

Final Exam Practice Questions

Question 1. Matthew, age 52, is a chef who just severed 2 of his fingers with a meat cutter. You would recommend that he:

1. Wrap the severed fingers tightly in a dry towel for transport to the emergency department with him.
2. Leave the severed fingers at the scene because fingers cannot be reattached.
3. Immediately freeze the severed fingers for reattachment in the near future.
4. Wrap the fingers in a clean, damp cloth; seal them in a plastic bag; and place the bag in an ice water bath.

Rationales

Option 1:

Severed fingers should be wrapped in a clean, damp cloth; sealed in a plastic bag; and placed in an ice water bath.

Option 2:

Severed fingers can be reattached after 1 to 2 days—or more—if properly stored.

Option 3:

Severed fingers should be wrapped in a clean, damp cloth; sealed in a plastic bag; and placed in an ice water bath, not frozen or kept at body temperature.

Option 4:

If a client has severed his fingers, the fingers should be wrapped in a clean, damp cloth; sealed in a plastic bag; placed in an ice water bath; and transported to the emergency room along with the client.

The valgus stress test, varus stress test, Lachman test, and thumb sign are all considered standard tests to check the integrity of the ligaments of the knee. Which test would the nurse practitioner choose to assess the anterior cruciate ligament (ACL), which is the most commonly involved structure in severe knee injury?

1. Valgus stress test.
2. Varus stress test.
3. Lachman test.
4. Thumb sign.

Rationales

Option 1:

The valgus stress test assesses stability of the medial collateral ligament (MCL).

Option 2:

The varus stress test assesses stability of the lateral collateral ligament (LCL).

Option 3:

The Lachman test assesses the ACL.

Option 4:

The thumb sign assesses the posterior cruciate ligament (PCL).

Lillian, age 70, was told that she has osteoporosis. When she asks you what this is, you respond that osteoporosis:

1. Develops when loss of bone occurs more rapidly than new bone growth.
2. Is a degenerative joint disease characterized by loss of cartilage in certain joints.
3. Is a chronic inflammatory disorder that affects multiple joints.

4. Is a bone disorder that has to do with inadequate mineralization of the bones.

Rationales

Option 1:

Osteoporosis develops when bone resorption occurs more rapidly than bone deposition.

Option 2:

Osteoarthritis is a degenerative joint disease characterized by degeneration and loss of articular cartilage in synovial joints.

Option 3:

Rheumatoid arthritis is a chronic, systemic inflammatory disorder characterized by persistent synovitis of multiple joints.

Option 4:

Osteomalacia is a metabolic bone disorder characterized by inadequate mineralization of the bone matrix, often caused by vitamin D deficiency.

Mike, age 42, a golf pro, has had chronic back pain for many years. His workup reveals that it is not the result of a degenerative disk problem. His back “goes out” about twice per year, and he is out of work for about a week each time. Which of the following should the nurse practitioner advise him to do?

1. Consider changing careers to something less physical.
2. Begin a planned exercise program to strengthen back muscles.
3. Make an appointment with a neurosurgeon for a surgical consultation.
4. Start on a daily low-dose narcotic to take away the pain.

Rationales

Option 1:

Suggesting a career change should be considered only in cases of disability or inability to safely continue one's current employment.

Option 2:

In this case, Mike may benefit from a regular planned exercise program to strengthen his back muscles and attempt to reduce the probability of future episodes of back pain.

Option 3:

Surgery is recommended only for clients with low back pain caused by degenerative disk disorders, and then only when severe neurologic involvement has occurred. Surgery benefits only approximately 1% of people with low back problems.

Option 4:

Narcotic pain medications are not considered first-line treatment for mechanical back pain.

Course Topic: Musculoskeletal Problems Concept(s): 21820Cognitive Level: Analysis [Analyzing]

Janine, age 69, has class III rheumatoid arthritis. According to the American Rheumatism Association, which of the following describes her ability to function?

1. Adequate for normal activities despite a handicap of discomfort or limited motion of one or more joints.
2. Largely or wholly incapacitated, bedridden, or confined to a wheelchair, permitting little or no self-care.
3. Completely able to carry out all usual duties without handicap.
4. Adequate to perform only a few or none of the duties of usual occupation or self-care.

Rationales

Option 1:

Class II refers to the client whose function is adequate for normal activities despite a handicap of discomfort or limited motion of one or more joints.

Option 2:

Class IV refers to the client who is largely or wholly incapacitated, bedridden, or confined to a wheelchair, permitting little or no self-care.

Option 3:

Class I refers to the client who can carry out all usual duties without handicap.

Option 4:

The American Rheumatism Association has established functional classes I to IV to describe a client's ability to accomplish activities of daily living. Because Janine is class III, her function would be adequate to perform only a few or none of the duties of usual occupation or self-care.

For an adult patient with a knee injury, the nurse practitioner orders a nonsteroidal anti-inflammatory drug (NSAID) to be taken on a routine basis for the next 2 weeks. Patient teaching should include which of the following?

1.

"You may take this medication on an empty stomach as long as you eat within two to three hours of taking it."

2.

"If one pill does not seem to help, you can double the dose for subsequent doses."

3.

"If you notice nausea, vomiting, or black or bloody stools, take the next dose with a glass of milk or a full meal."

4.

"If you have additional pain, an occasional acetaminophen (Tylenol) is permitted in between the usual doses of the NSAID."

Rationales

Option 1:

When teaching clients about NSAIDs, tell them not to take these drugs on an empty stomach but to take them with food or milk.

Option 2:

Clients should be taught to never take more than the prescribed dose of an NSAID due to the likelihood of increasing the chances of gastrointestinal (GI) and kidney damage.

Option 3:

When teaching clients about NSAIDs, tell them to stop the medication and call immediately if they notice any nausea, vomiting, coffee-grounds emesis, black stools, or blood in the stool.

Option 4:

If the client is having additional pain, acetaminophen (Tylenol) may be taken in conjunction with an NSAID because it is not an NSAID and will not potentiate gastric bleeding.

Sean, a factory line worker, has osteoarthritis (OA) of the right hand. According to the American College of Rheumatology (ACR), the guidelines for pharmacologic treatment include:

1. Acetaminophen, tramadol, and intra-articular corticosteroid injections.

2. Oral nonsteroidal anti-inflammatory drugs (NSAIDs), tramadol, and articular corticosteroid injections.

3. Acetaminophen, topical capsaicin, and topical nonsteroidal anti-inflammatory drugs (NSAIDs).

4. Topical capsaicin, topical nonsteroidal anti-inflammatory drugs (NSAIDs), and oral NSAIDs.

Rationales

Option 1:

Acetaminophen, oral nonsteroidal anti-inflammatory drugs (NSAIDs), tramadol, and intra-articular corticosteroid injections are recommended for initial management of hip OA.

Option 2:

Acetaminophen, oral NSAIDs, tramadol, and intra-articular corticosteroid injections are recommended for initial management of hip OA.

Option 3:

The ACR conditionally recommends acetaminophen, oral NSAIDs, topical NSAIDs, tramadol, and intra-articular corticosteroid injections for OA of the knee.

Option 4:

Topical capsaicin, topical NSAIDs, oral NSAIDs, and tramadol are recommended by the ACR for the treatment of OA of the hand.

Margaret, age 55, presents to you for evaluation of left hand and wrist pain and swelling after a slip and fall on the ice yesterday. On examination, you note tenderness at her “anatomical snuffbox.” You know this probably indicates a(n):

1. Ulnar styloid fracture.
2. Scaphoid fracture.
3. Hamate fracture.
4. Radial head fracture.

Rationales

Option 1:

An ulnar styloid fracture would produce tenderness at the distal ulna.

Option 2:

There is tenderness over the “anatomical snuffbox” in a scaphoid (aka navicular) fracture, the most common injury of the carpal bones. Poor blood supply puts the scaphoid bone at risk of avascular necrosis; therefore, wrist pain and tenderness in the anatomical snuffbox, even without history of antecedent trauma, warrant a wrist x-ray.

Option 3:

A fracture of the hook of the hamate is an uncommon injury seen in golfers and players of racket sports that involves pain and tenderness on the ulnar side of the palm.

Option 4:

A radial head fracture would result in pain at the elbow joint where the radial head lies proximal to the distal humerus. Be sure not to confuse the radial head (proximal end of the radius) with the radial styloid (distal end of the radius at the wrist).

Jim, age 22, a stock boy, has an acute episode of low back pain. The nurse practitioner orders a nonsteroidal anti-inflammatory drug (NSAID) and should educate him in which of the following?

1. Maintaining moderate bed rest for 3 to 4 days.
2. Calling the office for narcotic medication if there is no relief with the NSAID after 24 to 48 hours.
3. Beginning lower back strengthening exercises depending on pain tolerance.
4. Wearing a Boston brace at night.

Rationales

Option 1:

Years ago, muscle relaxants and bed rest were the treatments of choice for low back pain. Studies have now shown that resuming normal activity within the limits imposed by the pain has an effect as good as, if not better than, 2 days of bed rest.

Option 2:

NSAIDs, not narcotics, are generally the first-line medication treatment of low back pain and have no risk of opioid dependency.

Option 3:

Years ago, muscle relaxants and bed rest were the treatments of choice for low back pain. Studies have now shown that resuming normal activity within the limits imposed by the pain has an effect as good as, if not better than, 2 days of bed rest. The key here is letting pain be your guide. Exercise should begin as soon as possible after the acute injury and be directed at building endurance and stamina, with consideration given to one's pain tolerance.

Option 4:

A Boston brace may be used in the treatment of scoliosis.

Jessie, age 49, states she thinks she has rheumatoid arthritis. Before any diagnostic tests are ordered, the nurse practitioner completes a physical examination and makes a diagnosis of osteoarthritis rather than rheumatoid arthritis. Which clinical manifestation ruled out rheumatoid arthritis?

1. Fatigue.
2. Affected joints are swollen, cool, and bony hard on palpation.
3. Decreased range of motion.
4. Joint stiffness.

Rationales

Option 1:

Fatigue is common to both diseases.

Option 2:

In osteoarthritis, the affected joints are swollen, cool, and bony hard on palpation. With rheumatoid arthritis, the affected joints are red, hot, and swollen and boggy and tender on palpation.

Option 3:

Decreased range of motion is common to both diseases.

Option 4:

Joint stiffness is common to both diseases.

Greg, age 26, runs marathons and frequently complains of painful contractions of his calf muscles after running. You attribute this to:

1. Hypercalcemia.
2. Hyponatremia.
3. Heat exhaustion.
4. Dehydration.

Rationales

Option 1:

Hypercalcemia may affect gastrointestinal, renal, and neurologic function. Symptoms may include constipation and polyuria as well as nausea, vomiting, and anorexia at times.

Option 2:

Painful contractions of muscles after exertion, such as heat cramps, may be related to hyponatremia or other electrolyte imbalances. Usually the gastrocnemius and hamstring muscles are involved. Treatment of heat cramps

includes passive muscle stretching, cessation of activities, transfer to a cooler environment, and drinking cool liquids. Sports drinks that contain electrolytes, such as Gatorade, may be beneficial.

Option 3:

Heat exhaustion is a more serious condition, with symptoms ranging from nausea, vomiting, headache, loss of appetite, and dizziness to irritability, tachycardia, and hyperventilation.

Option 4:

Greg's painful muscle contractions are attributed to his hyponatremia, but this would be a good second choice.

Course Topic: Musculoskeletal Problems Concept(s): 21820Cognitive Level: Analysis [Analyzing]

The nurse practitioner is considering a diagnosis of calcium pyrophosphate deposition disease (CPPD), or pseudogout, in a 72-year-old man who presents with complaints of pain and stiffness in his wrists and knees. The most useful diagnostic tests to assist in confirming this diagnosis would be:

1. Synovial fluid analysis and x-ray.
2. Bacterial cultures.
3. Bone scan and magnetic resonance imaging (MRI).
4. Anticitrullinated protein antibodies (ACPA) and rheumatoid factor (RF).

Rationales

Option 1:

CPPD (pseudogout) may appear clinically similar to gouty arthritis; however, in CPPD crystals form in the cartilage and lead to inflammation. The typical age of onset is later than that of gout, initially presenting in the sixth decade of life or later. Diagnosis is made through synovial fluid analysis and will reveal positive calcium pyrophosphate dihydrate crystals. An x-ray will show radiographic evidence of chondrocalcinosis or calcification in the hyaline cartilage and/or fibrocartilage of the affected joint.

Option 2:

Bacterial cultures would be warranted to aid in the diagnosis of cellulitis.

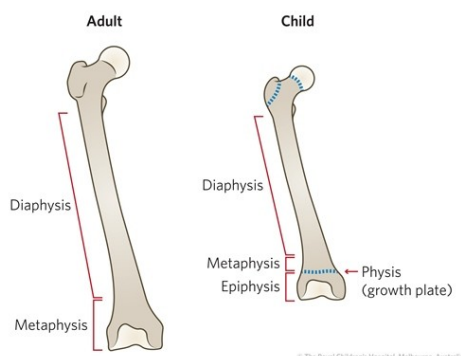
Option 3:

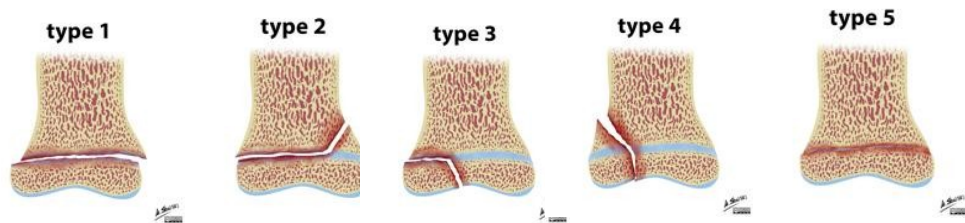
Bone scan and MRI are used to differentiate gouty arthritis from Charcot neuro-osteoarthropathy.

Option 4:

ACPA and RF assist in the diagnosis of rheumatoid arthritis.

Ethan, age 10, jumped off a 2-foot wall, twisting his foot and ankle upon landing. His ankle x-ray demonstrates a fracture of the distal tibia, over the articular surface, through the epiphysis and physis (growth plate). Based on the Salter-Harris classification of growth plate injuries, you know this is a:





1. Salter-Harris II fracture.
2. Salter-Harris III fracture.
3. Salter-Harris IV fracture.

4. Salter-Harris V fracture.

Rationales

Option 1:

A Salter-Harris II fracture travels through the metaphysis and physis.

Option 2:

The Salter-Harris classification system of growth plate injuries divides most growth plate injuries into 5 categories based on the damage: A Salter-Harris III fracture travels through the epiphysis and physis. A Salter-Harris I fracture travels through the physis.

Option 3:

A Salter-Harris IV fracture travels through the metaphysis, epiphysis, and physis.

Option 4:

A Salter-Harris V fracture involves a compression injury of the physis.

In assessing a patient, you place the tips of your first 2 fingers in front of each ear and ask the patient to open and close his mouth. Then you drop your fingers into the depressed area over the joint and assess for smooth motion of the mandible. With this action, you are checking for:

1. Maxillomandibular integrity.
2. Well-positioned permanent teeth or well-fitting dentures.
3. Temporomandibular joint syndrome.
4. Mastoid inflammation.

Rationales

Option 1:

Maxillomandibular integrity indicates a properly functioning temporomandibular joint (TMJ).

Option 2:

In most cases, well-positioned permanent teeth and well-fitting dentures prevent the development of temporomandibular joint (TMJ) syndrome.

Option 3:

In assessing your client, place the tips of your first 2 fingers in front of each ear and ask him to open and close his mouth. Then drop your fingers into the depressed area over the temporomandibular joint (TMJ) and check for smooth motion of the mandible. With this action, you are assessing for TMJ syndrome. Clicking or popping noises, decreased range of motion, pain, or swelling may indicate TMJ syndrome. However, an audible and palpable snap or click does occur in many normal people as they open their mouths. In rare cases, this may indicate osteoarthritis.

Option 4:

Mastoid inflammation is manifested behind, not in front of, the ear.

Sandra, a computer programmer, has just been given a new diagnosis of carpal tunnel syndrome. The nurse practitioner's next step is to:

1. Refer her to a hand surgeon.
2. Take a more complete history.
3. Try neutral position wrist splinting and order an oral nonsteroidal anti-inflammatory drug (NSAID).
4. Order nerve conduction studies and electromyography (EMG).

Rationales

Option 1:

For refractory cases, median nerve decompression may be accomplished with surgery, but complete recovery is not possible if atrophy is pronounced.

Option 2:

Taking a more complete history is not essential at this point because a diagnosis has already been made.

Option 3:

For the client who has just been given a diagnosis of carpal tunnel syndrome, your next step is to try neutral position wrist splinting and order an oral NSAID. **For symptoms of less than 10 months' duration, conservative treatment should be tried first.**

Option 4:

Nerve conduction studies and EMG confirm focal median nerve conduction delay within the carpal canal and also provide information about disease severity.

Alexander, age 12, sprained his ankle playing ice hockey. He is confused as to whether he should apply heat or cold. What should the nurse practitioner tell him?

1. "Use continuous heat for the first 12 hours and then use heat or cold to your own preference."
2. "Use continuous cold for the first 12 hours and then use heat or cold to your own preference."
3. "Apply cold for 20 minutes, then remove it for 30 to 45 minutes; repeat this for the first 24 to 48 hours while awake."
4. "Alternate between cold and heat for 20 minutes each for the first 24 to 48 hours."

Rationales

Option 1:

Applying heat may increase swelling and subsequently slow recovery.

Option 2:

Ice has been proven to speed recovery in ankle sprains; however, ice should never be applied continuously because it could hinder proper circulation and cause frostbite. Therefore, always recommend protective padding between the ice and the skin.

Option 3:

Tell a client who has sprained his ankle to apply cold for 20 minutes, then remove it for 30 to 45 minutes, and repeat that procedure for the first 24 to 48 hours while awake. Cold will cause vasoconstriction and decrease edema, preventing any further bleeding into the tissues. After any sprain, use the principles of RICE: **rest, ice, compression, and elevation.**

Option 4:

Applying heat may increase swelling and subsequently slow recovery.

Daniel, age 45, is of Northern European ancestry and has a dysfunctional and disfiguring condition affecting the palmar tissue under the skin of the distal palm and fourth and fifth fingers. What do you suspect?

1. Hallux valgus.
2. De Quervain tenosynovitis.
3. Dupuytren contracture.
4. Hallux rigidus.

Rationales

Option 1:

Hallux valgus, commonly referred to as a bunion, is an osseous deformity of the metatarsophalangeal (MTP) joint of the great toe that involves medial deviation of the toe.

Option 2:

De Quervain tenosynovitis is a painful inflammation of tendons around the thumb.

Option 3:

Dupuytren contracture affects the palmar tissue under the skin of the distal palm and fingers—most often the fourth and fifth fingers, but also the thumb-index finger web space. It is progressive and results in a flexion contracture, though it does not affect the flexor tendons. Occurring most frequently in males between the ages of 40 and 60, it is common among people of Northern European ancestry. It is dysfunctional and disfiguring. Although it is not actually painful, it may be tender. Surgery is recommended when the inability to straighten the fingers limits the client's hand function.

Option 4:

Hallux rigidus is a common type of arthritis that affects the base of the great toe at the metatarsophalangeal (MTP) joint, causing stiffness and decreased movement of the great toe.

Course Topic: Musculoskeletal Problems Concept(s): 21820 Cognitive Level: Analysis [Analyzing]

Paul has a malignant fibrosarcoma of the femur. He recently had surgery and is now on radiation therapy. You want to order a test to determine the extent of the tumor invasion of the surrounding tissues and the response of the bone tumor to the radiation. Which of the following tests should you order?

1. An x-ray.
2. A magnetic resonance imaging (MRI) scan.
3. A computed tomography (CT) scan.
4. A needle biopsy.

Rationales

Option 1:

A conventional x-ray will show the location of the tumor and the extent of bone involvement. Metastatic bone destruction has a characteristic "moth-eaten" pattern in which the growth has a poorly defined margin that cannot be separated from normal bone.

Option 2:

For Paul, who has a malignant fibrosarcoma of the femur, an MRI scan will determine the extent of the tumor invasion of the surrounding tissues and the response of the bone tumor to the radiation. It will also determine response to chemotherapy and detect recurrent disease.

Option 3:

A CT scan will evaluate the extent of the tumor invasion of bone, soft tissues, and neurovascular structures.

Option 4:

A needle biopsy, usually performed at the time of surgery, will determine the type of tumor.

Lois, age 52, who has just been given a diagnosis of sarcoidosis, has joint symptoms, including arthralgias and arthritis. Your next plan of action would be to:

1. Order a bone scan.
2. Obtain a tissue biopsy.
3. Begin a course of glucocorticoids.
4. Order daily doses of vitamin B.

Rationales

Option 1:

There is no present need for a bone scan.

Option 2:

There is no present need for a tissue biopsy.

Option 3:

Sarcoidosis is the result of an exaggerated immune system response to a class of antigens or self-antigens. Fifty percent of clients experience joint symptoms, including myopathy and polyarthritis; glucocorticoids are prescribed to suppress the immune process, thus relieving symptoms.

Option 4:

Vitamin B is not routinely ordered, as it has not been shown to impact sarcoidosis.

The nurse practitioner (NP) is assessing Maya, a 69-year-old Asian woman, for the first time. When trying to differentiate between scoliosis and kyphosis, the NP recalls that kyphosis involves:

1. Asymmetry of the shoulders, scapulae, and waist creases.
2. A lateral curvature and vertebral rotation on posteroanterior x-rays.
3. One leg appearing shorter than the other.
4. A posterior rounding at the thoracic level.

Rationales

Option 1:

Scoliosis involves asymmetry of the shoulders, scapulae, and waist creases.

Option 2:

Scoliosis involves a lateral curvature and vertebral rotation on posteroanterior x-rays.

Option 3:

In a client with scoliosis, the legs may appear uneven in length.

Option 4:

Kyphosis involves a posterior rounding at the thoracic level and a kyphotic curve of more than 45 degrees on an x-ray. There may be moderate pain with kyphosis.

Marsha, age 34, presents with symptoms resembling both fibromyalgia and chronic fatigue syndrome, which have many similarities. Which of the following is more characteristic of fibromyalgia than of chronic fatigue syndrome?

1. Musculoskeletal pain.
2. Difficulty sleeping.
3. Depression.

4. Fatigue.

Rationales

Option 1:

Musculoskeletal pain is not characteristic of chronic fatigue syndrome; rather, it is characteristic of fibromyalgia. The musculoskeletal pain, usually an achy muscle pain that may be localized or involve the entire body, is usually gradual in onset, although the onset may occasionally be sudden, such as after a viral illness.

Option 2:

Difficulty sleeping occurs with both disorders.

Option 3:

Depression occurs with both disorders.

Option 4:

Fatigue is a more significant feature of chronic fatigue syndrome.

[Page reference: 1009-1012]

Upon assessment, the nurse practitioner notes unilateral back pain of acute onset that increases when standing and bending. A straight leg raise test is negative. The most likely diagnosis is:

1. Herniated nucleus pulposus.

2. Muscle strain.

3. Osteoarthritis.

4. Spondylolisthesis.

Rationales

Option 1:

A herniated nucleus pulposus causes unilateral back pain that is acute and **increases when sitting or bending but decreases when standing**. The straight leg raise test is positive, and the plain x-ray is negative.

Option 2:

Muscle strain is usually located in the low back and is unilateral in location. The onset is acute, and pain increases with standing and bending and decreases with sitting. The straight leg raise test and plain x-ray are both negative.

Option 3:

Back pain related to osteoarthritis is usually bilateral in nature and has an insidious onset. Pain increases when standing and decreases when sitting. A straight leg raise test is negative, and a plain x-ray is positive.

Option 4:

Spondylolisthesis has an insidious onset, and low back pain increases when standing or bending and decreases when sitting. A straight leg raise test is negative, and a plain x-ray is positive.

[Page reference: 800]

A 55-year-old patient presents with complaints of paresthesias in the lower lateral arm, thumb, and middle finger. The nerve roots most commonly related to these symptoms are C6 and C7. The most likely diagnosis would be:

1. Brachial plexus neuritis.

2. Cervical radiculopathy.

3. Peripheral polyneuropathy.

4. Thoracic outlet syndrome.

Rationales

Option 1:

Brachial plexus neuritis presents with dysfunction ranging from momentary paresthesias to completely flail extremities and is usually caused by injuries to the C5 and C6 nerve roots.

Option 2:

Cervical nerve root compression of C6 and C7 causes cervical radiculopathy.

Option 3:

Peripheral polyneuropathy is associated with distal sensorimotor paresthesia and diminished deep tendon reflexes.

Option 4:

Thoracic outlet syndrome is caused by compression of the brachial plexus and/or subclavian vessels as they exit the space between the superior shoulder girdle and the first rib. Symptoms are color changes in the hand and sensory changes and weakness in the fourth and fifth fingers.

[Page reference: 797]

Christian, age 22, is a carpenter who is right hand dominant. He comes to the clinic for follow-up from the emergency department, where he was seen for right forearm pain. He states he was diagnosed with right forearm tendinitis and wants the provider to explain this diagnosis to him. Patient teaching should explain that he has inflammation of one or more tendons, which are:

1. The ropelike bundles of collagen fibrils that connect bone to bone.
2. The collagen fibers that connect muscle to bone.
3. The pouches of synovial fluid that cushion bone and other joint structures.
4. The fibrocartilaginous disks that separate bony surfaces.

Rationales

Option 1:

Ligaments connect bone to bone at the joints.

Option 2:

Tendons are the collagen fibers that connect muscle to bone.

Option 3:

Bursae are the pouches of synovial fluid that reduce friction between bones, muscles, and tendons.

Option 4:

Fibrocartilaginous disks separate bony surfaces, such as those between the vertebrae.

[Page reference: 836-839]

Steve, age 32, fell off a roof while shingling it. He is complaining of pain in his left hip and leg area. Other than an x-ray, what would make you suspect a fractured pelvis?

1. A clicking sensation when moving the hips.
2. A positive pelvic tilt test.
3. Hematuria.
4. Absence of distal reflexes.

Rationales

Option 1:

A clicking sensation when moving the hips is not diagnostic of a fractured pelvis.

Option 2:

A positive pelvic tilt test is not diagnostic of a fractured pelvis.

Option 3:

If a client has a fractured pelvis, a test for hematuria will usually prove positive. A fracture of the pelvis usually results in hypovolemia due to a generally significant associated blood loss. Surrounding blood vessels rupture, which results in a large retroperitoneal hematoma and shock. Pelvic fractures also commonly injure the urinary bladder or urethra. A client with a fracture in several locations of the pelvis may need a pneumatic antishock garment to control the blood loss and stabilize the pelvis. Only x-ray studies will confirm the diagnosis.

Option 4:

Absence of distal reflexes is not correlated with a fracture of the pelvis.

[Page reference: 1203-1204]

Beth, age 49, comes in with low back pain. An x-ray of the lumbosacral spine is within normal limits. Which of the following diagnoses do you explore further?

1. Scoliosis.
2. Osteoarthritis.
3. Spinal stenosis.

4. Herniated nucleus pulposus.

Rationales

Option 1:

A plain x-ray will show scoliosis.

Option 2:

A plain x-ray will show osteoarthritis.

Option 3:

A plain x-ray will show spinal stenosis.

Option 4:

A plain x-ray will not show a herniated nucleus pulposus or a muscle strain. It will show spondylolisthesis, scoliosis, osteoarthritis, and spinal stenosis. Note that x-rays of the spine are not indicated in low back pain unless the cause of the pain is thought to be bony in origin or traumatic in nature or there is a need to rule out systemic disease.

[Page reference: 824-826]

Joyce, age 87, broke her wrist after falling off a curb. She just had a plaster cast applied to her wrist. In instructing Joyce and her family on allowing the cast to dry properly, tell them to:

1. Continuously elevate Joyce's arm on a pillow.
2. Change the position of Joyce's arm every hour.
3. Position a fan near Joyce during the night to ensure even drying of the cast.
4. Put a blanket over the cast to absorb the dampness.

Rationales

Option 1:

Elevating her arm will prevent edema, but continuous elevation is not needed.

Option 2:

Instructions to the client and family on how to allow a cast to dry properly should include advising them to change the position of the casted extremity every hour. In this case, Joyce's arm should be repositioned frequently to prevent indentations in the cast itself (caused by continuous placement on a pillow) and to ensure drying of all surfaces of the cast.

Option 3:

A fan will dry only the outside of the cast.

Option 4:

A blanket will prevent drying of the cast.
[Page reference: 1239-1240]

Sandy, age 49, presents with loss of anal sphincter tone, impaired micturition, incontinence, and progressive loss of strength in the legs. You suspect cauda equina syndrome. What is your next action?

1. Ordering physical therapy.
2. Ordering a lumbosacral x-ray.
3. Ordering extensive lab work.
4. Referring to a neurosurgeon.

Rationales

Option 1:

A prompt referral to a neurosurgeon is required when a diagnosis of cauda equina syndrome is suspected.

Option 2:

An x-ray is not helpful in the diagnosis of cauda equina syndrome, and precious time should not be wasted with a client who has suspected cauda equina syndrome. Magnetic resonance imaging (MRI) can be a useful diagnostic tool, but prompt evaluation by a neurosurgeon is an essential first step in preventing permanent neurologic damage.

Option 3:

A prompt referral to a neurosurgeon is required when a diagnosis of cauda equina syndrome is suspected.

Option 4:

A prompt referral to a neurosurgeon is required when a diagnosis of cauda equina syndrome is suspected. Cauda equina syndrome is a widespread neurologic disorder in which there is loss of anal sphincter tone; impaired micturition; incontinence; saddle anesthesia (ie, loss of sensation in the anus, perineum, genitals, and inner thighs); and motor weakness or sensory loss in both legs.

[Page reference: 828-829]

When teaching Alice, age 77, to use a cane because of osteoarthritis of her left knee, an important point to stress is:

1. Carrying the cane in the ipsilateral hand.
2. Advancing the cane with the ipsilateral leg.
3. Making sure the cane length equals the height of the iliac crest.
4. Using the cane to aid in joint protection and safety.

Rationales

Option 1:

The cane should be carried in the contralateral hand.

Option 2:

When teaching clients about using a cane, tell them to advance the cane with the ipsilateral (affected) leg.

Option 3:

The cane length should equal the height of the greater trochanter.

Option 4:

The use of assistive devices is an important strategy for protecting the joints and providing safety, but clients must be taught the proper use of all devices.

[Page reference: 856-862]

You are caring for a patient who has a history of psoriasis and is now showing signs of joint involvement. Seropositivity provides a definitive diagnosis of psoriatic arthritis (PsA). The initial treatment choice for management of the patient is:

1. Disease-modifying antirheumatic drugs (DMARDs).
2. Nonsteroidal anti-inflammatory drugs (NSAIDs).
3. Tumor necrosis factor-alpha (TNF- α) inhibitors.
4. Uricosuric medications.

Rationales

Option 1:

DMARDs, such as methotrexate, are used for early-stage treatment of active disease with structural damage and inflammation.

Option 2:

NSAIDs are the first-line treatment for musculoskeletal signs and symptoms with joint involvement.

Option 3:

Biologic agents, or TNF- α inhibitors, are considered for patients with active disease and inadequate response to one or more systemic DMARDs or very active PsA.

Option 4:

A uricosuric such as probenecid, with the addition of the anti-inflammatory colchicine, is indicated for chronic gouty arthritis.

[Page reference: 1004]

Hilda, age 73, presents with a complaint of low back pain. Red flags in her history of a minor fall, osteopenia, and prolonged steroid use for systemic lupus erythematosus suggest the possibility of which of the following serious underlying conditions as the cause of her low back pain?

1. Cancer.
2. Cauda equina syndrome.
3. Neurologic compromise.
4. Spinal fracture.

Rationales

Option 1:

Cancer may be suspected if the low back pain is accompanied by unexplained weight loss and immunosuppression in a person over age 50.

Option 2:

Low back pain accompanied by acute onset of urinary retention or overflow incontinence, loss of anal sphincter tone or fecal incontinence, loss of sensation in the buttocks and perineum, and motor weakness in the lower extremities is a red flag for cauda equina syndrome or severe neurologic compromise.

Option 3:

Low back pain accompanied by acute onset of urinary retention or overflow incontinence, loss of anal sphincter tone or fecal incontinence, loss of sensation in the buttocks and perineum, and motor weakness in the lower extremities is a red flag for cauda equina syndrome or severe neurologic compromise.

Option 4:

The red flags for spinal fracture include major trauma or direct blow to the back in an adult, a minor fall or heavy lifting in a potentially osteoporotic or elderly person, prolonged steroid use, and age greater than 70.

[Page reference: 829-830]

A nurse practitioner is driving home from work and stops at the scene of a motorcycle accident that must have just occurred, as there are no rescue vehicles present. The driver is lying unconscious at the side of the road with an obvious open fracture of his femur. Which of the following actions should take priority?

1. Stopping the bleeding from the wound.
2. Determining if there has been a cervical fracture.
3. Establishing an airway.
4. Palpating the peripheral pulses.

Rationales

Option 1:

This is an important action, but establishing an airway is the first priority.

Option 2:

This is an important action, but establishing an airway is the first priority.

Option 3:

Follow the ABCs of first aid: airway, breathing, and circulation. Establishing an airway is the first priority, followed by breathing, and then circulation. Stopping the bleeding from the wound, assessing if there has been a cervical fracture, and palpating the peripheral pulses are all important actions, but if the client is not breathing, the other actions will not be necessary.

Option 4:

This is an important action, but establishing an airway is the first priority.

[Page reference: 1236]

Mr. McKinsey, age 69, was recently given a diagnosis of degenerative joint disease. Which assessment should the nurse practitioner use to check for effusion of the patient's knee?

1. Thomas test.
2. Tinel test.
3. Bulge test.
4. Phalen test.

Rationales

Option 1:

The Thomas test is used to assess for hip problems.

Option 2:

The Tinel test assesses for carpal tunnel syndrome.

Option 3:

The bulge test assesses for an effusion of the knee. If effusion is present, a bulge will appear at the sides of or below the patella when the practitioner compresses the area above the patella.

Option 4:

The Phalen test assesses for carpal tunnel syndrome.

[Page reference: 806-807]

Sam, age 50, presents with Paget disease that has been stable for several years. Recently, his serum alkaline phosphatase level has been steadily rising. The nurse practitioner determines that it is time to start him on pharmacologic management. Which of the following should she initially prescribe?

1. Nonsteroidal anti-inflammatory drugs (NSAIDs).

2. Corticosteroids.

3. Bisphosphonates.

4. Calcitonin.

Rationales

Option 1:

NSAIDs are helpful for clients with Paget disease who have mild symptoms and pain.

Option 2:

Corticosteroids do inhibit bone metabolism, but their use is limited by the side effects of long-term therapy with high doses.

Option 3:

When the serum alkaline phosphatase level rises—which indicates the disease has progressed—bisphosphonates, which decrease bone resorption by inhibiting osteoclast activity, are the treatment of choice.

Option 4:

Calcitonin (Calcimar) also inhibits osteoclastic bone resorption but is not as powerful as the bisphosphonates and does not suppress disease activity for as long after cessation.

[Page reference: 868-869]

James, age 17, has been complaining of a painful knob below his right knee that has prevented him from actively participating in sports. He has recently been given a diagnosis of Osgood-Schlatter disease and asks you about his treatment options. The nurse practitioner should tell him that the initial treatment is:

1. Relative rest; he could benefit from hamstring, heel cord, and quadriceps stretching exercises.

2. Immobilization; a long-leg knee immobilizer is recommended.

3. Surgical intervention; removal of the bony fragments is necessary.

4. Bed rest for 1 week.

Rationales

Option 1:

Osgood-Schlatter disease is an overuse injury that results from the excessive tension and pull of the patellar tendon on the tibial tuberosity. Treating the client conservatively while an adolescent will prevent potential problems as an active adult. Initially, relative rest should be used with hamstring, heel cord, and quadriceps stretching exercises.

Option 2:

If the problem persists, a long-leg knee immobilizer may be used.

Option 3:

Surgical intervention is rarely required and then only in adults after bone growth is complete.

Option 4:

Rest should be combined with stretching and strengthening exercises.

[Page reference: 805-807]

The nurse practitioner (NP) suspects a herniated disk in a 72-year-old patient. The NP elevates the patient's affected leg when she is in the supine position, and it elicits back and sciatic nerve pain, which indicates a positive test. This is known as which test or sign?

1. Femoral stretch test.

2. Crossed straight leg raise test.

3. Doorbell sign.

4. Straight leg raise test.

Rationales

Option 1:

The femoral stretch test is done with the client prone and the leg extended and knee flexed. Pain radiating to the anterior thigh indicates L4 radiculopathy.

Option 2:

In the crossed straight leg raise test, the uninvolved leg is elevated; sciatic pain down the contralateral leg indicates a herniated disk.

Option 3:

The doorbell sign indicates development of radiculopathy when the patient's symptoms are reproduced by compressing the neurologic and muscular structures in the lateral aspect of the neck.

Option 4:

All of the tests listed are tests done to assess for a herniated disk. In the straight leg raise test, you elevate the affected leg when the client is in the supine position; back pain and sciatic nerve pain (ie, radiating leg pain) indicate a herniated disk.

[Page reference: 799-800]

Jill, age 49, has recently begun a rigorous weightlifting regimen. She presents to the primary care office with a shoulder dislocation. Which of the following clinical manifestations leads the nurse practitioner to suspect an anterior shoulder dislocation over a posterior dislocation?

1. Inability to shrug the shoulder.

2. Absence of pain.

3. Inability to rotate the shoulder externally.

4. Shortening of the arm.

Rationales

Option 1:

Clinical manifestations of an anterior shoulder dislocation, which is far more common than a posterior dislocation, include the inability to shrug the shoulder, pain, and lengthening of the arm.

Option 2:

Pain is a clinical manifestation of anterior shoulder dislocation.

Option 3:

The inability to rotate the shoulder externally, along with the inability to elevate the arm, is a clinical manifestation of a posterior shoulder dislocation.

Option 4:

Lengthening of the arm is a clinical manifestation of anterior shoulder dislocation.

[Page reference: 801-802]

Karen, who is postmenopausal, is taking 1200 mg of calcium daily but does not understand why she also needs to take vitamin D. You tell her that:

1. A deficiency of vitamin D results in inadequate mineralization of bone matrix.

2. All vitamins need to be supplemented.

3. Vitamin D increases intestinal absorption of dietary calcium and mobilizes calcium from the bone.

4. Vitamin D binds with calcium to allow active transport into the cells.

Rationales

Option 1:

Vitamin D deficiency does result in inadequate mineralization of bone matrix (ie, rickets)—which is more commonly seen in children—but that is not the reason why Karen should take vitamin D.

Option 2:

Not all vitamins need to be supplemented; indeed, harm can result if certain vitamins are taken in higher than recommended doses.

Option 3:

Advise clients taking calcium supplements that they also need to take vitamin D because vitamin D raises serum calcium levels by increasing the intestinal absorption of dietary calcium and mobilizing calcium from the bone.

Option 4:

Vitamin D does not bind with calcium to allow active transport into the cells.

[Page reference: 723]

Endocrine and Metabolic Questions

Sigrid, age 48, appears with a 3-month history of heat intolerance, increased sweating, palpitations, tachycardia, nervousness, irritability, fatigue, and muscle weakness. Which test would you order first?

1. A blood chemistry panel.
2. Thyroid-stimulating hormone (TSH) level.
3. Liver function studies.
4. Electrocardiogram.

Rationales

Option 1:

If antithyroid drugs are used, a complete blood count (CBC) will need to be performed.

Option 2:

For a client with the symptoms experienced by Sigrid, a TSH level should be ordered first because the symptoms suggest hyperthyroidism. The TSH level is the best screening test for hyperthyroidism. Other laboratory and isotope tests for hyperthyroidism include a free triiodothyronine (T_3) or thyroxine (T_4) level, T_3 resin uptake, and thyroid autoantibodies, including thyrotropin receptor antibody (TRAb). Tests not routinely performed but that may be helpful include radioactive iodine uptake and a thyroid scan (with iodine-123 [^{123}I] or technetium-99m), which help to determine the etiology of the hyperthyroidism and assess the functional status of any palpable thyroid irregularities or nodules associated with a toxic goiter.

Option 3:

If antithyroid drugs are used, liver function tests will need to be performed.

Option 4:

An electrocardiogram may be ordered because of the palpitations, but once the thyroid is stabilized, the cardiac rhythm usually returns to normal.

[Page reference: 884]

Eunice, age 32, has type 2 diabetes. She said she heard she should take an aspirin a day after she reaches menopause for its cardioprotective action. She does not have coronary artery disease, but her father does. How do you respond?

1. "You're right. Your hormones protect you against coronary artery disease until menopause; then you should start on aspirin therapy."
2. "The American Diabetes Association recommends that you start on low-dose aspirin therapy now."
3. "Aspirin therapy is recommended for all patients over age 55 as a precautionary measure."
4. "If you maintain good glycemic control, you don't need aspirin therapy."

Rationales

Option 1:

The American Diabetes Association (ADA) recommends aspirin therapy as a primary prevention strategy in high-risk men and women with diabetes who have a family history of coronary heart disease.

Option 2:

The American Diabetes Association's position statement on aspirin therapy in patients with diabetes recommends low-dose (81 mg) aspirin use as a secondary prevention strategy in men and women with diabetes who have evidence of large-vessel disease, such as a history of myocardial infarction, vascular bypass procedures, and stroke, and have no contraindications for the use of aspirin. They also recommend aspirin therapy as a primary prevention strategy in high-risk men and women with type 1 or type 2 diabetes who have a family history of coronary heart disease and for individuals who smoke, are hypertensive or obese, or who have albuminuria, cholesterol levels greater than 200 mg/dL, low-density lipoprotein cholesterol levels greater than 130 mg/dL, high-density lipoprotein cholesterol levels less than 40 mg/dL, and triglyceride levels greater than 250 mg/dL.

Option 3:

Aspirin therapy is not recommended as a precautionary measure in all patients over age 55.

Option 4:

The American Diabetes Association (ADA) recommends aspirin therapy as a primary prevention strategy in high-risk men and women with diabetes who have a family history of coronary heart disease.

[Page reference: 932]

Marie, age 50, has type 1 diabetes and checks her blood glucose level several times every day. Her blood glucose level ranges from 250 to 280 mg/dL in the morning and is usually about 140 at lunch, about 120 at dinner, and about 100 at bedtime. In the morning, she takes 30 units of neutral protamine Hagedorn (NPH) insulin and 4 units of regular insulin, and before dinner she takes 18 units of NPH insulin and 4 units of regular insulin. Although she has had her insulin dose adjusted several times in the past month, it has had no effect on her high morning blood glucose level. What is your next course of action?

1.

Increase the evening NPH insulin dose by 2 more units.

2.

Have her check her blood glucose level between 2 am and 4 am for the next several days.

3.

Increase the morning regular insulin dose by 2 units.

4.

Order a fasting blood sugar test.

Rationales

Option 1:

If Marie's blood glucose level from 2 am to 4 am is greater than 70 mg/dL, the evening dose of NPH insulin should be increased and changed from before dinner to before bedtime.

Option 2:

Marie is experiencing the Somogyi phenomenon (rebound hyperglycemia). If her blood glucose level from 2 am to 4 am is greater than 70 mg/dL, the evening dose of NPH insulin should be increased and changed from before dinner to before bedtime. This should prevent most cases of nocturnal hypoglycemia, which results in morning hyperglycemia. **Many providers prefer the longer acting insulins, such as insulin glargine (Lantus) and insulin detemir (Levemir), because they are mostly "peakless" and have less risk of hypoglycemia than NPH.**

Option 3:

Marie's morning hyperglycemia is caused by her nocturnal hypoglycemia, so it is the evening dose that may need to be adjusted.

Option 4:

A fasting blood sugar test will not confirm the Somogyi phenomenon. The blood sugar level needs to be checked during the night to "catch" the Somogyi phenomenon.

[Page reference: 915-917]

Which class of antihypertensive agents may be problematic for clients with diabetes?

1.

Angiotensin-converting enzyme (ACE) inhibitors.

2.

Calcium channel blockers.

3.

Beta blockers.

4.

Alpha blockers.

Rationales

Option 1:

ACE inhibitors are the first choice for clients with diabetes who have hypertension because they slow the progression of diabetic nephropathy.

Option 2:

Calcium channel blockers provide pressure reduction without adverse effects on lipids and glucose control.

Option 3:

Beta blockers may be problematic in clients with diabetes because they block what is often the first sign of hypoglycemia—tachycardia. Many clients with diabetes have compelling indications (such as coronary artery disease) for the use of beta blockers. In these clients, the need for a beta blocker outweighs any risk that might occur. Decreasing the possibility of low blood sugar by selecting appropriate agents and adjusting dosages may be necessary. If a client with diabetes is on a beta blocker, it is important to explain that instead of tachycardia, he or she will notice other signs of hypoglycemia (such as sweating) that are not affected by beta blockers.

Option 4:

Alpha blockers provide smooth control and an improved lipid profile.

[Page reference: 925]

Marty has pheochromocytoma. You instruct him to:

1.

Void frequently in small amounts.

2.

Not exercise for more than 30 minutes at a time.

3.

Avoid sleeping in the prone position.

4.

Take steroids.

Rationales

Option 1:

Clients with pheochromocytoma should be told to void frequently in small amounts and to avoid a full bladder. In addition, to prevent stimulating a paroxysm, clients should also be advised to **avoid smoking; drugs that may influence catecholamine release, such as some anesthetics, atropine, opiates, steroids, and glucagon; and activities that might displace abdominal organs, such as bending, exercising, straining, and vigorous palpation of the abdomen.** For women, pregnancy should be discouraged.

Option 2:

Clients should avoid activities that might displace abdominal organs.

Option 3:

Clients should avoid activities that might displace abdominal organs.

Option 4:

Clients should avoid drugs that may influence catecholamine release, including steroids.

[Page reference: 900]

Jeffrey, age 17, has gynecomastia. You should also assess him for:

1.

Obesity.

2.

Endocrine abnormalities.

3.

Testicular cancer.

4.

Tuberculosis.

Rationales

Option 1:

While Jeffrey may be obese, which would probably accentuate his gynecomastia, it is the more serious problem of testicular cancer that needs to be addressed.

Option 2:

Gynecomastia can occur secondary to hyperthyroidism and other endocrine imbalances.

Option 3:

Gynecomastia may be the first sign of testicular cancer. It is also associated with breast, adrenal, pituitary, lung, and hepatic malignancies. Hypogonadism produces low testosterone levels in men with normal estrogen levels. Alteration in breast tissue responsiveness to hormonal activity can result in gynecomastia. Gynecomastia can occur secondary to cirrhosis, chronic obstructive lung disease, malnutrition, hyperthyroidism and other endocrine imbalances, tuberculosis, and chronic renal disease.

Option 4:

Gynecomastia can occur secondary to tuberculosis.

[Page reference: 774]

Jeremiah, age 72, has gout and is obese. When teaching him about diet, which of the following do you tell him?

1.

"Beer and wine are okay because they have no effect on uric acid."

2.

"Keeping your weight stable, even if you are a little overweight, is better than fluctuating."

3.

"You must go on a restricted, very low calorie diet to effect immediate change."

4.

"Fluid intake should exceed three thousand milliliters daily to prevent formation of uric acid kidney stones."

Rationales

Option 1:

Because both wine and beer in excessive amounts impair the ability of the kidneys to excrete uric acid, they should be used in moderation. Clients must be aware that binge drinking may provoke an acute attack.

Option 2:

If the client is obese, weight loss should be encouraged because loss of excess body fat may normalize serum uric acid without pharmacological intervention. Weight loss will also decrease stress on weight-bearing joints.

Option 3:

Caution regarding severe, rapid weight loss should be given because secondary hyperuricemia may result. A restricted, very low calorie diet may precipitate an acute attack.

Option 4:

Fluid intake should exceed 3000 mL daily to prevent formation of uric acid kidney stones. Clients should avoid dehydration because it may precipitate an acute attack.

[Page reference: 952]

An elderly client presents with atrial fibrillation. Which of the following lab tests is important in forming the diagnosis?

1.

Complete blood count (CBC).

2.

C-reactive protein (CRP).

3.

Comprehensive metabolic panel (CMP).

4.

Thyroid-stimulating hormone (TSH).

Rationales

Option 1:

A CBC is not specific.

Option 2:

A CRP will detect inflammation and the possibility of heart disease but not atrial fibrillation.

Option 3:

A CMP is not specific.

Option 4:

Atrial fibrillation is a common presentation in elderly clients with hyperthyroidism. If the TSH is suppressed, a free thyroxine (T₄) and triiodothyronine (T₃) should be drawn.

[Page reference: 884]

Martin, age 62, has acute nontransient abdominal pain that grows steadily worse in the epigastric area and radiates straight through to the back. The pain has lasted for days. He is also complaining of nausea, vomiting, sweating, weakness, and pallor. Physical examination reveals abdominal tenderness and distention and a low-grade fever. What do you suspect?

1.

Cholecystitis.

2.

Acute pancreatitis.

3.

Cirrhosis.

4.

Cushing syndrome.

Rationales**Option 1:**

The pain with cholecystitis is in the upper right quadrant and is intermittent, usually after a fatty meal.

Option 2:

Acute pancreatitis is an inflammation of the pancreas caused by the release of activated pancreatic enzymes into the surrounding parenchyma, with subsequent destruction of tissue, blood vessels, and supporting structures. Although pancreatitis may be acute or chronic, acute symptoms include continuous abdominal pain of several days' duration that increases in the epigastric area and radiates to the back, nausea, vomiting, sweating, weakness, pallor, abdominal tenderness, distention, and low-grade fever. Pancreatitis occurs primarily in middle-aged adults and slightly more often in women than in men.

Option 3:

The gastrointestinal (GI) manifestations of cirrhosis include parotid enlargement, esophageal or rectal varices, peptic ulcers, and gastritis.

Option 4:

The clinical manifestation of Cushing syndrome related to the gastrointestinal (GI) system is a peptic ulcer, which would result in intermittent pain related to meals.

[Page reference: 607]

Leah, age 70, has had diabetes for many years. When teaching her about foot care, you want to stress:

1.

That her calluses will protect her from infection.

2.

The need to assess the bottom of her feet carefully after walking barefoot.

3.

That painless ulcerations might occur and feet should be examined with a mirror.

4.

That mild pain is to be expected because of neuropathy.

Rationales**Option 1:**

She should try to avoid the development of calluses because preparations used to remove them are very caustic.

Option 2:

Leah should not be walking barefoot because her sensation is probably decreased as a result of neuropathy.

Option 3:

Painless ulcerations are very common in clients with diabetes, and the only way to assess for them in the feet is for clients to use a mirror to examine the bottoms of their feet.

Option 4:

Sensation may be decreased as a result of neuropathy.

[Page reference: 921-922]

Betty, age 40, has had type 1 diabetes for 20 years and takes a combination of neutral protamine Hagedorn (NPH) and regular insulin every day. She comes to the office because she has developed a severe upper respiratory infection with chills, fever, and production of yellow sputum. Because of her acute infection, you know that Betty is likely to require:

1.
A decrease in her daily insulin dosage.
2.
An increase in her daily insulin dosage.
3.
A high-calorie dietary intake and no insulin change.
4.
A change in her insulin from NPH to insulin aspart (NovoLog).

Rationales

Option 1:

Betty is likely to require an increase in her daily insulin dosage.

Option 2:

For clients with diabetes requiring insulin, an increase in their daily insulin dosage is usually required in the presence of an acute infection. Betty should begin by increasing her regular insulin dose by just 2 units and then monitoring her blood sugar level.

Option 3:

Betty is likely to require an increase in her daily insulin dosage and no increase in dietary caloric intake.

Option 4:

At some point, a more physiologic insulin regimen (such as basal-bolus) might be considered.

[Page reference: 922]

A client with hyperthyroidism presents with a complaint of a "gritty" feeling in her eyes. Over the past week, her visual acuity has diminished, and her ability to see colors has changed. She also has a feeling of pressure behind her eyes. The next step for the nurse practitioner is to:

1.
Order a thyroid ultrasound.
2.
Refer the client for immediate evaluation by an ophthalmologist.
3.
Order a total thyroxine (T_4).
4.
Prescribe a beta-adrenergic blocker.

Rationales

Option 1:

This course of action would prolong treatment and does not address the client's need to seek an immediate evaluation by an ophthalmologist.

Option 2:

The practitioner should refer the client for an immediate evaluation by an ophthalmologist. Clinically recognized **Graves ophthalmopathy** occurs in about 50% of cases of Graves disease. A client with Graves orbitopathy with these complaints is at risk of blindness if there is compression of the optic nerve. Additional symptoms include photophobia and diplopia. Autoantibodies present in Graves disease can cause increased muscle thickness in the eye, leading to edema and compression of the optic nerve. Fundal exam may reveal disk swelling. This is an

emergency situation that may require hospitalization and treatment with prednisone to diminish the inflammation. Artificial tears are also helpful. In 75% of clients, the onset of Graves orbitopathy occurs within a year before or after the diagnosis of thyrotoxicosis but can sometimes precede or follow thyrotoxicosis by several years.

Option 3:

This course of action would prolong treatment and does not address the client's need to seek an immediate evaluation by an ophthalmologist.

Option 4:

This course of action would prolong treatment and does not address the client's need to seek an immediate evaluation by an ophthalmologist.

[Page reference: 888]

Morton has type 2 diabetes. His treatment, which includes diet, exercise, and 3 oral antidiabetic agents at maximum dose, is insufficient to achieve acceptable glycemic control. Your next course of action is to:

1.

Give the patient a sliding scale with mealtime coverage with regular insulin.

2.

Add a dosage of long-acting insulin at bedtime to the regimen.

3.

Discontinue the oral antidiabetic agents and start insulin therapy with N and R.

4.

Suggest treatment using an insulin pump.

Rationales

Option 1:

As a first step, the addition of a bedtime injection of long-acting insulin such as insulin glargine (Lantus) or insulin detemir (Levemir) is recommended.

Option 2:

If treatment with diet, exercise, and oral antidiabetic agents is insufficient to achieve acceptable glycemic control in clients with type 2 diabetes, adding a dosage of insulin at bedtime to the regimen may be necessary. **As a first step, the addition of a bedtime injection of long-acting insulin such as insulin glargine (Lantus) or insulin detemir (Levemir) is recommended.** Intermediate-acting insulin such as neutral protamine Hagedorn (NPH) is no longer recommended because of the peaks in drug levels that can cause hypoglycemia. Initially, the dosage is 10 units at bedtime; then the dose is adjusted to reduce overnight hepatic glucose production and achieve a normal or near-normal fasting blood glucose concentration. If this regimen does not achieve the desired effect, the oral antidiabetic agents should be discontinued, and mealtime analogue rapid-acting insulin can be added to the largest meal. Most clients will eventually require 4 injections with the basal-bolus regimen.

Option 3:

As a first step, the addition of a bedtime injection of long-acting insulin such as insulin glargine (Lantus) or insulin detemir (Levemir) is recommended.

Option 4:

Insulin pumps are sometimes ordered for type 1 diabetes.

[Page reference: 916-917]

Jay has had diabetes for 10 years. He recently had a physical and was told he has some evidence of nephropathy. What is the first manifestation of this condition?

1. Microalbuminuria.

2. Development of Kimmelstiel-Wilson nodules.

3. Decreased serum urea nitrogen levels.

4. Decreased serum creatinine levels.

Rationales

Option 1:

Microalbuminuria is the first symptom indicative of nephropathy in clients who have had diabetes for about 10 years (although some studies suggest 5 years). There is increased permeability of the capillaries, with resultant leakage of albumin into the glomerular filtrate, causing microalbuminuria.

Option 2:

The development of Kimmelstiel-Wilson nodules occurs in people with type 1 diabetes but does not necessarily precede microalbuminuria.

Option 3:

As renal function deteriorates, serum urea nitrogen levels increase.

Option 4:

As renal function deteriorates, serum creatinine levels increase.

[Page reference: 920]

Question 15. Sadie, age 40, has just been given a diagnosis of Graves disease. She has recently lost 25 lb, has palpitations, is very irritable, feels very warm, and has a noticeable bulge on her neck. The most likely cause of her increased thyroid function is:

1.

Hyperplasia of the thyroid.

2.

An anterior pituitary tumor.

3.

A thyroid carcinoma.

4.

An autoimmune response.

Rationales**Option 1:**

Hyperplasia of the thyroid results from hyperthyroidism; it does not cause it.

Option 2:

Although pituitary tumors can cause hyperthyroidism, they do not cause Graves disease.

Option 3:

Although thyroid carcinoma can cause hyperthyroidism, it does not cause Graves disease.

Option 4:

Graves disease is the result of an autoimmune response wherein antibodies are produced that act against the body's own organs and tissues. Thyroid-stimulating immunoglobulins are found in 95% of people with Graves disease and are evidence of this autoimmune process.

[Page reference: 880]

A patient presents to your primary care office with abnormal lab results. On physical exam, you tap the patient's facial nerve around the zygomatic arch, just anterior to the earlobe. This describes which of the following tests and is associated with which of the following lab abnormalities?

1.

Trousseau sign, hypocalcemia.

2.

Chvostek sign, hypocalcemia.

3.

Chvostek sign, hypercalcemia.

4.

Lachman test, hypercalcemia.

Rationales**Option 1:**

Trousseau sign is positive in hypocalcemia but is described as spasms of the hand and wrist following inflation of a blood pressure cuff in the arm.

Option 2:

The test described in the question is positive in someone with hypocalcemia and is called Chvostek sign.

Option 3:

The test described in the question is consistent with Chvostek sign but is not consistent with hypercalcemia; it is consistent with hypocalcemia.