium and alendronate. Physical examination reveals that she has limited ROM, primarily due to pain. Notably, the Sharp-Purser test had no symptom relief and she felt the numbness and tingling throughout the movement. Concerned, you ask her to go to the ER or see her PCP for imaging. What do you suspect is contributing to the patient's symptoms?

A. Dens fracture

B. C4 fracture

C. Transverse ligament injury

D. Brachial plexus injury

Correct Answer: A

System: Musculoskeletal

Difficulty Level: Hard

Catagory: Differential Diagnosis

CORRECT

Answer choice A, Dens fracture, is correct due to the patient's age, osteoporosis, and mechanism of injury. Additionally, when a patient has symptoms throughout the Sharp-Purser Test (flex the patient's head forward while placing pressure on C2), that is indicative of something more severe than hypermobility / Transverse ligament injury. If the symptoms / pain subside during a Sharp Purser Test, that is a positive test, and would be indicative of a Transverse Ligament injury. Because the pain did not subside, the most likely answer is a Dens Fx. The dens, or odontoid process, is part of the axis (C2 vertebra) and is crucial for the stability of the atlanto-axial joint. Fractures here are serious due to the proximity to the spinal cord and brainstem.

INCORRECT

Answer choice B, C4 fracture is incorrect as it may not be the best option.

Answer choice C, Transverse Ligament Injury is incorrect because the Sharp-Purser test was negative. If the test was positive and the symptoms subsided, this would be correct.

Answer choice D, Brachial plexus injury is incorrect because the patient's symptoms do not align with this type of injury. This typically involves severe pain, potential Horner's syndrome, and muscle weakness in specific distributions depending on the nerve roots involved.

02

During a review of systems for an upcoming session, a physical therapist notes a significant decrease in a patient's hemoglobin levels, about 7.8g/dl, indicating anemia. The 68-year-old male patient has been on multiple medications, including warfarin, metformin, and lisinopril. What symptoms are typically NOT present in a patient with these findings?

A. Increased Diastolic Blood Pressure

B. Yellow-tingled skin (conjunctiva)

C. Dyspnea

D. Chest pain / Heart palpitations

Correct Answer: A

System: Cardiology

Difficulty Level: Intermediate

Category: Physical Therapy Examination

CORRECT

Answer Choice A is correct because increased diastolic blood pressure is not a typical symptom of anemia. Anemia often results in decreased blood oxygen levels, leading the heart to work harder to supply the body's tissues. This increased cardiac workload can cause an elevation in systolic blood pressure due to the heart's increased pumping action, but it does not typically raise diastolic blood pressure. You would also typically see an increase in HR and RR.

INCORRECT

Answer Choice B is incorrect because yellow-tingled skin, particularly of the conjunctiva, is indicative of jaundice. While anemia itself does not directly cause jaundice, certain types of anemia, such as hemolytic anemia, result from the increased breakdown of red blood cells. This breakdown releases bilirubin, leading to jaundice if the liver cannot process it fast enough.

Answer Choice C is incorrect. This symptom is typically associated with anemia. Anemia can lead to a reduced oxygen supply to the body's tissues, causing symptoms like shortness of breath or dyspnea, especially during exertion.

Answer Choice D is incorrect because chest pain and heart palpitations can be symptoms of anemia. Reduced hemoglobin levels mean that the blood carries less oxygen, causing the heart to work harder to supply oxygen to tissues. This increased cardiac workload can lead to symptoms like chest pain and palpitations.

03 A 12-year-old boy is brought to you, a pediatric physical therapist, for weakness and poor coordination skills. His mother notes that the child has been weakening in both his arms and legs over the last 2 years, resulting in him ambulating with a waddling gait and hyperextending his back to remain upright. His mother stated that these findings are not uncommon in his family as his cousins are also uncoordinated and frequently fall. In the history, it is noted that the patient had a creative kinase level of 386 U/L. During your physical examination, you notice the child has trace deep tendon reflexes. Based on the information provided, what do you suspect is MOST LIKELY causing the child's symptoms?

A. Type II Myotonic Dystrophy

B. Duchenne's Muscular Dystrophy

C. Kugelberg-Welander Syndrome

D. Myasthenia Gravis

Correct Answer: C

System: Neuromuscular

Difficulty Level: Hard

Category: Differential Diagnosis

CORRECT

The most likely cause of the child's symptoms is Kugelberg-Welander Syndrome, also known as Spinal Muscular Atrophy (SMA) Type 3. Kugelberg-Welander Syndrome is a type of spinal muscular atrophy (SMA) that is characterized by muscle weakness, waddling gait, and degeneration over time. It usually presents in early childhood and adolescence and progresses more slowly than SMA type 1 or type 2, which have an earlier onset. Type 1 SMA, also known as Werdnig-Hoffman disease, is the most severe form of SMA. Symptoms usually appear at birth or within an infant's first six months of life. Most children with type 1 SMA die before their second birthday. Type 2 SMA, also known as Dubowitz disease, is an intermediate form of the disease. Symptoms usually appear when a child is between six months and 18 months old. Children with type 2 SMA may be able to sit up but can't walk. Most children with type 2 SMA live into adulthood.

INCORRECT

The other answer choices are less likely to be the cause of the child's symptoms. Answer choice A, Type II Myotonic Dystrophy is a form of muscular dystrophy that causes muscle weakness, pain, and stiffness, with symptoms usually developing during a person's 20s or 30s.

Answer choice B, Duchenne's Muscular Dystrophy is a severe type of muscular dystrophy that primarily affects boys and is characterized by muscle weakness that usually begins around the age of four and worsens quickly.

Answer choice D, Myasthenia Gravis is an autoimmune disease that causes muscles under voluntary control to feel weak and get tired quickly due to a breakdown in communication between nerves and muscles

04 You are evaluating a 68-year-old female patient in the acute care setting post-right hemicolectomy due to colon cancer. She now has a colostomy bag in place. You need to apply a gait belt to assist the patient with gait training during the session. Considering the patient's surgical history and current medical condition, where is the MOST APPROPRIATE placement for the gait belt.

A. Snugly around the waist

B. Loosely around the waist

C. A gait belt is contraindicated and the therapist should document that

D. Loosely around the armpit region

Correct Answer: D **System:** Safety & Protection

Difficulty Level: Easy

CORRECT

Answer Choice D, loosely around the armpit region, is correct because placing the gait belt loosely around the armpit region avoids any pressure on the colostomy bag and surgical site, ensuring a safer and more comfortable gait training for the patient.

INCORRECT

Answer choices A and B are incorrect because placing a gait belt around the waist is contraindicated for this patient. This would put pressure on the colostomy bag and surgical site, especially in situations where the patient is unstable.

Answer choice C is incorrect because a gait belt can and should be used. In certain situations, the therapist may hold onto the hospital gown but that is not recommended for patient and therapist safety

05 A 27-year-old man presents to the clinic with complaints of pain, weakness, and wrist drop in the right hand. During the subjective history, he reports that 2 nights ago, he fell asleep with his arm hanging over the back of a chair and woke up with the inability to extend his wrist. On physical examination, there is noticeable weakness in his hand and fingers; he struggles to fully extend them. Manual Muscle Test (MMT) shows weakness in wrist and finger extensors, primarily the extensor carpi radialis longus and brevis.. Range of Motion (ROM) scores show decreased wrist extension. His vital signs are all within normal limits. Lastly, he is currently taking ibuprofen for pain relief. Based on these findings, what do you suspect occurred?

A. Saturday Night Palsy; Radial Nerve Affected

B. Thursday Night Palsy: Radial Nerve Affected

C. Cerebral Palsy; Ulnar Nerve Affected

D. Brachial Plexus Injury / Strain; Radial Nerve Affected

Correct Answer: A

System: Musculoskeletal

Difficulty Level: Hard

Category: Differential Diagnosis

CORRECT

Based on the information provided, it seems that the patient is most likely experiencing Saturday Night Palsy, which is a compressive neuropathy of the radial nerve that occurs from prolonged, direct pressure onto the upper medial arm or axilla by an object or surface. The result of this compression is a nerve palsy that impairs motor and sensory function.

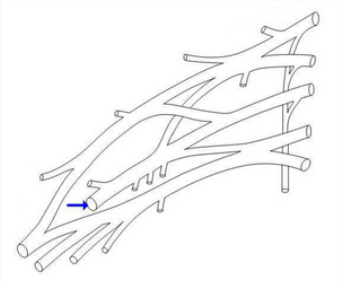
INCORRECT

The other options are less likely.
Answer Choice B, Thursday Night Palsy, does not exist as a medical condition.

Answer Choice C, Cerebral Palsy, is a group of disorders that affect movement, muscle tone, balance, and posture caused by abnormality or a disruption in brain development. It is not related to the symptoms described by the patient.

Answer Choice D, Brachial Plexus Injury, is an injury to the brachial plexus, the network of nerves that conducts signals from the spinal cord to the shoulder, arm, and hand. While it is possible for this injury to affect the radial nerve, it is less likely given the specific circumstances described by the patient (falling asleep with his arm hanging over the back of a chair). Saturday Night Palsy is a more specific diagnosis for this situation.

06 A 47-year-old patient who has been coming to you for back pain informs you that he had a bad fall this past weekend and would like you to assess him. He states that he fell off his skateboard while attempting to do a kickflip and landed on his right hand. He currently complains of pain and weakness in that arm. After your examination, you suspect an injury to the highlighted nerve in the brachial plexus. Based on the site of nerve injury, what movements do you expect to be limited?



A. Flexion of the Wrist

B. **Extension of the Wrist**

C. Opposition of the Thumb

D. Flexion of the Fingers

Correct Answer: B

System: Musculoskeletal

Difficulty Level: Easy

Catagory: Physical Therapy Examination

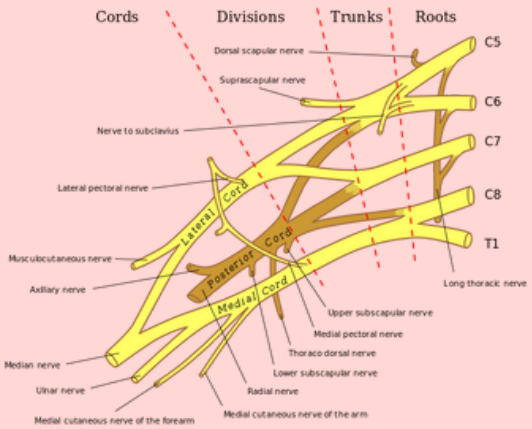
CORRECT

Answer Choice B is correct. The Radial Nerve controls extension of the wrist and thumb, as well as abduction and extension of the fingers. Injury to the radial nerve would limit these movements.

INCORRECT

Answer Choices A and C are incorrect. Both of these choices list the function of the median nerve, which was not highlighted. The median nerve is responsible for flexion of the wrist and thumb, as well as opposition of the thumb.

Answer Choice D is incorrect. The ulnar nerve, which was not highlighted, is responsible for flexion of the fingers and adduction of the thumb.



07

You are treating a 68-year-old male with a past medical history of multiple myeloma in the inpatient rehab facility. The patient presents with altered mental status and is oriented to person only. He has been experiencing progressive weakness (3/5 MMT in all four extremities), decreased ROM, constipation, and twitchiness. He is currently taking bortezomib and dexamethasone (cancer therapy), along with amlodipine, metformin, and atorvastatin. Lastly, MRI of the spine reveals multiple lytic lesions. Given these findings, what do you suspect is MOST LIKELY causing the patient's symptoms?

A. Hypokalemia

B. Hyponatremia

C. **Hypercalcemia**

D. Hypermagnesemia

Correct Answer: C

System: System Interactions

Difficulty Level: Intermediate

Category: Differential diagnosis

CORRECT

Answer Choice C, Hypercalcemia, is correct because it can cause many of the patient's symptoms, including his severe constipation, confusion, progressive weakness, and decreased Range of Motion (ROM). In multiple myeloma, excessive bone destruction due to osteolytic tumor lesions often leads to hypercalcemia (elevated levels of calcium in the blood). Thus, hypercalcemia is the most common metabolic complications associated with multiple myeloma. The MRI findings of multiple lytic lesions in the spine further support the likelihood of hypercalcemia in this patient, as these destructive bone lesions are likely releasing a lot of calcium into the bloodstream.

INCORRECT

Answer Choice A, Hypokalemia, is incorrect because the patient's symptoms do not quite match with the symptoms of hypokalemia (low levels of potassium in the blood). While hypokalemia can cause muscle weakness and possibly constipation, it does not typically cause the confusion or lytic bone lesions present in this patient. In addition, hypokalemia is usually marked by abnormal heart rhythms. Lastly, hypokalemia is usually caused by a loss of potassium in the digestive tract due to vomiting, diarrhea, excessive laxative use, certain medications, and some adrenal and genetic conditions. It is not associated with multiple myeloma.

Answer Choice B, Hyponatremia, is incorrect because the patient's symptoms do not quite match with the symptoms of hyponatremia (low levels of sodium in the blood). While hyponatremia can explain this patient's altered mental status and muscle weakness, it does not explain his constipation or the lytic bone lesions. In addition, hyponatremia is not typically associated with multiple myeloma. Instead, hyponatremia is usually caused by diuretic use, diarrhea, heart failure, renal disease, liver disease, and the syndrome of inappropriate antidiuretic hormone secretion (SIADH).

Answer Choice D, Hypermagnesemia, is incorrect because hypermagnesemia (high levels of magnesium in the blood) is not typically associated with multiple myeloma. Hypermagnesemia primarily occurs in patients with acute or chronic kidney disease, and is uncommon outside of kidney failure or excessive magnesium administration. While hypermagnesemia might cause muscle weakness and altered mental status, it does not typically lead to constipation or lytic bone lesions. Other typical symptoms of hypermagnesemia include hypotension, respiratory depression, and cardiac arrest.

08 A 68-year-old woman presents to the emergency department with severe right upper quadrant abdominal pain that radiates to her right shoulder. She reports that the pain intensifies after meals, especially fatty meals. She is currently on multiple medications including warfarin, metformin, and amlodipine. During the physical examination, you deduce that she is experiencing cholecystitis. What recommendations could you make to this patient to help relieve her symptoms?

A. Lean to the affected side

B. Lie supine and waiting for symptoms to pass

C. **Lean forward**

D. Apply Heat / Cold packs followed by stretching

Correct Answer: C

System: Gastrointestinal

Difficulty Level: Intermediate

Category: Intervention

CORRECT

Answer Choice C (Leaning forward) is correct as this position may alleviate abdominal pressure, thus reducing postprandial (i.e. post-meal) gallbladder discomfort.

INCORRECT

Answer Choice A (Lean to the affected side) is incorrect since this position is typically recommended for kidney-related symptoms, not gallbladder issues like cholecystitis.

Answer Choice B (Lie supine and waiting) is incorrect as this recommendation does not provide active relief. Furthermore, laying down could potentially worsen abdominal pressure and discomfort.

Answer Choice D (apply Heat/Cold packs followed by stretching) is incorrect as this technique is more suitable for muscle pain relief, and it will not address the underlying gallbladder inflammation causing discomfort in this case.

09

A 45-year-old patient with a history of hypertension and diabetes is admitted to the neurology ward following a head injury. The patient's eyes open when the therapist calls out to him, he starts saying confusing things when asked questions, and his motor response is localized. Calculate the patient's Glasgow Coma Scale (GCS) score.

A. GCS score of 15

B. GCS score of 14

C. GCS score of 13

D. GCS score of 12

Correct Answer: D

System: Neuromuscular

Difficulty Level: Intermediate

Category: Physical Therapy Examination

CORRECT

- Eye Opening (E) = 3 (since the patient's eyes opened when called out to)
- Motor Response (M) = 5 (since the patient exhibited localized motor response)
- Verbal Response (V) = 4 (since the patient's verbal responses were confused)

The GCS score is calculated by adding these values:
GCS = E + M + V; GCS = 3 + 5 + 4; GCS = 12 (a moderate score)

INCORRECT

Answer choices A, B, and C are incorrect based on this chart

Glasgow Coma Scale

Eyes Opening	Verbal Reasoning	Motor Response
		
Spontaneous > 4	Orientated > 5	Obey commands > 6
To sound > 3	Confused > 4	Localising > 5
To pressure > 2	Words > 3	Normal flexion > 4
None > 1	Sounds > 2	Abnormal flexion > 3
	None > 1	Extension > 2
		None > 1

GCS Grading
Mild: 13-15
Moderate: 9-12
Severe: 3-8

Mnemonic
EYES = LOOK= 4
VERBAL = SPEAK = 5
MOTOR = MOVING = 6

10

A 24-year-old woman presents to the physical therapy clinic with a referral for generalized weakness and chronic back pain. During the history, she states that in addition to the back pain and weakness, she has been experiencing nausea, vomiting, abdominal pain, increased thirst, and frequent urination for the past 2 days. She has a history of kidney stones, type 1 diabetes, and hypertension. On physical examination, she appears lethargic and dehydrated with dry mucous membranes and fruity-smelling breath. MMT reveals 4+/5 strength with thoracic flexion, extension, and side bending. Range of motion is within normal limits. Based on the given scenario, which of the following is the MOST LIKELY diagnosis?

A. Lactic acidosis

B. Hyperosmolar hyperglycemic state

C. Diabetic ketoacidosis

D. Nephrolithiasis (kidney stones)

Correct Answer: C

System: Metabolic & Endocrine

Difficulty Level: Hard

Category: Differential Diagnosis

CORRECT

Option C is correct because the patient's symptoms match those of Diabetic ketoacidosis (DKA), making it the correct diagnosis. The symptoms of DKA include nausea, vomiting, abdominal pain, increased thirst, frequent urination, lethargy, dry mucous membranes, and fruity-smelling breath. In addition, this patient has a known history of type 1 diabetes mellitus.

INCORRECT

Option A, lactic acidosis, is incorrect because the patient's symptoms do not match those of lactic acidosis. Symptoms of lactic acidosis may include muscle weakness, rapid breathing, and abdominal pain. Although there are similarities with DKA, lactic acidosis does not cause fruity-smelling breath.

Option B, hyperosmolar hyperglycemic state, is incorrect because this young patient with type 1 diabetes mellitus is more likely to have DKA. HHS is more common in elderly patients with type 2 diabetes mellitus. However, many of the symptoms of the two diseases overlap, making this question tricky. Symptoms of HHS may include increased thirst, frequent urination, fever, and confusion.

Option D, nephrolithiasis (kidney stones), is incorrect because the patient's symptoms do not match those of kidney stones. Symptoms of kidney stones may include severe pain in the side and back, pain below the ribs, pain that radiates to the lower abdomen and groin, pain on urination, pink or red urine, and nausea and vomiting.

11 Martina, a 8-year-old female, got burned from dropping a cup of boiling water on herself while attempting to make tea. She has burns on the right arm (upper and lower portions), right thigh, and right leg (below the knee). Calculate the percentage of burned surface area according to the Lund and Browder chart.

A. 20%

B. **23%**

C. 24%

D. 27%

Correct Answer: B **System:** Integumentary

Difficulty Level: Hard **Category:** Physical Therapy Examination

CORRECT

Option B is correct because, according to the modified Lund and Browder chart, body surface area is calculated as:

- Right upper arm 4% + right lower arm 3% + right hand 2.5% + right thigh 8% + right leg 5.5% =
- The total body surface area is 23%.

Initially, a patient must be transported from the site of injury to the treatment facility. The goal of the treatment is to stabilize the patient. After the patient arrives at the burn center, adequate fluid resuscitation should be initiated.

INCORRECT

Option A, C, and D are incorrect because TBSA is not 20%, 24%, or 27%. (See chart)

Remember , when dealing with burn management, follow this order:

- Maintain airway.
- Prevent cyanosis, shock and hemorrhage.
- Establish baseline data on patient such as extent and depth of burn.
- Prevent fluid loss.
- Clean the patient and their wounds.
- Examine injuries.
- Prevent pulmonary and cardiac complications

Area	Birth yr.	1–4 yrs.	5–9 yrs.	10–14 yrs.	15 yrs.	Adult	PT	FT	Total	Donor Areas
Head	19	17	13	11	9	7				
Neck	2	2	2	2	2	2				
Anterior Trunk	13	13	13	13	13	13				
Posterior Trunk	13	13	13	13	13	13				
Right Buttock	2½	2½	2½	2½	2½	2½				
Left Buttock	2½	2½	2½	2½	2½	2½				
Genitalia	1	1	1	1	1	1				
Right Upper Arm	4	4	4	4	4	4				
Left Upper Arm	4	4	4	4	4	4				
Right Lower Arm	3	3	3	3	3	3				
Left Lower Arm	3	3	3	3	3	3				
Right Hand	2½	2½	2½	2½	2½	2½				
Left Hand	2½	2½	2½	2½	2½	2½				
Right Thigh	5½	6½	8	8½	9	9½				
Left Thigh	5½	6½	8	8½	9	9½				
Right Leg	5	5	5½	6	6½	7				
Left Leg	5	5	5½	6	6½	7				
Right Foot	3½	3½	3½	3½	3½	3½				
Left Foot	3½	3½	3½	3½	3½	3½				
						Total				

Key: FT – Full Thickness
PT – Part Thickness

Figure 24.10 Modified Lund and Browder chart for determination of percentage of body surface area burn for various ages. *Courtesy Shriners Burns Hospital, Cincinnati, OH.*

12 A 42-year-old female patient presents to your clinic with complaints of aching, heaviness and swelling in her lower legs. During your evaluation, you note that she has rusty brownish-yellow hemosiderin changes on her lower leg. Her vital signs are within normal limits and she reports no significant past medical history, other than Type II Diabetes Mellitus. She is currently taking Ozempic once per week for weight loss and DM management. Based on the given findings, which answer choice is MOST consistent with her symptoms?

A. Acute Arterial Insufficiency

B. Acute Venous Insufficiency

C. Chronic Arterial Insufficiency

D. Chronic Venous Insufficiency

Correct Answer: D

System: Cardiology

Difficulty Level: Easy

Category: Differential Diagnosis

CORRECT

Option D: Chronic Venous Insufficiency (CVI) is correct because CVI is a condition in which the veins in the legs have difficulty returning blood to the heart, leading to pooling of blood in the lower extremities. This can result in symptoms such as aching, heaviness, and swelling in the lower legs, as well as skin changes such as rusty brownish-yellow discoloration from hemosiderin deposits. These symptoms and signs are consistent with the patient's presentation.

INCORRECT

Option A: Acute Arterial Insufficiency is incorrect because it typically presents with sudden onset of severe pain, pallor, pulselessness, and paralysis in the affected limb, which are not present in this case.

Option B: Acute Venous Insufficiency is incorrect because it appears more acutely than CVI with the sudden onset of pain and swelling in one leg. In addition, there is no hemosiderin staining in acute venous insufficiency because the hemosiderin deposits have not had time to form.

Option C: Chronic Arterial Insufficiency is incorrect because it is associated with intermittent claudication and decreased pulses, and would not typically present with hemosiderin staining.

13 A patient has been experiencing swelling and discomfort in her left arm for the past six months. She noticed that the swelling worsens throughout the day and is aggravated by prolonged use of her left arm. What should be a part of your Phase 1 Rehabilitation intervention?

A. Long-stretch compression bandages, worn 24 hours per day

B. Short-stretch compression bandages, worn 12 hours per day

C. Long-stretch compression bandages, worn 12 hours per day

D. Short-stretch compression bandages, worn 24 hours per day

Correct Answer: D

System: Lymphatic

Difficulty Level: Hard

Catagory: Intervention

CORRECT

Option D is correct. Short-stretch bandages are appropriate for managing edema and promoting venous return, especially when worn continuously. Wearing short-stretch compression bandages for 24 hours per day helps in providing consistent compression, reducing swelling, and supporting the overall rehabilitation process.

INCORRECT

Option A is incorrect as they are not the best choice for managing swelling, especially in cases where the swelling worsens throughout the day. Long-stretch bandages are designed to provide sustained, even pressure. Wearing long-stretch compression bandages for 24 hours per day can lead to excessive compression, which may not be well-tolerated by the patient, especially during periods of rest.

Option B is incorrect as using the short-stretch bandages for only 12 hours per day might not be sufficient to address the patient's symptoms, especially if the swelling worsens throughout the day. However, short-stretch bandages are preferred to long-stretch bandages because short-stretch bandages are designed to provide high resistance at rest and low resistance with activity, promoting efficient muscle pump function.

Option C is incorrect for reasons similar to option A. Wearing long-stretch compression bandages for only 12 hours per day may not provide continuous support and compression, which is often needed in cases of persistent swelling.

14 A physical therapist is assessing a patient who has a history of paraplegia with some qualitative tests. The patient takes 23 seconds to complete TUG. The POMA score for this patient is 22, and the Berg Balance Score is 43. What is the MOST LIKELY score interpretation for this patient?

A. The patient has a normal TUG score. Their POMA score indicates a moderate risk of falls. Their Berg Balance score indicates a low risk of falls.

B. The patient is at an increased risk for falls based on their TUG score. Their POMA score indicates a moderate risk of falls. Their Berg Balance score indicates a high risk of falls.

C. The patient has a high risk for falls based on their TUG score. Their POMA score indicates a moderate risk of falls. Their Berg Balance score indicates a moderate risk of falls.

D. The patient has a high risk for falls based on their TUG score. Their POMA score indicates a high risk of falls. Their Berg Balance score indicates a high risk of falls.

Correct Answer: B

System: Neurological

Difficulty Level: Intermediate

Category: Physical Therapy Examination

CORRECT

Answer Choice B is correct because it correctly interprets the patient's risk based on the TUG, POMA, and Berg Balance Scale scores. The TUG score of 23 seconds places the patient at an increased risk for falls, the POMA score of 22 indicates a moderate risk of falls, and the Berg Balance Scale score of 43 suggests a high risk of falls.

INCORRECT

Answer Choice A, C, and D are incorrect because they do not accurately interpret the scores from the TUG, POMA, and Berg Balance Scale.

The TUG score of 23 seconds indicates an increased (but not high) risk of falls for this patient.

- This is because scores between 20-30 seconds are associated with increased risk, not high risk.

The POMA score of 22 indicates a moderate risk of falls.

- Scores below 19 indicate high risk and scores between 19-24 indicate moderate risk.

The Berg Balance Scale score of 43 falls into the high-risk category.

- Scores below 45 indicate a high risk of falls.

15 A 40-year-old female presents to the clinic with a complaint of chronic low back and right hip pain. She reports a deep, achy pain, localized mainly around her right sacroiliac (SI) and hip joint, which intensifies with prolonged standing and sitting. Her medical history is significant for a past episode of kidney stones and ongoing treatment for endometriosis. There are no red flags, such as unexplained weight loss, fever, or changes in bowel or bladder function. Which of the following tests is the MOST sensitive and could be used to rule out an SI joint issue?

A. Scour Hip Test

B. Gaenslen Test

C. **Patrick's Test**

D. Ober's Test

Correct Answer: C

System: Musculoskeletal

Difficulty Level: Intermediate

Category: Intervention

CORRECT

Answer Choice C is correct because Patrick's Test, or the FABER Test, has a reported sensitivity of approximately 90% for identifying hip pathology. This high sensitivity means that the test is very good at correctly identifying individuals who have hip joint issues. In the context of this patient with chronic low back and right hip pain, a positive Patrick's Test would suggest that the hip joint is likely the source of the pain, helping to effectively rule out the sacroiliac joint as the primary issue. This question is tricky because the positive Patrick's test/FABER is being used to rule out the SI joint.

INCORRECT

Answer Choice A (Scour Hip Test) is incorrect because the Scour Hip Test, used to assess for hip joint pathology, has a sensitivity of around 62%. While this test is reasonably sensitive, it is not as high as the Patrick's Test, making it less effective for ruling out SI joint issues compared to the Patrick's Test.

Answer Choice B (Gaenslen Test) is incorrect because the Gaenslen Test, which is specific for SI joint dysfunction, has a reported sensitivity of about 37%. This lower sensitivity indicates that the test is less effective at correctly identifying individuals with SI joint issues, making it less reliable for ruling out SI joint problems in this context. Additionally, the test is used to rule in an SI joint issue, not rule out the issue. To rule in an SI joint issue, you need 3/5 tests in Laslett's cluster to be positive.

Answer Choice D (Ober's Test) is not the best choice because is primarily used for assessing the tightness of the iliotibial band and tensor fascia lata and is not specifically focused on the SI joint or hip joint issues. Therefore, it is less relevant for ruling out SI joint issues compared to the Patrick's Test.

16 A 68-year-old male with a history of hypertension, type 2 diabetes mellitus, and stage 3 chronic kidney disease presents to the emergency department (ED) with severe right-sided flank pain radiating to the groin for the past 6 hours. He also complains of nausea and a single episode of vomiting. His medications include metformin, lisinopril, and atorvastatin. On physical examination, there is right costovertebral angle tenderness. A CT reveals that the patient has a kidney stone. Based on the given information, what physical therapy recommendations can the PT prescribe to temporarily reduce pain?

A. Sitting upright and / or leaning forward

B. Leaning to the affected side

C. Lying supine and waiting for the pain to subside

D. Applying Hot / Cold packs followed by stretching

Correct Answer: B

System: Genitourinary

Difficulty Level: Intermediate

Category: Intervention

CORRECT

Answer Choice B is correct. Leaning to the affected side may help to temporarily reduce discomfort by possibly facilitating stone movement through the ureter due to gravity, although evidence supporting this maneuver is limited. In clinical practice, patients may find some positions more comfortable than others when experiencing renal colic, and leaning toward the affected side is a common self-adjustment.

INCORRECT

Answer Choice A is incorrect because sitting upright and/or leaning forward is more typically associated with relieving pain from pancreatic or gallbladder issues than relieving pain from renal colic from a kidney stone.

Answer Choice C is incorrect as lying supine and waiting for the pain to subside is not an active method of managing the pain and, therefore, not the best recommendation from the PT. Additionally, it does not aid in facilitating stone passage, which could potentially alleviate the pain.

Answer Choice D is incorrect because, while applying hot/cold packs followed by stretching may provide temporary relief from muscle tension or spasms, they do not address the root cause of the pain, which is the kidney stone. Moreover, stretching is not typically a recommended physical therapy intervention for renal colic.

17 A study is conducted to determine whether a new drug reduces the time it takes to recover from a specific illness. The null hypothesis states that there is no difference in recovery time between the new drug and the standard treatment. After conducting the study with a large sample size, the researchers obtain a p-value of 0.047. Assuming a significance level of 0.05, which of the following is the MOST APPROPRIATE conclusion?

A. Reject the null hypothesis; the new drug significantly reduces recovery time.

B. Do not reject the null hypothesis; the new drug does not significantly reduce recovery time.

C. Reject the null hypothesis; the new drug does not significantly reduce recovery time.

D. Do not reject the null hypothesis; the new drug significantly reduces recovery time.

Correct Answer: A **System:** Research

Difficulty Level: Easy

CORRECT

Answer Choice A is correct because the p-value of 0.047 is less than the significance level of 0.05. This indicates that there is less than a 5% probability that the observed reduction in recovery time is due to chance, leading to the rejection of the null hypothesis. Hence, it is concluded that the new drug does have a significant effect on reducing recovery time compared to the standard treatment.

Further explanation: The p-value is a measure of the probability that the observed results would occur if the null hypothesis were true. In hypothesis testing, if the p-value is less than or equal to the predetermined significance level (α; commonly 0.05), the null hypothesis is rejected. This signifies that the observed effect is statistically significant and not just due to chance.

INCORRECT

Answer Choice B is incorrect because the p-value is less than the established alpha level (0.05), indicating that the findings are statistically significant.

Answer Choice C is incorrect as it presents a contradictory statement. Rejecting the null hypothesis implies that the results are significant, not insignificant.

Answer Choice D is incorrect because it does not reject the null hypothesis, despite the p-value being less than the threshold for significance (0.05).

18 A 45-year-old patient with a past medical history of hypertension, hyperlipidemia, and osteoarthritis presents to physical therapy with complaints of joint pain in his right elbow. The patient works in construction and handles crane operations. His pain has been present for several months and has not improved with over-the-counter pain medication. On examination, the physical therapist identifies an active trigger point in the right elbow. The therapist decides to perform dry needling on the patient. During the procedure, the patient suddenly complains of pain in both the left and right arms. What mechanism is MOST LIKELY causing the pain in his left arm?

A. Referred pain due to trigger points

B. Puncture of the radial nerve with the needle

C. Activation of wide dynamic range neurons

D. Mismanagement of signals in the secondary interneuron

Correct Answer: C **System:** Neuromuscular

Difficulty Level: Hard **Category:** Physical Therapy Examination

CORRECT

Answer Choice C is correct. Wide dynamic range (WDR) neurons are a type of sensory neuron that respond to a wide range of stimuli, including both innocuous and noxious stimuli. They are found in the dorsal horn of the spinal cord, and they play a role in the transmission of pain signals. They can detect pain sensations but cannot determine location. That is how a pain sensation on the ipsilateral side (the patient's right elbow) can cause pain on the contralateral side (the patient's left elbow).

INCORRECT

Answer choice A is unlikely because it does not follow the typical pain pattern associated with right elbow pain. Referred pain typically follows a predictable pattern. For example, trigger points in the right shoulder may cause referred pain in the right arm, but they are not likely to cause pain in the left arm.

Answer choice B is unlikely because it is virtually impossible to damage a nerve via a dry needle. Dry needling is very safe and rarely causes harmful injury unless the therapist is negligent. In addition, even if damaged, the right radial nerve would be unlikely to cause left elbow pain.

Answer choice D is unlikely because the secondary interneuron is not responsible for sending pain signals to the left arm. It is responsible for determining whether or not pain signals will reach the brain.

19 In an outpatient cardiac rehabilitation center, a 45-year-old male patient with a known history of cocaine use disorder presents for a routine evaluation. He reports experiencing shortness of breath and intermittent chest pain over the past few months. His vital signs are as follows: blood pressure 160/95 mmHg, heart rate 110 bpm, respiratory rate 22 breaths/min, and oxygen saturation 95% on room air. Physical examination reveals a mild systolic murmur best heard at the apex. Given the patient's history, which structure would you expect to be the MOST affected?

A. Left Atrium

B. **Left Ventricle**

C. Right Atrium

D. Right Ventricle

Correct Answer: B

System: Cardiology

Difficulty Level: Hard

Catagory: Differential Diagnosis

CORRECT

Answer Choice B (Left Ventricle) is correct because chronic cocaine use predominantly affects the left ventricle. Cocaine's stimulatory effect on the sympathetic nervous system leads to increased heart rate and blood pressure, contributing to left ventricular hypertrophy and possibly reduced ejection fraction. This correlates with the patient's symptoms of chest pain and shortness of breath, as well as the systolic murmur at the apex, a typical sign of left ventricular strain.

INCORRECT

Answer Choice A (Left Atrium) is incorrect because the left atrium is typically affected in cases involving mitral valve disease or atrial fibrillation. While it can be secondarily affected by left ventricular dysfunction, it is not the primary site affected by long-term cocaine use, which more directly impacts the left ventricle.

Answer Choice C (Right Atrium) is incorrect because the right atrium is more commonly affected by conditions that cause right-sided heart failure or tricuspid valve disease.

Answer Choice D (Right Ventricle) is incorrect because the right ventricle is generally affected in conditions leading to pulmonary hypertension or chronic lung disease. While right ventricular dysfunction can sometimes occur, it is typically a secondary consequence of left-sided heart failure or other pulmonary conditions.

20

A 78-year-old woman, living with her daughter, is visited at home by a physical therapist for management of chronic lower back pain. The patient is usually upbeat but appears withdrawn and hesitant during the session. The therapist notes multiple bruises of different stages on her arms and a recent burn mark on her hand, which the patient dismissively attributes to "clumsiness." The therapist also observes that the patient flinches at sudden movements and seems fearful when her daughter speaks to her. The patient's blood pressure is higher than usual at 160/90 mmHg, and she appears malnourished. In this scenario, what is the most appropriate initial action for the physical therapist to take?

A. Directly confront the daughter about the suspected abuse.

B. Report the findings to a supervisor and discuss the need for a potential adult protective services referral.

C. Advise the patient to avoid situations leading to injuries.

D. Document the findings and continue monitoring in subsequent visits.

Correct Answer: B **System:** Professional Responsibilities

Difficulty Level: Easy

CORRECT

Answer choice B (Report the findings to a supervisor and discuss the need for a potential adult protective services referral) is correct. This patient's burn and bruises in different stages of healing, behavioral changes such as withdrawn behavior and flinching, and high blood pressure (likely due to stress) suggest abuse. As a healthcare provider, the therapist has a responsibility to report suspected elder abuse. Discussing with a supervisor can provide guidance on the appropriate steps, including a possible referral to adult protective services.

INCORRECT

(A) is incorrect because confronting the daughter directly may escalate the situation and is not within the therapist's professional role. It could also put the patient at greater risk of harm. (C) is incorrect as it implies victim-blaming and does not address the potential underlying issue of abuse. (D) is incorrect because, while documentation is important, it is not sufficient as the only response in a case where there is a suspicion of abuse.

21 Damage to the ------ results in a positive Babinski sign, absent superficial abdominal reflexes and cremasteric reflex, and the loss of fine motor or skilled voluntary movement.

A. Corticospinal tract (Anterior)

B. Tectospinal tract (Anterior)

C. Corticospinal tract (Lateral)

D. Tectospinal tract (Lateral)

Correct Answer: C

System: Neuromuscular

Difficulty Level: Intermediate

Category: Physical Therapy Examination

CORRECT

Answer choice C, Corticospinal tract (Lateral), is correct. Damage to the lateral corticospinal tract can result in a positive Babinski sign, absent superficial abdominal reflexes and cremasteric reflex, and loss of fine motor or skilled voluntary movement. The Babinski sign is characterized by the dorsiflexion of the big toe and fanning of the other toes in response to stimulation of the sole, indicating an upper motor neuron lesion. The lateral corticospinal tract is responsible for voluntary skilled movements.

INCORRECT

Answer choice A, Corticospinal tract (Anterior), is incorrect. The anterior corticospinal tract primarily controls the axial and girdle muscles. Damage to this tract may not specifically result in the described combination of signs and symptoms.

Answer choice B, Tectospinal tract (Anterior), is incorrect. The tectospinal tract is involved in reflex postural movements of the head and neck, not the described signs and symptoms.

Answer choice D, Tectospinal tract (Lateral), is incorrect. The lateral tectospinal tract is involved in the reflex turning of the head in response to visual stimuli and does not contribute to the described clinical manifestations.

22

Which of the following is NOT true about the prosthetic device shown below?

A. **The device does not allow plantar flexion during the early stance phase**

B. The device cannot be effectively used on uneven terrain

C. The device should not be recommended if energy conservation is needed

D. The device allows for a small amount of mediolateral and transverse motion

Correct Answer: A

System: Equipment

Difficulty Level: Hard

CORRECT

Answer Choice A is correct. The SACH foot is designed to provide shock absorption and simulate normal plantar flexion during the early stance phase, primarily through its cushion heel. This heel compresses about 3/8 inches, allowing the forefoot to rotate toward the floor and closely mimicking normal plantar flexion. Given that the SACH foot does allow the plantar flexion, Answer Choice A is NOT true.

INCORRECT

Answer Choice B is incorrect. The SACH foot, due to its lack of flexibility and inability to accommodate uneven terrain, is not ideal for moderate to high activity prosthesis users that require mobility on varied terrains. It is more suitable for those who require limited walking and have little variation in speed and types of terrain, such as those who want to perform only basic household activities. Thus, the statement in this answer choice is actually TRUE.

Answer Choice C is incorrect. The SACH foot is not recommended in situations where energy conservation is a priority. This is due to its design limitations: it doesn't store and return the same amount of energy as more advanced prosthetic feet, making it less efficient for users who require energy conservation in their activities. Thus, the statement in this answer choice is actually TRUE.

Answer Choice D is incorrect. The SACH foot is designed to allow for a small amount of mediolateral and transverse motion, providing a certain degree of flexibility and comfort during use. Thus, the statement in this answer choice is actually TRUE.

23 A 32-year-old female, post-cesarean section, seeks consultation from a pelvic floor physical therapist. During the examination, she reveals that she is HIV-positive and effectively managing her condition with antiretroviral therapy (ART) including tenofovir, emtricitabine, and dolutegravir. Although she has had the disease for years, she expresses concerns about inadvertently transmitting the disease and would like your help in identifying which of the following actions is LEAST LIKELY to transmit the disease.

A. Breastfeeding her newborn infant

B. Sharing drinks with a family member

C. Donating blood

D. Kissing with the presence of oral lesions

Correct Answer: B

System: System Interactions

Difficulty Level: Easy

Category: Differential Diagnosis

CORRECT

Answer Choice B is correct because HIV cannot be transmitted through casual contact, which includes sharing drinks. HIV is not spread through saliva, and thus, sharing utensils, glasses or food does not pose a risk for transmission.

INCORRECT

Answer Choice A is incorrect as breastfeeding her newborn infant can be a mode of HIV transmission. If an HIV-positive mother is not on effective antiretroviral therapy, there is a risk of passing the virus to the infant through breast milk. However, the risk is significantly reduced if the mother is on effective ART with an undetectable viral load.

Answer Choice C is incorrect because donating blood poses a potential risk for HIV transmission. HIV transmission is not likely through the actual donation due to the modern practice of screening blood donations for HIV. However, the process of donating blood itself could theoretically pose a risk if contaminated equipment is used between donors, which is extremely rare with modern medical practices.

Answer Choice D is incorrect as kissing with the presence of oral lesions presents a theoretical (but extremely low) risk of HIV transmission. If the oral lesions are open and blood is present, there is a potential, albeit minimal, risk for transmission.

24 In an outpatient physical therapy clinic, a 72-year-old female patient presents with a referral from her primary care physician (PCP) for conservative treatment of persistent musculoskeletal inflammation in the right shoulder. Examination reveals tenderness to palpation of the right shoulder, reduced range of motion (ROM) with active abduction limited to 90 degrees, and a manual muscle test (MMT) score of 4/5 in the affected area. MRI of the shoulder shows signs consistent with tendonitis without significant structural damage. Based on the given scenario, which therapeutic modality would be MOST appropriate?

A. Direct contact Iontophoresis with Hydrocortisone set to a negative polarity

B. **Direct contact Iontophoresis with Dexamethasone set to a negative polarity**

C. Direct contact Iontophoresis with Dexamethasone set to a positive polarity

D. Direct contact Iontophoresis with Acetone set to a positive polarity

Correct Answer: B **System:** Therapeutic Modalities

Difficulty Level: Hard

CORRECT

Answer Choice B (Direct contact Iontophoresis with Dexamethasone set to a negative polarity) is correct. Dexamethasone is a potent corticosteroid, highly effective in reducing inflammation in musculoskeletal disorders. Its ionized form requires a negative polarity for effective transdermal delivery through iontophoresis, making it an appropriate choice for this patient's shoulder inflammation.

INCORRECT

Answer Choice A (Direct contact Iontophoresis with Hydrocortisone set to a negative polarity) is incorrect because Hydrocortisone has a positive polarity, and the polarity was set to negative. In this case, the opposite nature of the poles would cause them to attract and prevent effective transmission of medication. Additionally, hydrocortisone is less effective and potent than dexamethasone, so it is not commonly used in iontophoresis for musculoskeletal conditions.

Answer Choice C (Direct contact Iontophoresis with Dexamethasone set to a positive polarity) is incorrect. Dexamethasone is negatively charged and needs to be administered under a negative polarity to effectively penetrate the skin and reach the target tissue. Using a positive polarity contradicts the principles of iontophoresis, where the repulsion of like charges facilitates the drug's transdermal migration.

Answer Choice D (Direct contact Iontophoresis with Acetone set to a positive polarity) is incorrect. Acetone is not typically used in iontophoresis for treating musculoskeletal conditions. It is primarily known as a solvent and lacks therapeutic properties for treating inflammation or pain in musculoskeletal areas. It is typically used to reduce calcium deposits. Thus, it would be an inappropriate and ineffective choice for this patient's condition.

25 In an outpatient pediatric physical therapy clinic, a 2-month-old premature infant, born at 30 weeks gestation, is evaluated for developmental therapy. The infant's mother reports increased extensor tone and difficulty in achieving midline orientation. The infant has not been on any medications since discharge from the neonatal intensive care unit. A recent MRI of the brain was unremarkable. Physical examination reveals increased extensor tone in both upper and lower extremities, with decreased flexor tone. The infant has difficulty in maintaining head control and exhibits a preference for turning the head to the right. Based on this clinical presentation, which of the following treatment options would NOT be appropriate for this patient?

A. Minimize the use of infant jumpers or walkers

B. **Place the child in supine to influence the Tonic Labyrinthine Reflex to promote flexion**

C. Place the child in prone to influence the Tonic Labyrinthine Reflex to promote flexion

D. Stress side-lying and prone with chin tucked

Correct Answer: B

System: Neuromuscular

Difficulty Level: Hard

Category: Intervention

CORRECT

Answer Choice B is correct because placing a child in a supine position can exacerbate extensor tone rather than promote flexion. Effective management of infants with high tone often involves positioning and seating adjustments, but placing them in supine is not typically advised for reducing tone or spasticity.

INCORRECT

Answer Choice A is incorrect because these devices can encourage weight bearing in an extended position, which might exacerbate extensor tone. Therefore, it is recommended that their use be minimized for infants with this condition.

Answer Choice C is incorrect because the prone position is often recommended for infants to promote motor development and muscle tone regulation. This position can increase flexor tone.

Answer Choice D is incorrect because these positions support the development of midline control and head alignment, which are critical in infants with increased extensor tone.

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