

جامعة ذي قار كلية التمريض

# Rheumatoid Arthritis

## LUPUS

Prepare by  
د . قاسم علي خزعل



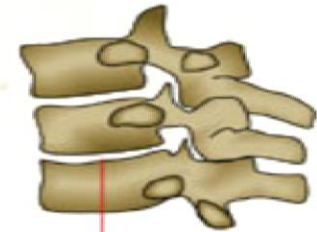
# What are joints?

- ❑ Joint pain is an early symptom of Arthritis
  - ❑ The joint is the area where bones meet!
  - ❑ Synovial joints are responsible for movement
- The joint is the area most commonly targeted by inflammation**

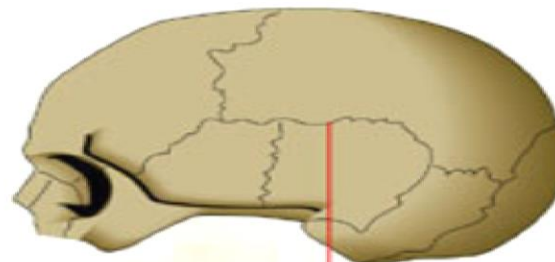
## TYPES OF JOINTS FOUND IN THE HUMAN BODY



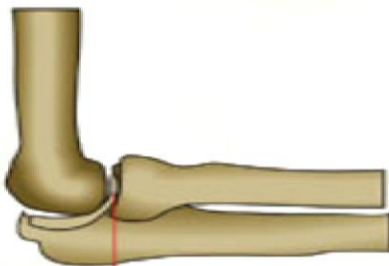
ribs and vertebrae =  
semi-mobile joints



vertebrae =  
cartilagenous joints



skull=  
immovable joints



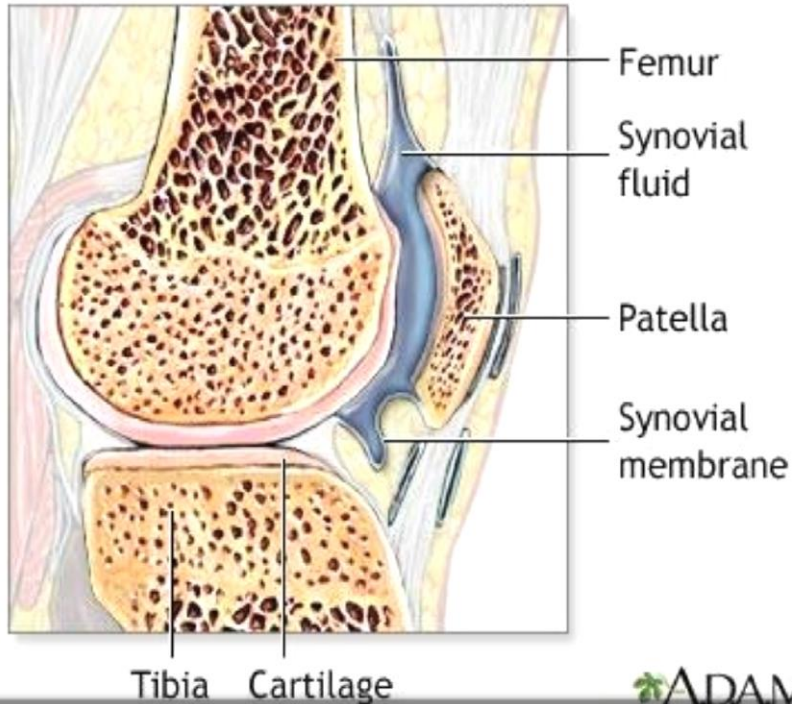
elbow=  
hinged joint



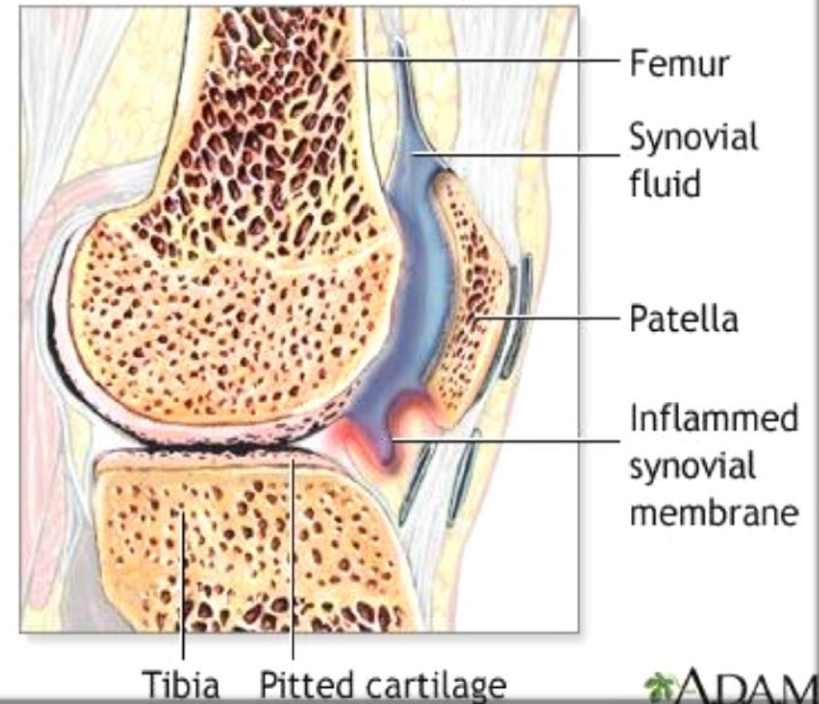
hip=  
ball and socket joint

# Anatomy of the Joint

Cut-section view of normal knee joint



Cut-section view of knee joint



## Articular/hyaline cartilage

- ❑ Acts as a shock absorber
- ❑ Allows for friction-free movement
- ❑ Not innervated!

## Synovial membrane/synovium

- ❑ secretes synovial fluid
- ❑ nourishes cartilage
- ❑ cushions the bones

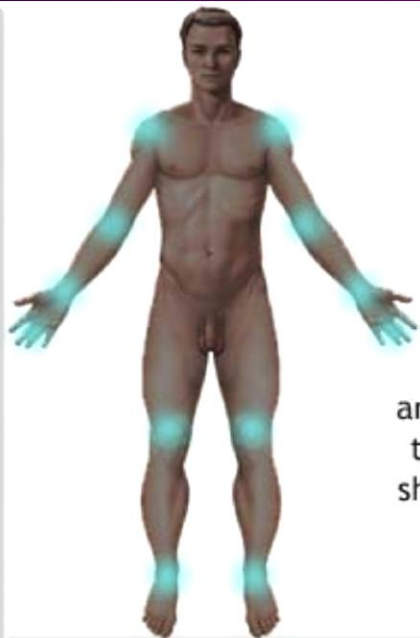
# Rheumatoid Arthritis

“A **chronic autoimmune** disease characterized by the **inflammation** of the **synovial** joints”

Has a symmetrical bilateral effect on joints

Results in joint deformity and immobilization

Multiple factors increase one's risk



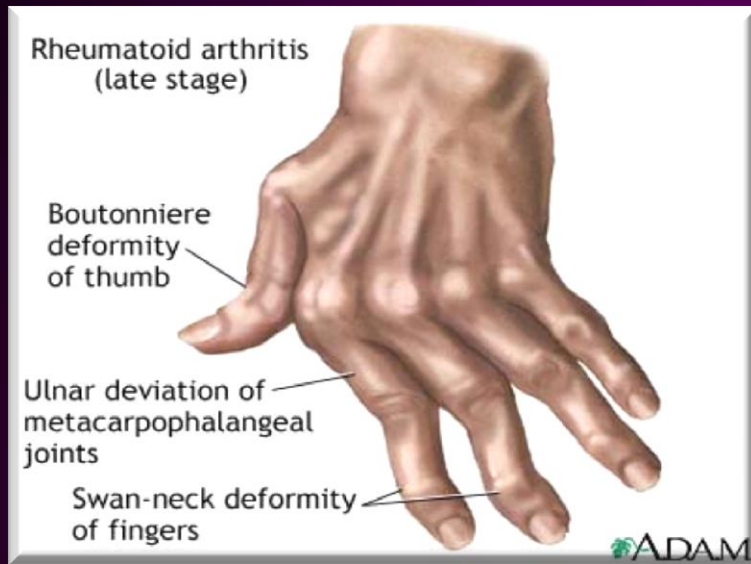
Rheumatoid arthritis usually affects joints symmetrically (on both sides equally), may initially begin in a couple of joints only, and most frequently attacks the wrists, hands, elbows, shoulders, knees and ankles

ADAM.





# Symptoms



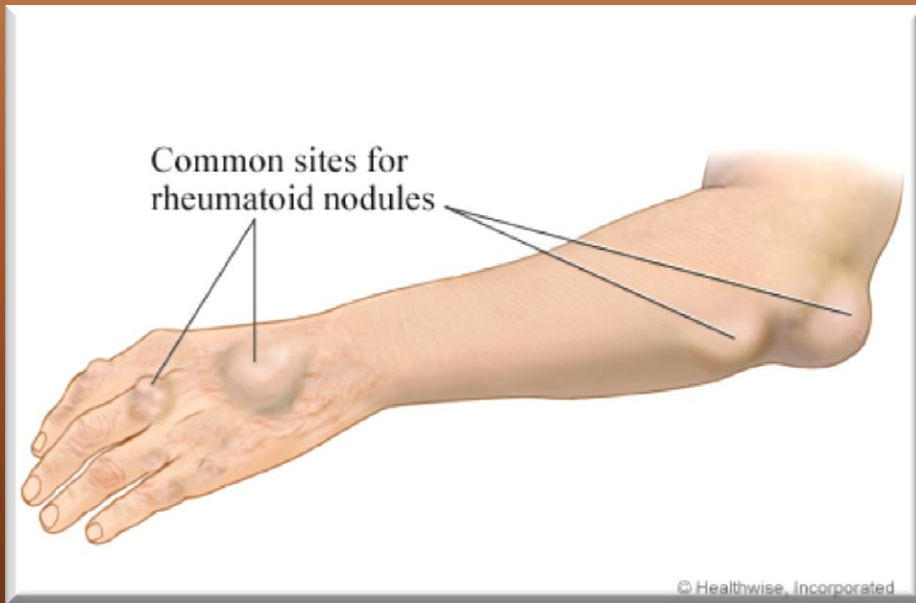
- Morning stiffness lasting more than half an hour
- Simultaneous symmetrical joint swelling
- Not relieved by rest
- Fever
- Weight loss
- Fatigue
- Anemia
- Lymph node enlargement
- Nodules
- Raynaud's phenomenon

# Raynaud's phenomenon





# Nodules







© The American College of Surgeons





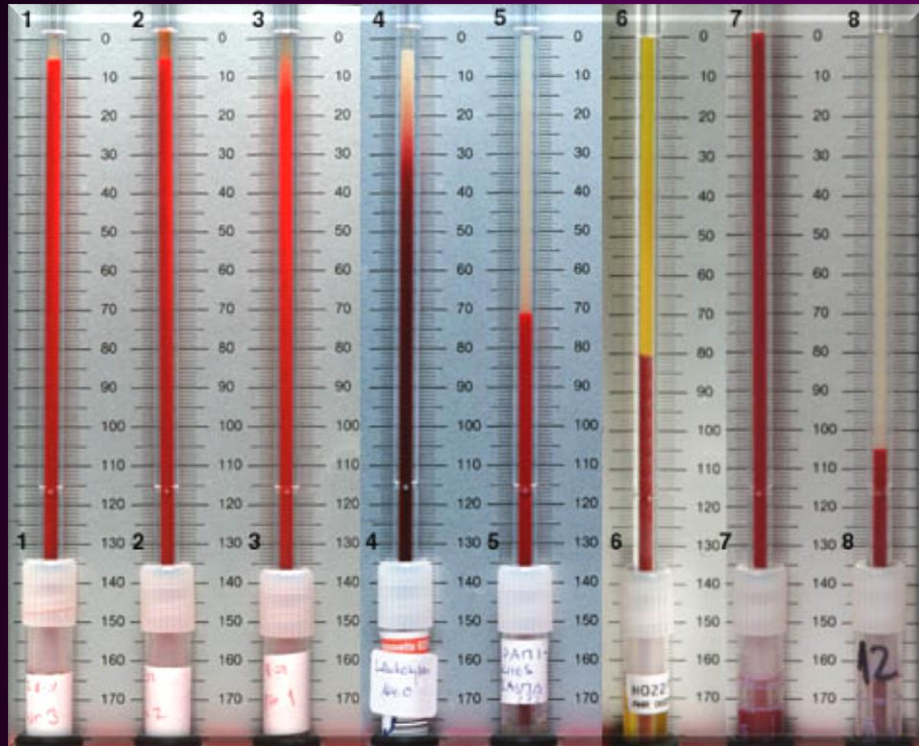
# Diagnosis

No single test is specific to Rheumatoid Arthritis

- ❑ CBC
- ❑ Radiographs of involved joints
- ❑ CT/MRI scans
- ❑ Direct arthroscopy
- ❑ Synovial/Fluid aspirate
- ❑ Synovial membrane biopsy
- ❑ Arthrocentesis



# Inflammatory Markers: ESR and CRP Test



The level of CRP in the blood is **normally low**. Increasing amount suggests **inflammation**.

ESR rates for men: 0–15mm/hr

ESR rates for women: 0–20mm/hr

# *Antibody Tests: Rheumatoid Factor Test and CCP*

Other blood tests check for the presence of antibodies that are **not normally** present in the human body





# *Direct arthroscopy*



## **Benefits**

- Minimally invasive
- Less tissue damage
- Fewer complications
- Reduced pain
- Quicker recovery time
- Outpatient basis

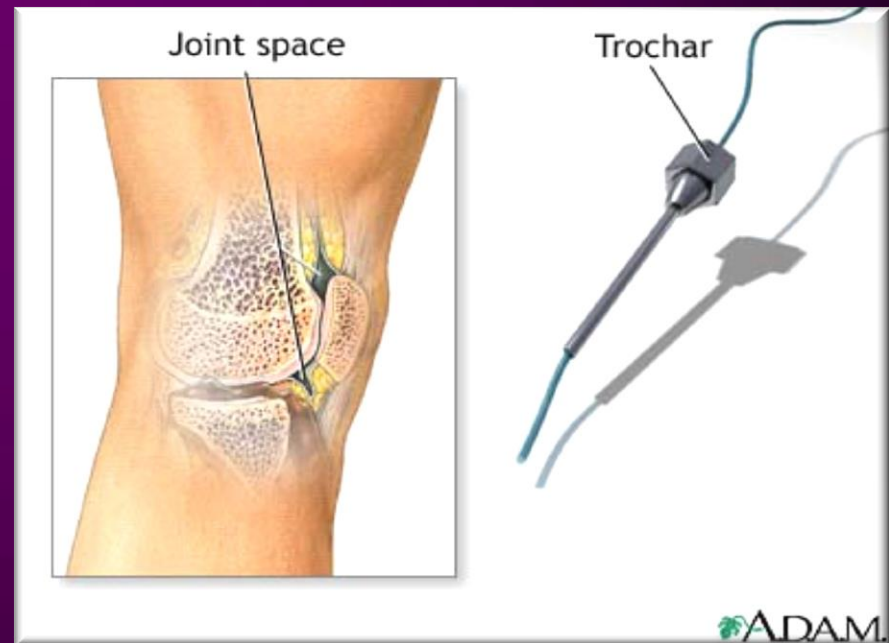
# **Synovial/Fluid aspirate**

## **Synovial membrane biopsy**

### **Arthrocentesis**

**Arthrocentesis:** synovial fluid is aspirated and analysed for inflammatory components

**Abnormal synovial fluid:** cloudy, milky, or **dark yellow** containing leukocytes



# *X-Ray*



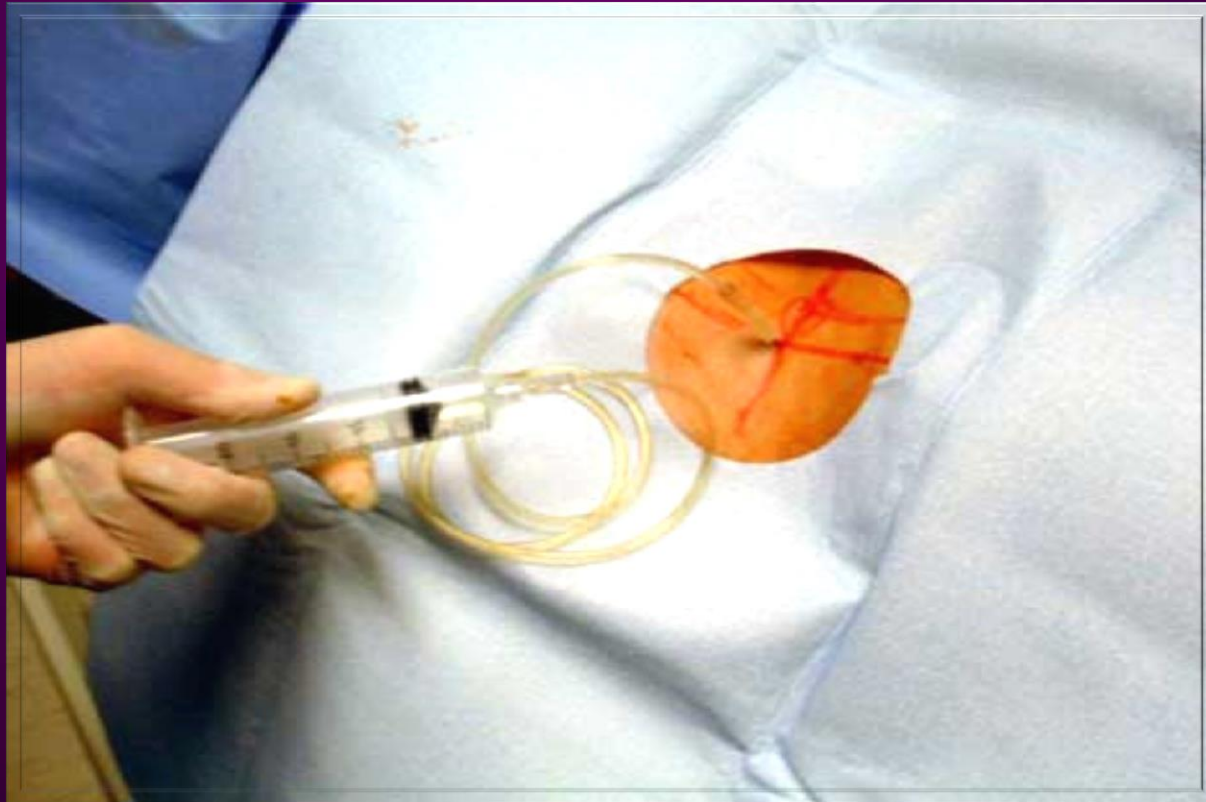
X-rays are an important diagnostic test for monitoring the disease progression

Patients may reveal NO changes on an X-ray in the early stages



# *Arthrography*

A radiopaque substance or air is injected into the joint, which outlines soft tissue structures surrounding the joint



# ***CT/MRI scans***

Used for better visualization of soft tissue

MRI is particularly sensitive for the early and subtle features of RA

Can detect changes of Rheumatoid Arthritis prior to an X-Ray



# Newly Diagnosed

The major goal is to relieve pain and inflammation and prevent further joint damage



Anxiety, depression, and a low self esteem commonly accompanies Rheumatoid Arthritis



# Medications

There are four types of medications used to treat RA:

- Non-steroidal anti-inflammatory drugs (NSAIDs)
- Disease-modifying anti-rheumatic drugs (DMARDs).
- Corticosteroids
- Biologic Response Modifiers (“Biologics”)



# Non-steroidal anti-inflammatory drugs (NSAIDs)

Examples	General Use	Side Effects	Nursing Considerations
<p>Aspirin, ibuprofen, naproxen, COX-2 inhibitors, propionic acid, phenylacetic acid</p>	<ul style="list-style-type: none"> <li>• anti-inflammatory: Used in the management inflammatory conditions</li> <li>• Antipyretic: used to control fever</li> <li>• Analgesic: Control mild to moderate pain</li> </ul>	<ul style="list-style-type: none"> <li>• Nausea</li> <li>• Vomiting</li> <li>• Diarrhea</li> <li>• Constipation</li> <li>• Dizziness</li> <li>• Drowsiness</li> <li>• Edema</li> <li>• Kidney failure</li> <li>• Liver failure</li> <li>• Prolonged bleeding</li> <li>• Ulcers</li> </ul>	<ul style="list-style-type: none"> <li>• Use cautiously in patients with hx of bleeding disorders</li> <li>• Encourage pt to avoid concurrent use of alcohol</li> <li>• NSAIDs may decrease response to diuretics or antihypertensive therapy</li> </ul>

# Corticosteroids

Examples	General Use	Side Effects	Nursing Considerations
Cortisone, hydrocortisone, prednisone, betamethasone, dexamethasone	<ul style="list-style-type: none"><li>• Used in the management inflammatory conditions</li><li>• When NSAIDS may be contraindicated</li><li>• Promptly improve symptoms of RA</li></ul>	<ul style="list-style-type: none"><li>• Increased appetite</li><li>• Weight gain</li><li>• Water/salt retention</li><li>• Increased blood pressure</li><li>• Thinning of skin</li><li>• Depression</li><li>• Mood swings</li><li>• Muscle weakness</li><li>• Osteoporosis</li><li>• Delayed wound healing</li><li>• Onset/worsening of diabetes</li></ul>	<ul style="list-style-type: none"><li>• Take medications as directed (adrenal suppression)</li><li>• Used with caution in diabetic patients</li><li>• Encourage diet high in protein, calcium, potassium and low in sodium and carbohydrates</li><li>• Discuss body image</li><li>• Discuss risk for infection</li></ul>

# Disease-modifying anti-rheumatic drugs(DMARDs)

Examples	General Use	Side Effects	Nursing Considerations
<p><b>Methotrexate (the gold standard)</b>  <b>, gold salts,</b>  <b>cyclosporine,</b>  <b>sulfasalazine,</b>  <b>azathioprine</b></p>  	<ul style="list-style-type: none"> <li><input type="checkbox"/> immunosuppressive activity</li> <li><input type="checkbox"/> Reduce inflammation of rheumatoid arthritis</li> <li><input type="checkbox"/> Slows down joint destruction</li> <li><input type="checkbox"/> Preserves joint function</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Dizziness, drowsiness, headache</li> <li><input type="checkbox"/> Pulmonary fibrosis</li> <li><input type="checkbox"/> Pneumonitis</li> <li><input type="checkbox"/> Anorexia</li> <li><input type="checkbox"/> Nausea</li> <li><input type="checkbox"/> Hepatotoxicity</li> <li><input type="checkbox"/> Stomatitis</li> <li><input type="checkbox"/> Infertility</li> <li><input type="checkbox"/> Alopecia</li> <li><input type="checkbox"/> Skin ulceration</li> <li><input type="checkbox"/> Aplastic anemia</li> <li><input type="checkbox"/> Thrombocytopenia</li> <li><input type="checkbox"/> Leukopenia</li> <li><input type="checkbox"/> Nephropathy</li> <li><input type="checkbox"/> fever</li> <li><input type="checkbox"/> photosensitivity</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> May take several weeks to months before they become effective</li> <li><input type="checkbox"/> Discuss teratogenicity, should be taken off drug several months prior to conception</li> <li><input type="checkbox"/> Discuss body image</li> </ul>



# Biologic Response Modifiers (“Biologics”)

Examples	General Use	Side Effects	Nursing Considerations
Etanercept, anakinra, abatacipt, adalimumab, Infliximab ( <b>Remicade</b> )	<ul style="list-style-type: none"> <li><input type="checkbox"/> Used in the management inflammatory conditions</li> <li><input type="checkbox"/> When NSAIDS may be contraindicated</li> <li><input type="checkbox"/> Promptly improve symptoms of RA</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Increased appetite</li> <li><input type="checkbox"/> Weight gain</li> <li><input type="checkbox"/> Water/salt retention</li> <li><input type="checkbox"/> Increased blood pressure</li> <li><input type="checkbox"/> Thinning of skin</li> <li><input type="checkbox"/> Depression</li> <li><input type="checkbox"/> Mood swings</li> <li><input type="checkbox"/> Muscle weakness</li> <li><input type="checkbox"/> Osteoporosis</li> <li><input type="checkbox"/> Delayed wound healing</li> <li><input type="checkbox"/> Onset/worsening of diabetes</li> </ul>	<ul style="list-style-type: none"> <li>•Take medications as directed (adrenal suppression)</li> <li>•Encourage diet high in protein, calcium, potassium and low in sodium and carbohydrates</li> <li>•Discuss body image</li> <li>•Discuss risk for infection</li> </ul>

# Alternative Medicine



Omega 3 interferes with blood clotting drugs!

- Olive leaf extract
- Aloe Vera
- Green Tea
- Omega 3
- Ginger Root Extract
- Cats Claw

# Pain

Pain is subjective and influenced by multiple factors



Helpless

Lack of control

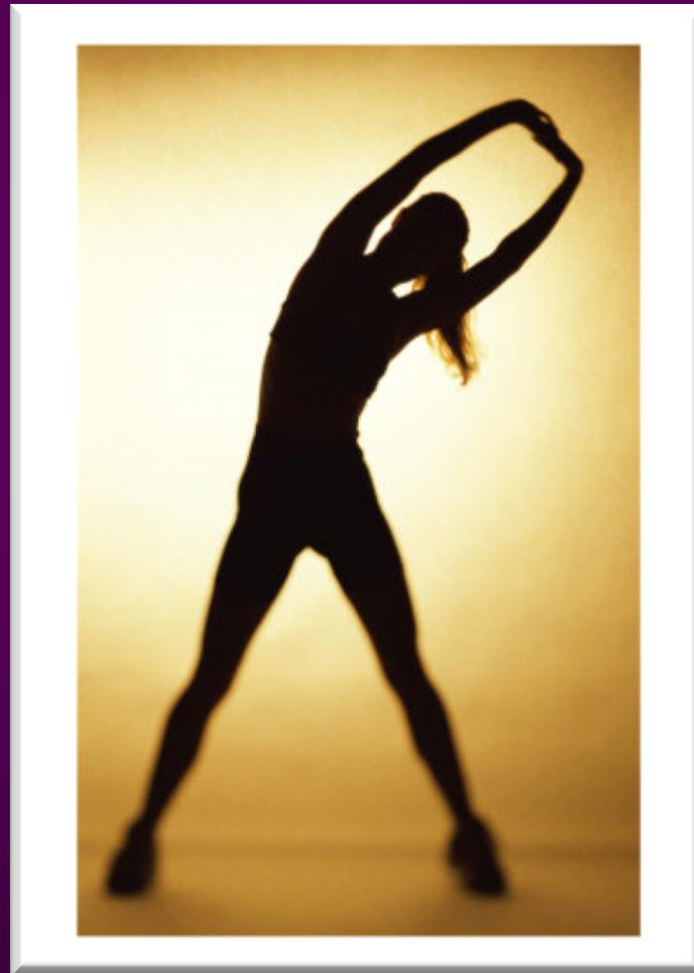
Stressful events can increase symptoms of arthritis

Consider drugs such as Paxil, Elavil or Zoloft

# Exercise

**Being overweight strains joints and leads to further inflammation**

4 times a week for  
30 minutes



- Walking
- Light jogging
- Water aerobics
- Cycling
- Yoga
- Tai chi
- stretching



# Nutrition

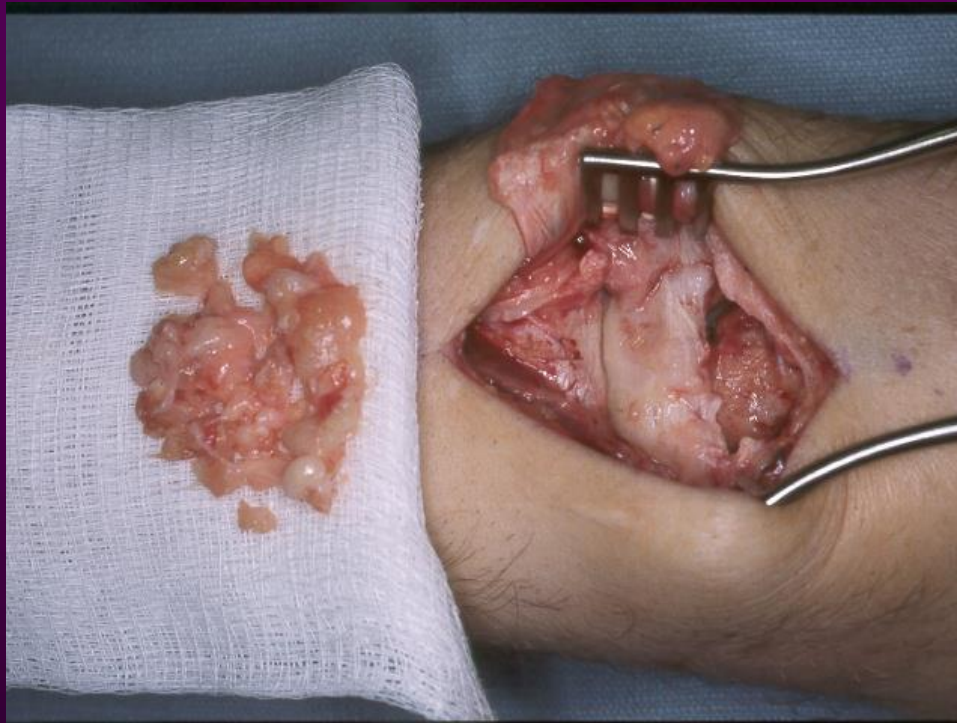
The most commonly observed vitamin and mineral deficiencies in patients with RA are:

- folic acid
- vitamin C
- vitamin D
- vitamin B<sub>6</sub>
- vitamin B<sub>12</sub>
- vitamin E
- calcium
- magnesium
- zinc
- selenium



# Synovectomy

- ❑ Increases function of the joint
- ❑ Decreases pain and inflammation
- ❑ Beneficial as an early treatment option
- ❑ Not a cure!



# Braces/casts/splints

- ❑ Support injured joints and weak muscles
- ❑ Improve joint mobility and stability
- ❑ Help to alleviate pain, swelling and muscle spasm
- ❑ May prevent further damage and deformity



# Case Study

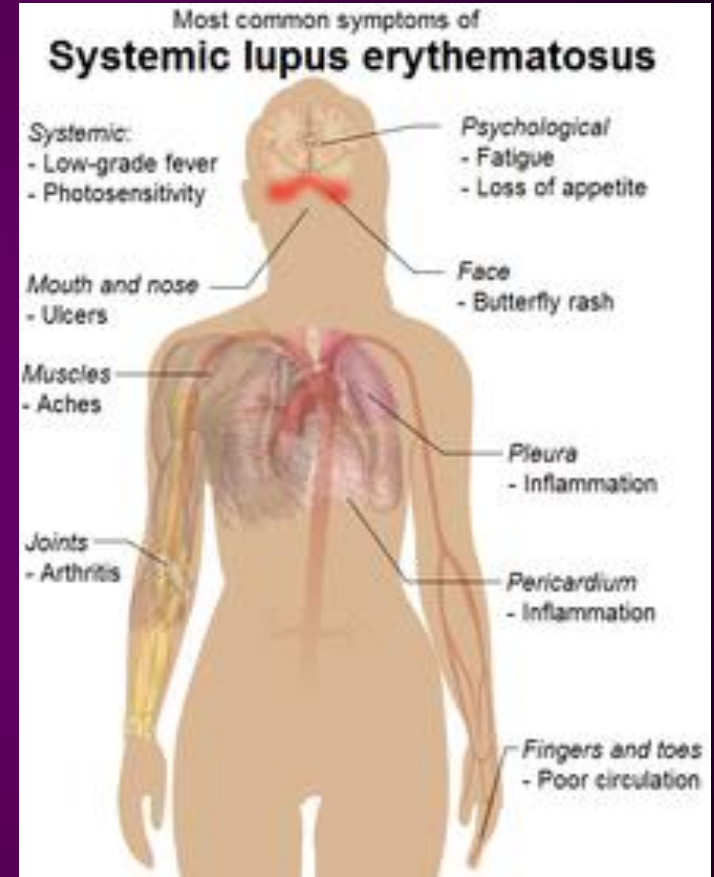
Mrs. Fatima Hip is a 66 year old female who has suffered from lupus for the past 30 years. Mrs. Sour Hip experiences many joint-related lupus symptoms, particularly in her right hip. She will be undergoing a right hip replacement surgery next week. Her medical history includes systemic lupus erythematosus, HTN, a. fib, pneumonia in winter 2010, and a history of pernicious anemia for which she receives Vitamin B12 s/c q2months. Her medications include long-term corticosteroid therapy to help manage her lupus.





# LUPUS

- ❑ A chronic disease, affecting over 1/1000 Canadians
- ❑ Affects 8x as many women
- ❑ Auto-immune
- ❑ Cause is unclear – potential hormonal or genetic link
- ❑ When properly treated, most individuals can survive for a normal lifespan



# Types of Lupus

**Systemic Lupus Erythematosus (SLE)** : The most common type of lupus. Any tissue in the body may be affected including the kidneys, heart, lungs, and brain.

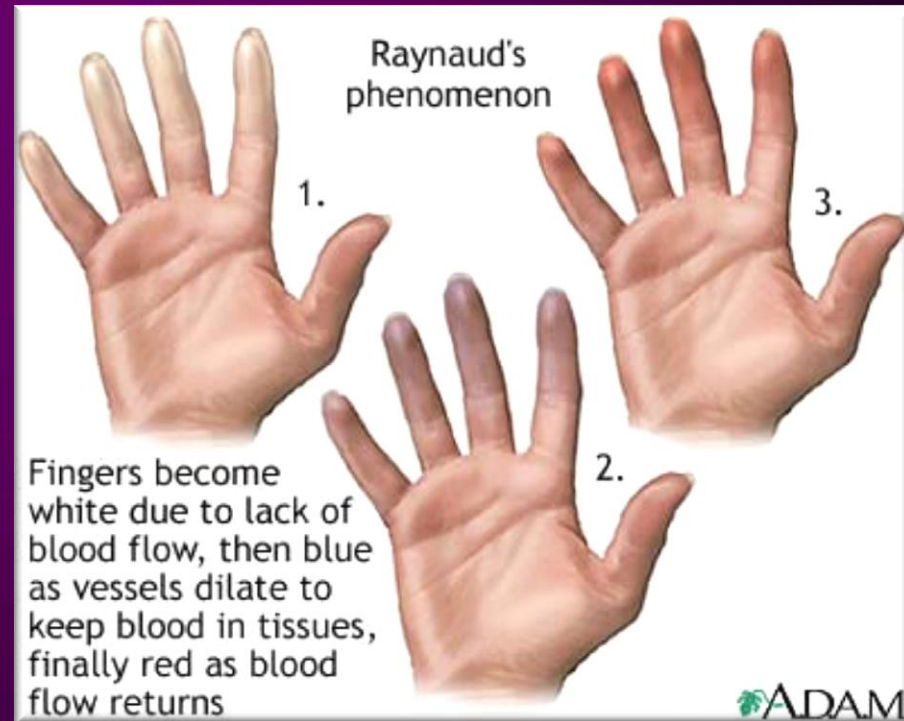
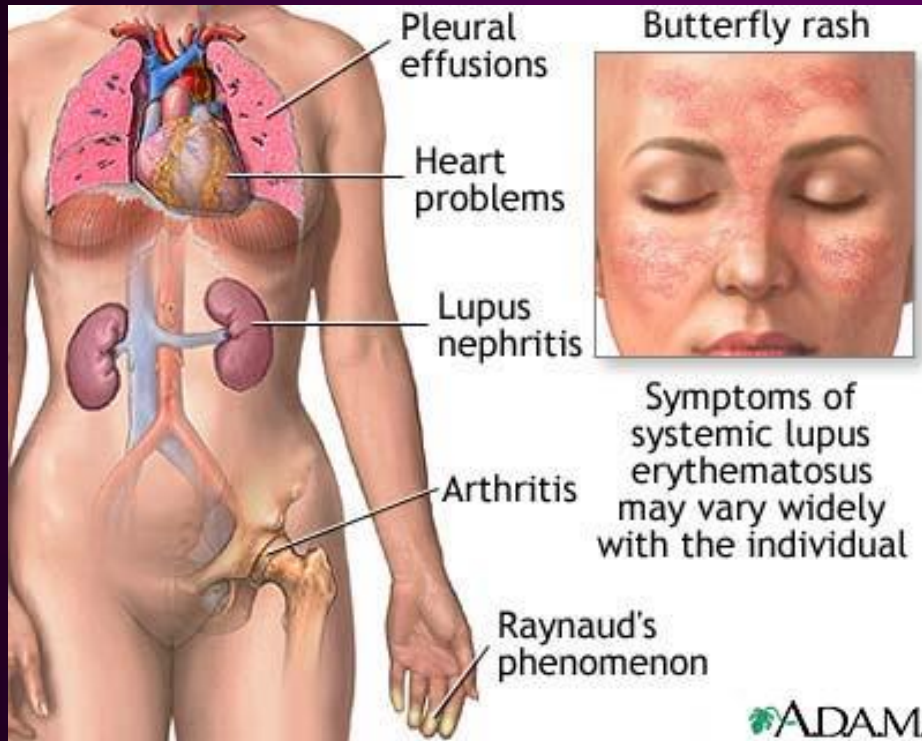


**Discoid Lupus Erythematosus (DLE)**: Affects the skin; skin develops lesions and scales.

**Cutaneous Lupus Erythematosus** : May be chronic or acute. This type may only involve the skin or progress to involve other body systems.

# **THE DISEASE OF A THOUSAND FACES**

# Manifestations of SLE





# Pharmacological Therapy



**Acetaminophen**

**NSAIDs**

**Corticosteroids**

**Cytotoxic or Immunosuppressive drugs**

**Antimalarial drugs**

# Healthy Lifestyle

(Arthritis Society, 2010)



# Nursing Considerations

- Educate patient on lupus.
- Help patient identify factors that precipitate flare-ups.
- Assess patient's medication knowledge.
- Provide adequate symptom management.
- Medic Alert bracelet
- Provide emotional and psychological support.. A big one!