

## Preconference Form

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Medical Diagnosis/Disease: Osteoarthritis

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

#### Anatomy and Physiology Normal Structures

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#### Pathophysiology of Disease

- Noninflammatory disorder of the diarthrodial (synovial) joints
- Gradual loss of articular cartilage with the formation of bony outgrowths (spurs or osteophytes) at the joint margins
- Could be caused direct damaged cartilage or joint instability, however there is no single cause
- Various genetic traits may be responsible for the development of cartilage defects
- Obesity contributes to hip and knee OA. It increases mechanical stress on the joints
- Decreased Estrogen at menopause may contribute to increased incidence of OA
- Anterior cruciate ligament injury from quick stops and pivoting increases risk for knee OA
- The normally smooth, white, translucent articular cartilage becomes dull, yellow, and granular as OA progresses
- As the collagen structure in the cartilage changes, articular surfaces become cracked and worn
- As central cartilage becomes thinner, cartilage as the joint becomes thicker and osteophytes form. Joint edges become uneven, affecting the distribution of stress across the joint and causing reduced motion
- Inflammation is secondary symptom, however, when phagocytes try to get rid the joint of small pieces of cartilage torn from joint surface. This causes pain and stiffness
- Pain in later disease occurs due to articular cartilage being lost, and bony joint surfaces rub each other
- Develops in the intervertebral (apophyseal) joints of the spine

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

#### Anticipated Diagnostics Labs

Synovial fluid analysis helps to distinguish OA from other types of inflammatory arthritis

No labs or biomarkers can be used to diagnose OA  
Erythrocyte sedimentation rate(ESR) is normal expect for slight increases during acute inflammation  
CBC

Liver function tests

Additional Diagnostics  
x-rays help confirm and stage joint damage  
a bone scan  
CT scan  
MRI

-all detect early joint change

Contributing Risk Factors

Drugs- indomethacin and corticosteroids may stimulate collagen-digesting enzymes in joint synovium  
Hematologic or endocrine problems- chronic hemarthrosis may contribute to cartilage deterioration  
Inflammation- release of enzymes in response to local inflammation may affect cartilage health  
Joint instability- damage to supporting structures causes instability, placing uneven stress on joint cartilage  
Mechanical stress- repetitive physical activities can cause cartilage deterioration  
Neurologic problems- pain and loss of reflexes from neurologic disorders, such as diabetic neuropathy and chronic joint, cause abnormal movements  
Skeletal deformities- congenital or acquired conditions (dislocated hip)  
Trauma- dislocations or fractures may lead to avascular necrosis or uneven stress on cartilage

Signs and Symptoms

- Pain
- Musculoskeletal problems
- Impaired role performance

Possible Therapeutic Procedures

Non-surgical  
Health promotion  
Abulatory care  
Heat and cold applications  
Nutrition therapy  
Exercise  
Rest and joint protection  
Role performance

Surgical

Prevention of Complications

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

Avoid smoking  
Properly treat joint injuries  
Maintain healthy weight and eat balanced diet  
Use safety measures to protect and decrease risk for joint injury  
Exercise regularly, including strength and endurance training

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

Anticipated Medication Management  
NSAIDS  
Aspiran, salicyte  
Corticosteroids  
Systemic  
Topical analgesics

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

Non-Pharmacologic Care Measures

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

What stressors might a patient with this diagnosis be experiencing?

**Client/Family Education**

List 3 potential teaching topics/areas  
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**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)

