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The Free Refresher Modules are carefully designed to help you prepare for the 10-Day Live Course. They are designed to help you refresh your basic concepts that were commonly asked in the actual NCLEX for the last 3-6 months. The modules are very crucial to your NCLEX success! According to our own study, 98.38% of Rachell Allen students who really studied the modules performed better than those who did not pay much attention to the modules prior to attending the 10-Day Comprehensive Live Course.

Since you are getting the modules for free, let us make it a habit to say "Thank You". A grateful heart attracts success, brilliance and abundance!

Happy Learning!

- The Rachell Allen Success Team

MODULE 7

Basic Care & Comfort

"SUCCESS depends on the second letter."

Fundamentals of Nursing



Which of the following are true for HYPOKALEMIA? Encircle your answer.

HYPO or HYPERkalemia? T wave Prominent Mgt: KCI supplement U wave Inversion tall T Mgt: segment kayexelate wave depression Sign: Prolonged Sign: diarrhea constipation PR interval



Which of the following are true for HYPERKALEMIA? Encircle your answer.

HYPO or HYPERkalemia? Tall T Depressed Mgt: Kayexelate T wave wave Prolonged Prominent Mgt: KCI PR U wave supplement interval K level: Diarrhea >5.1 Constipation meq/L



Identify complications related to administration of TPN (Total Parenteral Nutrition) by encircling the following:

TPN Complications U N N N C O Z U S T N W F K D G M O W O C J U D L M L F X B F N I A E Q K W J S U X F R Q K A N K J J Z T I I I A U M X F N J W U R G L D H N Q E I A I W T X W Q O O I X C P X Y R T S S H L B V K P H X W W S O I W A I M E C Y L G R E P Y H K P C E R L D H V F H Q L Q T O P R L R S X X X Y C E U G O E I O C W R G A S T R R N O M A A C A R R D Y Y B U C R Q U D X G U T L I X Q L N R G W E I N F E C T I O N V P L Z Q N

AIR EMBOLISM INFECTION FLUID OVERLOAD PNEUMOTHORAX HYPERGLYCEMIA



Determine the chemical names of the different fat-soluble vitamins by unscrambling the letters.

Fat soluble vitamins

Determine the chemical names of the different fat-soluble vitamins by unscrambling the letters.

I. cirtoln	Vitamin A	
2. cflacioler	Vitamin D	
3. elotoproch	Vitamin E	
4. hdmeooypntinae	Vitamin K	

ACTIVITY # 5: Word Scramble

Determine the chemical names of the different watersoluble vitamins by unscrambling the letters.

Water soluble vitamins Determine the chemical names of the different water-soluble vitamins by unscrambling the letters. 1. iinethma Vitamin B1 2. Ifvinobrai Vitamin B2 3. npyxerdoii Vitamin B6 4. iolifecda_ Vitamin B9 5. leabmiaanoyoen Vitamin B12 6. ieaesrdbe_aio Vitamin C

Review of Anatomy and Physiology

The musculoskeletal system is an <u>organ system</u> that gives humans the ability to move using the <u>muscular</u> and <u>skeletal systems</u>. The musculoskeletal system provides form, support, stability, and movement to the body.

Recognize the following parts and their basic function by matching Column A to Column B:

Column A	Column B
1. E bones	A. Connective tissue that cushions bony prominences
2.D joint	B. Dense, fibrous connective tissue; attaches bone to bone
3. F muscle	C. Dense, fibrous connective tissue; attaches muscle to bone
4. A cartilage	D. Formed where two bones touch one another; provides
5. C tendon	stabilization and movement
6. B ligament	E. Form the structure of the skeletal system; store calcium,
	phosphorus, and magnesium; produce new red blood cells
	F. Gives the body shape and form. Includes: cardiac/involuntary;
	smooth involuntary; striated skeletal/voluntary

Further test your knowledge by filling in the blanks, choosing from the list of words provided:

Bones	movement	red blood cells
Calcium	muscle	shape
Joints	phosphorous	support
Ligaments	protection	tendons
Magnesium	protection	cartilage

The musculo	skeletal system is co	mposed of 7	,8	, 9	
10	, 11	, and 12	that	at work togethe	er to give the
body 13	, 14	, 15	, and	16	to the
vital organs	and tissues. In addition	on, it provides a place	e for 17	, 18	,
and 19	storage, and	d it functions to produ	uce new 20	·	



Determine the different musculoskeletal injuries by solving the puzzle.

MUSCULOSKELETAL INJURIES



Across

- injury involving the ligamentous structures surrounding a joint
- 4. occurs when there is an abnormal separation in the joint where two or more bones meet
- 5. injury to the miscle tissure/tendon in the form of incomplete tears

Down

- any break in the continuity of the bone occurring in the shaft or diaphysis
- 2. first nursing management to prevent further injury in clients with strain/sprain
- 6. provided to prevent edema and swelling of clients with sprain/strain

Diagnostic Studies

While it is not necessary to memorize all the laboratory and diagnostic tests related to the musculoskeletal system, you should recognize some names and make certain correlations for the exam. The following exercises are designed to provide a basic understanding of these studies.

Match the following laboratory tests with the appropriate diagnost 1 Muscular dystrophy; trauma 2 Rheumatoid arthritis 3 Gout 4 Osteolytic metastatic tumor 5 Most specific test for systemic lupus erythematosus	atic diagnosis: A. Anti-DNA B. Cwalcium C. Muscle enzymes; including CPK D. Rheumatoid factor E. uric acid
Match each diagnostic study with the appropriate definition:	
1 Fluoroscopic and radiographic examination of the subarachnoid space to help diagnose causes of low back pain. Client must remain NPO for 3-4 hours before the test. The nurse must assess for allergies to iodine and contrast medium. The client must remain supine for 12 hours after the procedure. 2 Microscopic examination of the bone; usually performed after an abnormal bone scan or CAT scan. It helps to distinguish between benign and malignant bone tumors. The client should be NPO after 8 hours before the procedure. The nurse should assess for hypersensitivity to anesthetics. Post procedure, the nurse should assess for signs of infection. 3 Radiological study that senses variations in tissue density and gives a detailed view of bones and tissue. Useful in detecting herniated disks, spinalstenoses, and tumors. The nurse should instruct the client remain still during the procedure and to remove all metal jewelry. The client should be NPO 4 hours before the procedure. 4 Provides direct visualization of the interior of a joint using an endoscope to evaluate the knee for meniscus cartilage or ligament tears and to diagnose acute and chronic disorders. Corrective surgery may be performed during the procedure. Complications include infection, hemarthrosis, swelling, and joint injury. Client should be NPO after midnight the night before the procedure. 5 Produces sensitive images soft tissue without contrast dyes. Allows visualization of the spinal cord and locates lesions in the white matter in diseases such as multiple sclerosis.	A. Arthrography B. Arthroscopy C. Bone biopsy D. Bone scan E. Computed tomography F. Electromyography G. MRI H. Myelography I. Radiology/x-ray

6. ___ Measures and records electrical currents

produced by skeletal muscles. Used in diagnosing
cervical or lumbar disk disease, muscular dystrophy,
myasthenia gravis, polymyositis, and motor neuron disease.
The client must restrict smoking and caffeine intake
before the test.
7 imaging with scanning camera after injection of
radioactive tracer that collects in tissue having abnormal
metabolism, i.e., "hot spots." Increased uptake is found
in osteomyelitis, malignant lesions, osteoporosis, fractures,
and Paget's disease. The dye is excreted in the urine 6-12
hours after the initial injection.
8Shows functional or structural changes in bones
and joints.
9 Radiographic visualization of joints after injection
of a contrast medium. Allows visualization of soft tissues
such as ligament and cartilage to detect cause of knee
or shoulder pain, joint derangement, and synovial cysts.
The nurse should assess for allergies to contrast dyes,
seafood, iodine, or local anesthetics. The joint should rest
for 12 hours post procedure.
Musculoskeletal Disorders
is an inflammation of the joints (usually the small joints)
caused by an external agent. It is characterized by joint pain, warmth, edema, and limited motion and occurs symmetrically.
motion and occurs symmetricany.
is a noninflammatory degenerative joint disease caused by repeated
stress on weight-bearing joints. It occurs asymmetrically and affects only 1 or 2 joints. If the
client is overweight, weight loss should be encouraged to reduce pressure on joints.
is a monoarticular arthritis that occurs asymmetrically and is characterized by too

is the most common metabolic bone disorder, causing decreased bone mass and increased risk of fractures. Causes of osteoporosis include calcium and estrogen deficiency. Post-gastrectomy clients are also susceptible. Calcium and vitamin D supplements are advised.

much uric acid. Clients report ingestion of too much alcohol or high purine foods. Uric acid crystals precipitate and deposit in the joints and connective tissue, causing swollen, warm, and reddened joints. Diet plays a large role in managing gout. Foods to avoid include organ meats, alcohol, and fat. Beans, lentils, and bran should be limited, and fluids should be encouraged.

Diet modification helps prevent excess uric acid formation.

occurs when bone does not calcify due to vitamin D deficiency. Bone pain

is an acute or chronic bone infection, causing inflammation.

intensifies with activity and is most common in the pelvis and lower extremities.

Treatment includes immobilization, cast application after swelling decreases, cold or heat, and correct positioning.

Potential complications of fractures are listed below. Match each with the associated area of injury:

1 Sciatic nerve drainage	A. Dislocation of fractured knee
2 Profuse bleeding, bladder rupture, bowel trauma	B. Distal femur
3 Popliteal artery damage, bleeding	C. Fracture of 5 th metatarsal
4 Popliteal artery damage	D. Fracture of proximal fibula
5 Nerve damage	E. hip
6 Injury of peroneal nerve	F. pelvic

Amputation

Amputation is the surgical removal of a diseases part or organ. We include it in musculoskeletal disorders but recognize the fact that the determining cause of amputation can be found in many systems. The nursing assessment and interventions in any amputation are the same as thos associated with the musculoskeletal system.

Three major nursing concerns related to care of an amputee:

- 1. Stump care to promote healing and prevent infection
 - Keep stump elevated to decrease swelling.
 - Assess for signs of hemorrhage.
 - Pressure dressing bandage to prevent edema.
 - Keep site clean and dry.
- 2. Exercise to maintain tone of unaffected muscle needed for crutch walking or prosthesis physical therapy: active and passive range of motion
- 3. Pyschological support for loss of a body part.
 - Phantom pain may occur.
 - Encourage client to talk about the limitations caused by the amputation and the impact on her life.

GENERAL INTERVENTIONS FOR MUSCULOSKELETAL DISORDERS

is the treatment of choice for common musculoskeletal problems including fractures, sprains, strains, and soft tissue injuries. Immobilization is accomplished through traction and casting.

is the application of a pulling force to a specific part of the body to align and immobilize fractured bones, relieve muscle spasm, and correct flexion contractures, deformities, and dislocations. For traction to be effective, there must be a pull in the opposite direction (countertraction).

Nursing care (related to traction) includes the following:

- Five important principles of maintaining traction:
 - 1. Maintaining established line of pull.
 - 2. Prevent friction.
 - 3. Maintain counteraction.
 - 4. Maintain continuous traction unless ordered otherwise.
 - 5. Maintain correct body alignment.

Pin care:

- 1. Cleanse with hydrogen peroxide or normal saline as ordered.
- 2. Apply antibiotics or antiseptic solution/ointment as ordered.
- 3. Monitor for signs and symptoms of infection.

Documentation:

- 1. Length of time in traction (intermittent or continuous)
- 2. Client position in bed.
- 3. Status of traction setup.
- 4. Client response (i.e., pain).

In addition to knowing principles of basic nursing care of the client in traction, it is important to familiarize yourself with the different types of traction outlined below:

Skin Traction (attached to the skin, used intermittently)			
Buck's	Straight line of pull		
Russel's	Upward lift		
Cervical halter	For sprains and strains to the cervical spine and ruptured cervical disks		
Pelvic belt	Relieves lower spine pain		

Skeletal Traction (secure into the bone, the skeleton, used continuously)			
Balanced suspension	For femoral fractures; allows movement		
	without disrupting traction pull and alignment		
Overhead 90-90 traction	Provides upward pull on upper arm		
Cervical tongs	Immobilizes and reduces fractures of cervical		
	spine that may injure spinal cord		

Assessment of traction includes:

• Frequent checks for the "5 Ps" of muscle ischemia:

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- 1. Progressive pain
- 2. Pulselessness
- 3. Paresthesia
- 4. Paralysis
- 5. Pallor
- Frequent neurovascular checks:
 - 1. Pulses
 - 2. Nail beds (cyanosis, capillary, refill)
 - 3. Skin (blanching, coldness, lack of sensation)
- Frequent assessment for compartment syndrome, the progressive vascular compromise of an extremity due to inability of the fascia surrounding the muscles to expand when edema occurs.

Assessment of tract <mark>ion includes what three com</mark> ponents?
A
В
C
immobili <mark>ze fra</mark> ctures after surgical or alternative correction. Types include: short,
long, spica, splint, a <mark>nd bod</mark> y ca <mark>st. Nurs</mark> ing care of the client with a cast includes:
• Chacking pourovascular status frequently

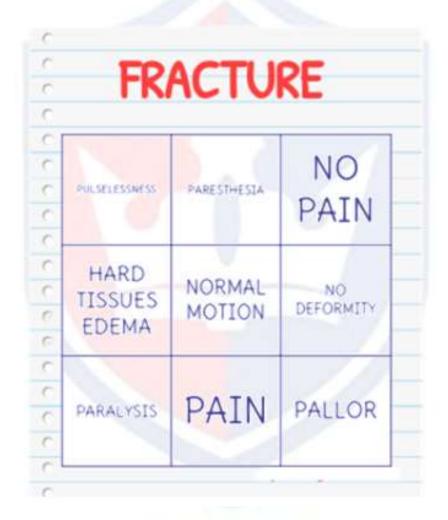
- Checking neurovascular status frequently.
- Noting color of the skin distal to the affected extremity.
- Noting drainage, swelling, irritation, odor, or bleeding.
- Assessing the balance and coordination.
- Assessing the 5 Ps of muscle ischemia.

List the 5 P	s of muscle i	ischemia:
A		
В		
C		
D		
E.		

- Elevating involved extremity.
- Safety and comfort.
- Emotional support.



Identify which of the following are signs and symptoms of FRACTURE.





Identify which of the following are applicable to the said fracture management.

OPEN REDUCTION LESS RISK HIGHER RISK FOR SURGICAL FOR INFECTION INFECTION TREATED WITH BANDAGES INTERNAL FIXATION SCREWS, LOCAL MANUAL NAILS, ANESTHESIA MANIFULATION PINS



Determine different types of musculoskeletal traction by completing the puzzle.

MUSCULOSKELETAL TRACTION

F Z B Q P G P Q T V L F G D Z E Y Z Q R D Y D G B P E U B D Z O R H G Q C N I H P D U B M E I D G P U D P O U L I M P G C A F J B L E X S U B W H T S X O Q K Z E I N C H K S E R H O U U V I S S B R E Q H G X E Q Y G D Z T X D P K B V P F D M V L Z A N T S V U Z Q J I I S G U R P S P N F R C N R L P H E N U A V R Z O Y T N C B A L A N C E S K E L E T A L S K S C R U T C H F I E L D T O N G G Q N G P V H R B M I Z H A L O T R G H

Find the following words in the puzzle

BALANCE SKELETAL BRYANTS CRUTCHFIELDTONG

SKIN.

BUCKS

HALO RUSSELS



Determine different types of musculoskeletal traction by completing the puzzle.

OSTEOPOROSIS

C S S I S O H P Y K C E R U L I A F L A N E R
A G X C W R Y V S V I M V A D Z Y M Z 8 E H X
L T J N T C M J I W U D Q D Q E P O G W T 8 S
C Q I 8 U K O J P S J 1 Y M L Q V V 1 Q A W V
I P U O Q Z T J J M R T I Z Y O N C N R N F E
I F F F B D C F I E S D I O R E T S I H O C J
O C G Q V X E P F R E A B D H H O L G A R D P
N F R D Q I R C A U C A S I A N L D I X D K R
I B O N E D E M I N E R A L I Z A T I O N S E
N J R E H Z H E R O J X G T N Y Q K O U E P G
J V Y G L G P T Z T Z I C X R I P J N D L Y N
O H P E J S O O X M G H M U K A Z H V F A 8 A
M Z R S L W O S E W N B F U X L U C N W I Q N
G A G Y P W F E B O N E P A I N C M Z F K H C
R B L D I R N Q Z R B Q X D G K I V A U B R Y
E R U F A L L S V H L Z W D H J I Z I A C D C

Find the following words in the puzzle.

ALENDRONATE FALLS
BONE DEMINERALIZATION KYPHOSIS
PREGNANCY OOPHERECTOMY
CALCITONIN BONE PAIN
CAUCASIAN RENAL FAILURE

STEROIDS TRAUMA

Ambulation Aids

Type of Ambulation Aids	
Cane	Instruct the client to hold cane in the hand on
	the opposite side of the affected extremity
	and advance cane at the same time as the
	affected extremity.
Walker	Instruct the client to hold the upper bars,
	move walker forward, then step into it.
Crutches	Assure proper length:
	With the client standing erect, the top of the
	crutch should be 2 inches below the axilla and
	the tip of each crutch should be 6 inches in
	front and to the side of the feet. The client's
	elbow should be slightly flexed when hand is
	on hand grip. The client's weight should not be
	on the axilla.

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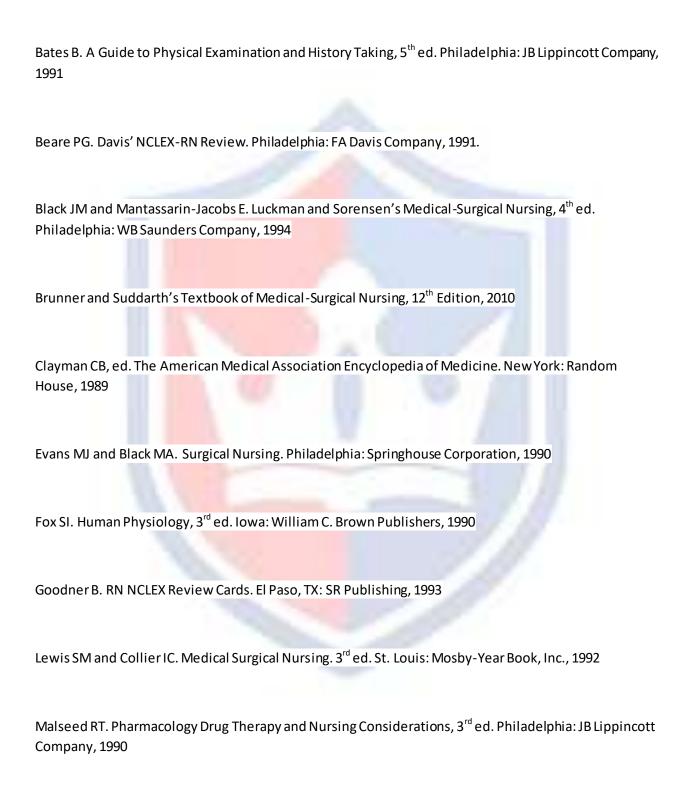
Match the following types of crutch walking with the appropriate description:

- 1. ___ Used when weight-bearing is allowed on both extremities. Advance right crutch, step with left foot; advance left crutch, step with right foot.
- 2. ___ Acceleration of four-point gait. Right crutch moves together with left leg; left crutch moves together with right crutch.
- 3. ___ Used when weight-bearing is permitted on one extremity only. Advance both crutches and affected extremity several inches; maintaining good balance, advance unaffected leg, supporting weight of body on hands.
- 4. ___ Used in clients with paralysis of both lower extremities, unable to lift feet from the floor. Place both crutches forward. Client swings forward to the crutches.
- 5. ___ Used in clients with paralysis of both lower extremities. Both crutches placed forward, client swings body though crutches.
- A. four-point gait
- B. swing-through gait
- C. swing-to gait
- D. three-point gait
- E. two-point gait

NCLEX-RN STYLE QUESTIONS

A client is 1 day postoperative after a total hip replacement. The client should be placed in which of these positions for meals? A client who has had a plaster of Paris cast.	 (1) Supine (2) Semi-Fowler's (3) Orthopneic (4) Trendelenburg (1) Observe the color of the fingers.
applied to his forearm is receiving pain medication. To detect early manifestations of compartment syndrome, which of these assessments should the nurse make?	(2) Palpate the radial pulse under the cast.(3) Check the cast for odor and drainage.(4) Evaluate the response to analgesics.
3. After a computed topography scan with intravenous contrast medium, a client returns to the unit complaining of shortness of breath and itching. The nurse should be prepared to treat the client for	 (1) an anaphylactic reaction to the dye. (2) inflammation from the extravasation of fluid during injection. (3) fluid overload from the volume of infusions. (4) a normal reaction to the stress of the diagnostic procedure.
4. While caring for a client with a newly applied plaster of Paris cast, the nurse makes note of all of the following conditions. Which assessment finding requires immediate notification of the physician?	 (1) Moderate pain, as reported by the client (2) Report, by client, that heat is being felt under the cast (3) Presence of slight edema of the toes of the casted foot (4) Onset of paralysis in the toes of the casted foot
5. Which nursing intervention is appropriate for a client with skeletal traction?	(1) Pin care(2) Prone positioning(3) Intermittent weights(4) 5-lb weight limit
6. In order for Buck's traction applied to the right leg to be effective, the client should be placed in which position?	(1) Supin(2) Prone(3) Sim's(4) Lithotomy
7. Which of these nursing actions will best promote independence for the client in skeletal traction?	(1) Instruct the client to call for an analgesic before pain becomes severe.(2) Provide an overhead trapeze for client use.(3) Encourage leg exercises within the limits of

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