

**Lecture# 16**  
**semester# 2**

# **Musculoskeletal System Disorders, Arthritis**

**:by**

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# Arthritis

Arthritis is inflammation of one or more joints. Symptoms of arthritis include pain and limited function of joints.

A joint is an area of the body where two different bones meet.

Arthritis is frequently accompanied by joint pain. Joint pain is referred to as arthralgia.



# Causes of arthritis

1. Injury (leading to osteoarthritis).
2. Metabolic abnormalities (such as gout).
3. Hereditary factors.
4. The direct and indirect effect of infections (bacterial and viral)
5. A misdirected immune system with autoimmunity (such as, systemic lupus erythematosus).

# Types Of Arthritis:

## 1. Osteoarthritis

is a painful, degenerative joint disease that often involves the hips, knees, neck, lower back, or small joints of the hands. OA usually develops in joints that are **injured** by repeated overuse from performing a particular task or playing a favorite sport or from carrying around excess body weight .

## 2. Rheumatoid Arthritis

Is an autoimmune inflammatory disease that usually involves various joints in the fingers, thumbs, wrists, elbows, shoulders, knees, feet, and ankles. An autoimmune disease is one in which the body releases enzymes that attack its own healthy tissues. In RA, these enzymes destroy the linings of joints.

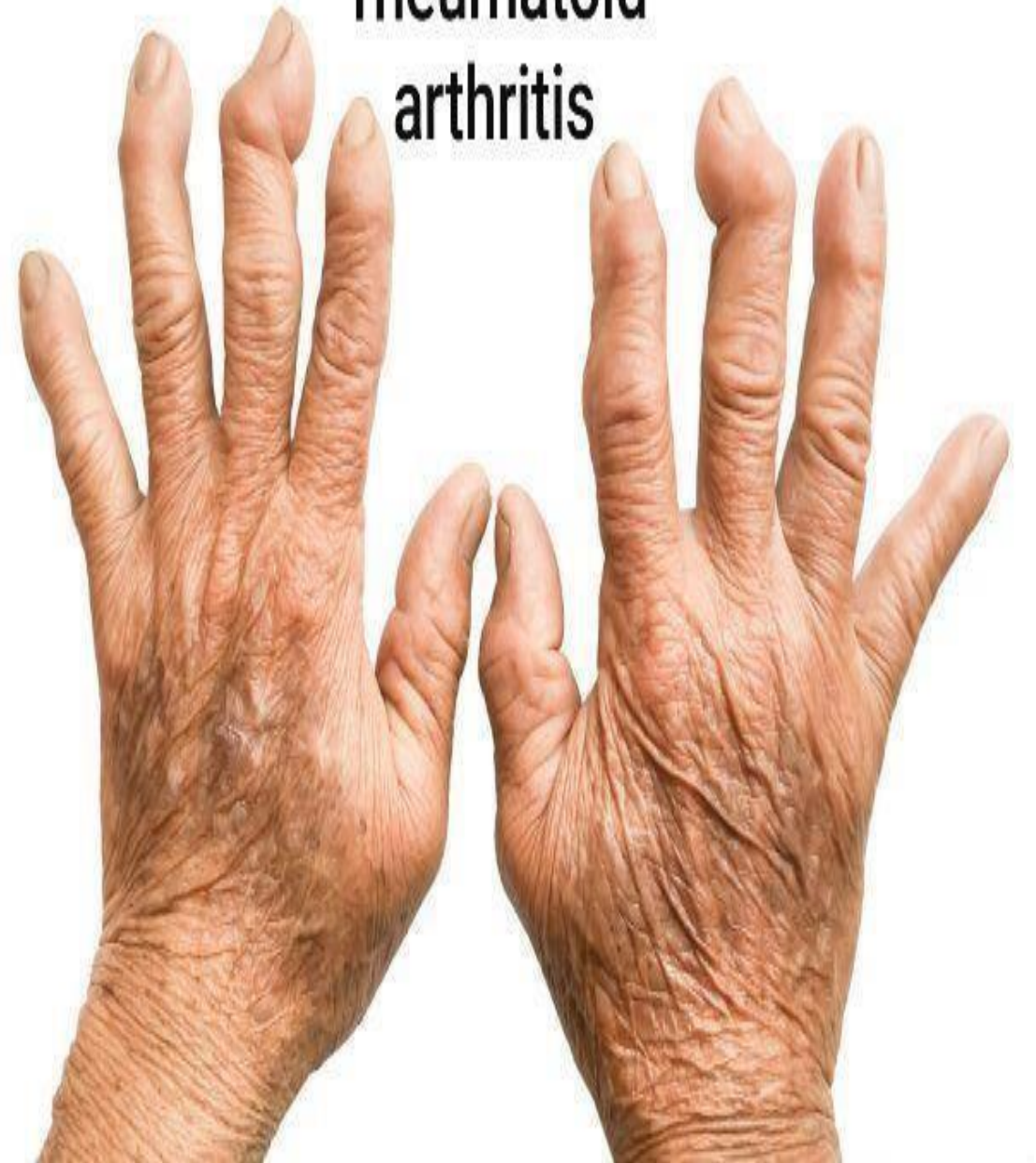
## Cont..

- 3. Gout** (is caused by crystals that build up in the joints. It usually affects the big toe, but many other joints may be affected)
- 4. Ankylosing Spondylitis** (is arthritis that affects the spine. It often involves redness, heat, swelling, and pain in the spine or in the joint where the bottom of the spine joins the pelvic bone.)
- 5. Psoriatic Arthritis** can occur in people who have psoriasis (scaly red and white skin patches). It affects the skin, joints, and areas where tissues attach to bone.
- 6. Reactive Arthritis** is pain or swelling in a joint that is caused by an infection in your body.

osteoarthritis



rheumatoid  
arthritis



**gout arthritis**



**psoriatic arthritis**



## **Progression of Ankylosing Spondylitis**



# Signs and Symptoms

In general, the signs and symptoms can be divided into **early** and **late** manifestations. The typical pattern of joint inflammation is **bilateral** and **symmetrical**. The disease usually **begins in the upper extremities** and progresses to other joints over many years .

Affected joints are slightly **reddened, warm, swollen, stiff, and painful**. The patient with RA often has **morning stiffness** lasting for up to an hour, and those with severe disease may report experiencing stiffness all day. Generally, activity decreases pain and stiffness.

Because of the systemic nature of RA, the patient may have a low-grade fever, malaise, depression, lymphadenopathy, weakness, fatigue, anorexia, and weight loss. As the disease worsens, major organs or body systems are affected. Joint **deformities** occur as a late symptom, and secondary **osteoporosis** (bone loss) can lead to fractures.



# Diagnostic Tests

No specific diagnostic test confirms RA. An increase in WBCs and platelets is typical.

Immunological tests findings for patients with RA usually include the following:

1. Presence of rheumatoid factor (RF) in serum
2. Decreased red blood cell (RBC) count
3. Decreased C4 complement
4. Increased erythrocyte sedimentation rate (ESR)
5. Positive antinuclear antibody (ANA) test
6. Positive C-reactive protein (CRP) test.

# Management of arthritis

1. Physical therapy.
2. Splinting, cold-pack application.
3. Anti-inflammatory medications.
4. Pain medications
5. Immune-altering medications
6. Surgical operations (joint replacement).
7. Keep sugary and/or fatty foods to a minimum - such as red meat
8. Eating plenty of fruit and vegetables, as well as whole grains.
9. Omega-3 essential fatty acids are thought to relieve to some extent the symptoms of arthritis.
10. Maintain ideal body weight.

# Nursing Diagnoses

1. Acute Pain related to chronic disease process
2. Disturbed Body Image related to changes resulting from disease process
3. Fatigue related to chronic pain and limited mobility
4. Self-care Deficit related to chronic degenerative disease process
5. Impaired Physical Mobility related to chronic inflammation of joints

# Nursing intervention

1. Assess pain; note the location and intensity (scale 0-10). Write down the factors that accelerate and signs of pain non-verbal.
2. Instruct to frequently change positions. Helps to move in bed, prop a pain in the joints above and below, avoid jerky movements.
3. Instruct the patient to a warm bath or shower at the time awake.
4. Give a massage to enhance relaxation and reduce pain.

## Cont..

5. Encourage the use of stress management techniques, such as progressive relaxation
6. Give the drug prior to activity that is planned as directed to increase relaxation and to make it easier to participate in therapy.
7. Give anti-inflammatory and mild analgesic effect in reducing stiffness and increasing mobility.
8. Give the ice-cold compress if needed. That can relieve pain and swelling during the acute period.

**Thanks  
For Listening**