

## Preconference Form

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Medical Diagnosis/Disease: Osteoarthritis / THA

### NCLEX IV (8): Physiological Integrity/Physiological Adaptation

#### Anatomy and Physiology

##### Normal Structures

Skeletal system- all bone of the body. Axial S- skull, vertebral column, rib cage. Appendicular skeleton- limbs, & pelvic girdle. Muscular system- all muscles in the body. Skeletal muscle- voluntary muscles attached to bone. Smooth muscles- involuntary muscles found in organs/blood vessels. Cardiac- involuntary found only in the heart. Each long bone consists of epiphysis (wide area at the opposite ends) provide stability to joints, covered by articular cartilage to prevent friction, main space for muscle attachment. Diaphysis (shaft, support consist of cortical bone, able to with stand bending & twisting) and metaphysis (opposite ends under the epiphysis composed of cancellous bone). Maintain function is to support, protect internal organs, voluntary movement, blood cell production, & mineral storage. Framework that keeps the body from collapsing. Point of attachment for muscles and ligaments. Muscles connect to bone by tendons, bones act as a lever, when muscle contraction occurs it creates movement. Ligaments provide stability to the joints. Bone marrow is where white and red blood cells are produced in bone. Bone is classified as cortical (compact & dense) cancellous (Spongy). In cortical bone cylindrical like structures called osteons fit closely together to create a dense bone structure. The haversian canals run parallel through bone long axis contains blood vessels that travels to the bone's interior from the periosteum. Lamellae concentric rings surrounding osteons, indicating mature bones. Joint is a place where the ends of 2 bones are close and move in relation to each other. Most

#### Pathophysiology of Disease

Most common cause of musculoskeletal injury is trauma resulting in fractures, dislocation, subluxation, and soft tissue injury. Non inflammatory disorder of the synovial joints. OA involves gradual loss of articular cartilage with formation of bony outgrowth at the joint margin. Genetic, metabolic, and local factors interact to cause of cartilage deterioration from damage at the level of chondrocytes. Normal smooth, white, translucent cartilage becomes dull, yellow and granular as OA progress. Cartilage becomes softer & less elastic. Body's attempt at cartilage repair can nit keep up with OA. Collagen structures change articular surfaces becomes cracked and worn. Central cartilage becomes thinner cartilage at the joints becomes thicker & osteophytes form. Joint surface becomes uneven, affecting the distribution of stress across the joint. THA consist of removing damage cartilage and bone from hip joint and replaced with a prosthetic implant. Implant consist of metal stem that fits into the thigh bone, a ball that replaces the hip joint and a socket that is placed in the pelvis.

### NCLEX IV (7): Reduction of Risk

#### Anticipated Diagnostics

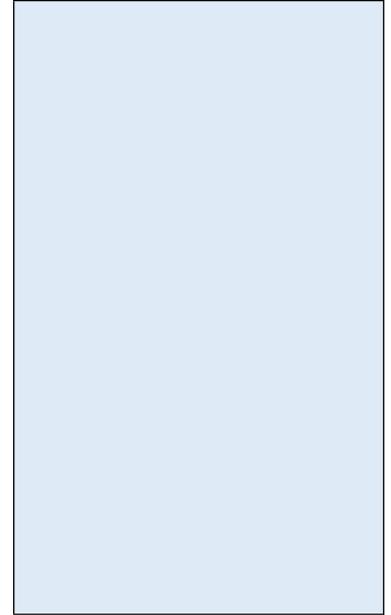
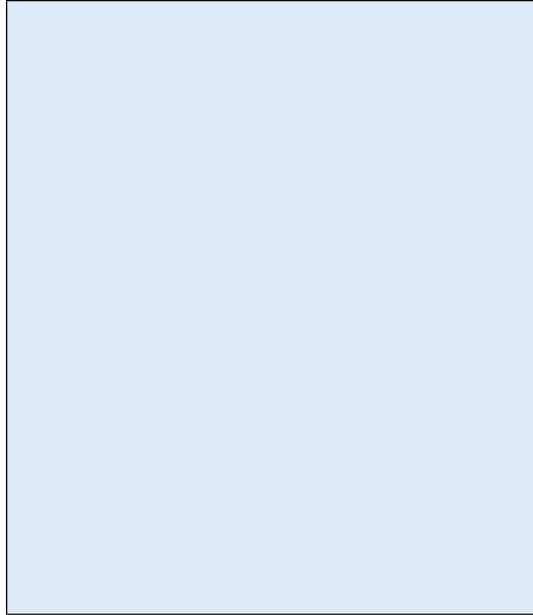
##### Labs

Calcium, K, phosphorus, rheumatoid factor RF, Anti-DNA antibodies, Aldolase, Alkaline phosphatase, **CBC**, Liver function,

##### Additional Diagnostics

X-ray, bone scan, CT scan, discogram, EMG electromyogram (mineral density), MRI, Quantitative ultrasound, thermography, **EKG**

common joint is the synovial freely movable. 3 types of cartilage hyaline, elastic, and fibrous. Cartilage in synovial joints serves as a support for soft tissues and provide articular surface for joint movements.



### NCLEX II (3): Health Promotion and Maintenance

#### Contributing Risk Factors

Age, gender, family hx, body frame and sizes, hormonal levels, diet, smoking, excessive alcohol consumption.

#### Signs and Symptoms

Pain, stiffness, swelling, tenderness, decreased ROM, grating sensation, Bone spurs.

### NCLEX IV (7): Reduction of Risk

#### Possible Therapeutic Procedures

##### Non-surgical

NSAIDs, intraarticular corticosteroids, heat & cold compress, use of assistive devices, exercise, nutrition supplements, acupuncture. Arthroplasty

##### Surgical

Reconstructive, Knee or hip replacement surgeries.

#### Prevention of Complications

(What are some potential complications associated with this disease process)

Reduced mobility, joint deformities, muscle weakness, increased risk for falls, mental health issues, sleep disturbances.

### NCLEX IV (6): Pharmacological and Parenteral Therapies

#### Anticipated Medication Management

Corticosteroids, intraarticular injections, analgesics, NSAIDs, Salicylate, topical analgesics.

### NCLEX IV (5): Basic Care and Comfort

#### Non-Pharmacologic Care Measures

Exercise, heat & cold compress, PT, weight management, assistive devices, diet, education and support.

### NCLEX III (4): Psychosocial/Holistic Care Needs

#### What stressors might a patient with this diagnosis be experiencing?

Financial, mental, lifestyle changes, impact on relationships, limited mobility, pain, fear.

## Client/Family Education

List 3 potential teaching topics/areas

- Proper use of analgesics, NSAIDs to prevent addiction.
- Appropriate ROM exercises
- Healthy lifestyle choices such as diet

## NCLEX I (1): Safe and Effective Care Environment

Multidisciplinary Team Involvement

(Which other disciplines do you expect to share in the care of this patient)

Nutritionist, PT, OT, social worker, case management, nurses, can, doctors, surgeons, pharmacist