

Introduction to Hip & Knee Replacement

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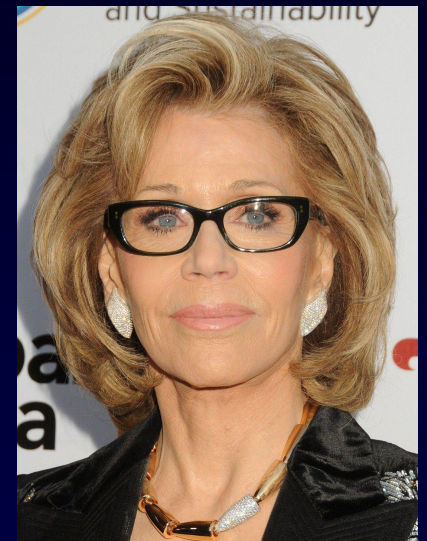


Anderson Orthopaedic Clinic

Objectives

- Review the background of arthritis and joint replacement
- Review treatment alternative
- Introduce surgical concepts
- Answer all questions

Familiar faces



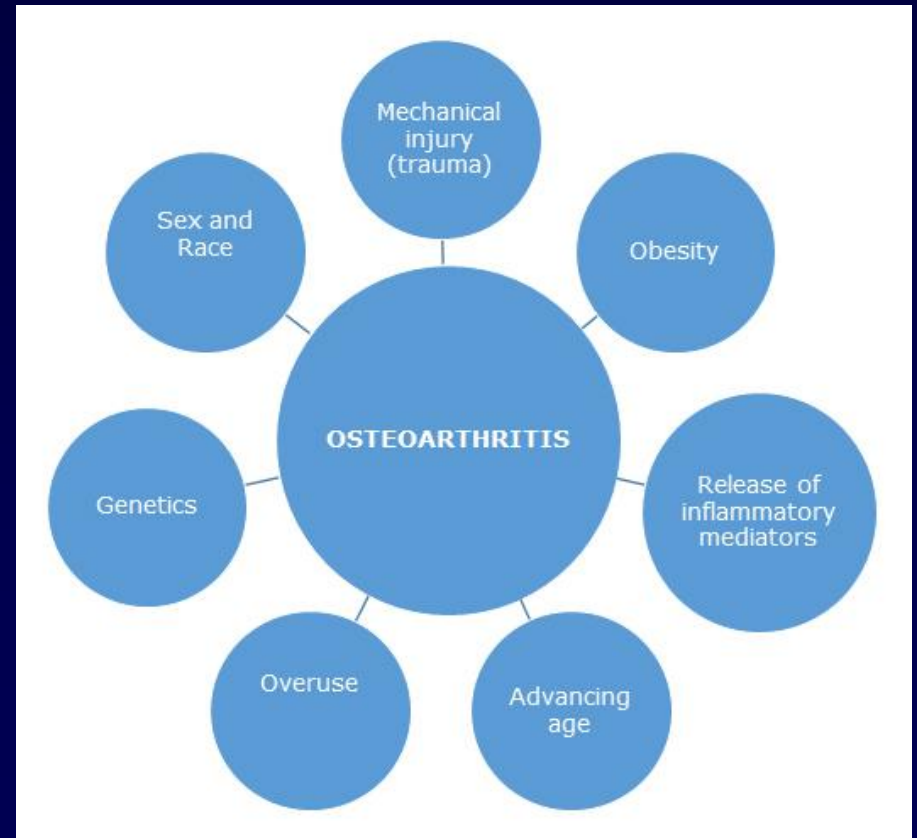
Prevalence

- As many as 91 million Americans affected (all types)
- 31 million affected by osteoarthritis (OA)
- Lifetime risk of developing symptomatic knee OA is 45%

Osteoarthritis

Multifactorial disease of joints

- Abnormal anatomy
- Abnormal biology
- Overuse
- Genetics



Normally Functioning Joint



- Healthy cartilage
- Well lubricated
- Full motion
- Pain free

Osteoarthritic Joint

- Damage to cartilage



- “Bone on bone”
- Loss of lubricating mechanism
- Loss of motion
- Pain

Diagnosis

- Medical history
- Physical exam
- X-rays



Normal Hip

- Well maintained joint space
- Smooth joint surfaces
- No bone spurs



Arthritic Hip

- Loss of joint space
(bone on bone)
- Bone cyst
- Bone spurs
- Dense white bone
(sclerosis)



Normal Knee

- Well maintained joint space
- Smooth joint surfaces
- No bone spurs



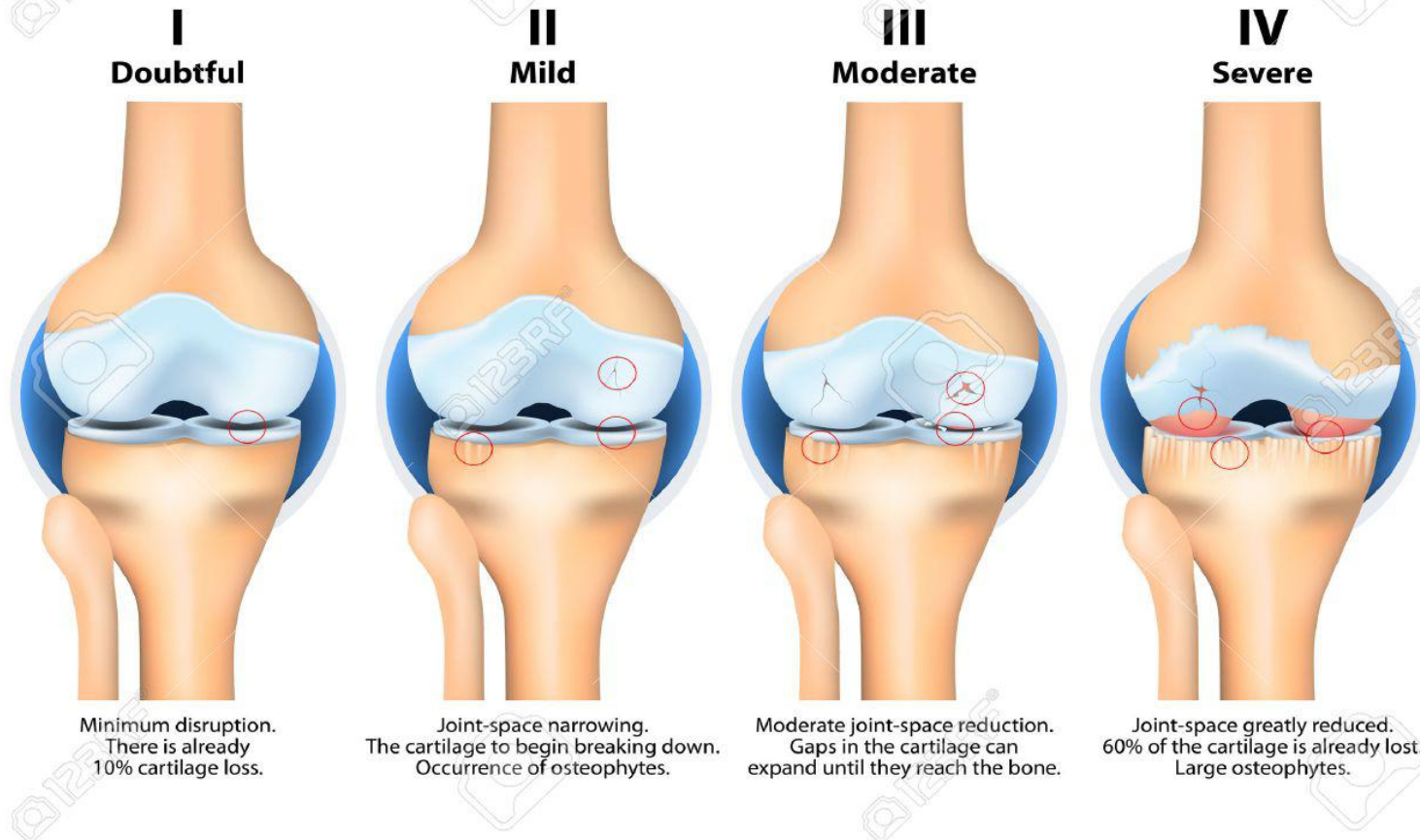
Arthritic Knee

- Loss of joint space (bone on bone)
- Flattening of surface
- Bone spurs
- Leg deformity



Spectrum of Disease

STAGE OF KNEE OSTEOARTHRITIS



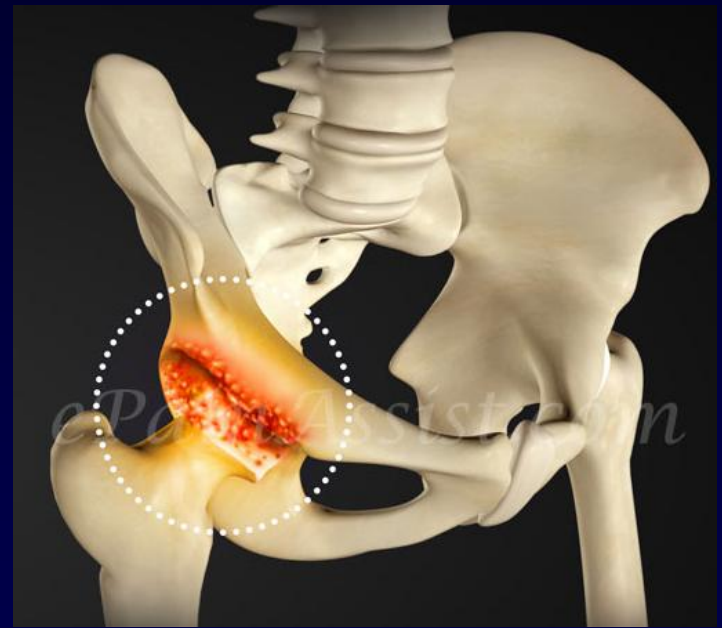
- Similar progression in the hip

Treatment of OA

- Patient education
- Weight reduction
- Activity modification
- Medication
- Cane or ambulatory aid
- Surgery

Weight Reduction

- Knee experiences forces up to 6.5x body weight
- Less load on joints
- May “wear out” slower
- Safer surgery, less complications



Activity Modification

- Lower impact exercise
- Decrease symptoms
- Keeps you active



Medication: Anti-inflammatories

- Many varieties
- Most effective class of medication
- Some topical forms
- Discuss with your physician



Medication: Injections

- Steroid shot
 - Anti-inflammatory
 - No more than 3-4 per year
 - Law of diminishing returns
- Lubricating injections
 - Single shot or series
 - Variable pain relief
 - Small chance of reaction
- Stem cell/PRP
 - Variable pain relief
 - Not shown to regrow cartilage
 - Out of pocket expense



Medication: Supplements

- Glucosamine/Chondroitin Sulfate
 - Does not grow new cartilage
 - May be anti-inflammatory
 - More effective in mild arthritis
 - Few side effects
 - Not FDA approved



Surgery

- Good joint replacement candidates
 - Not satisfied with non-surgical treatment
 - Medically optimized
 - Understand the procedure, risks, benefits and recovery

Surgery

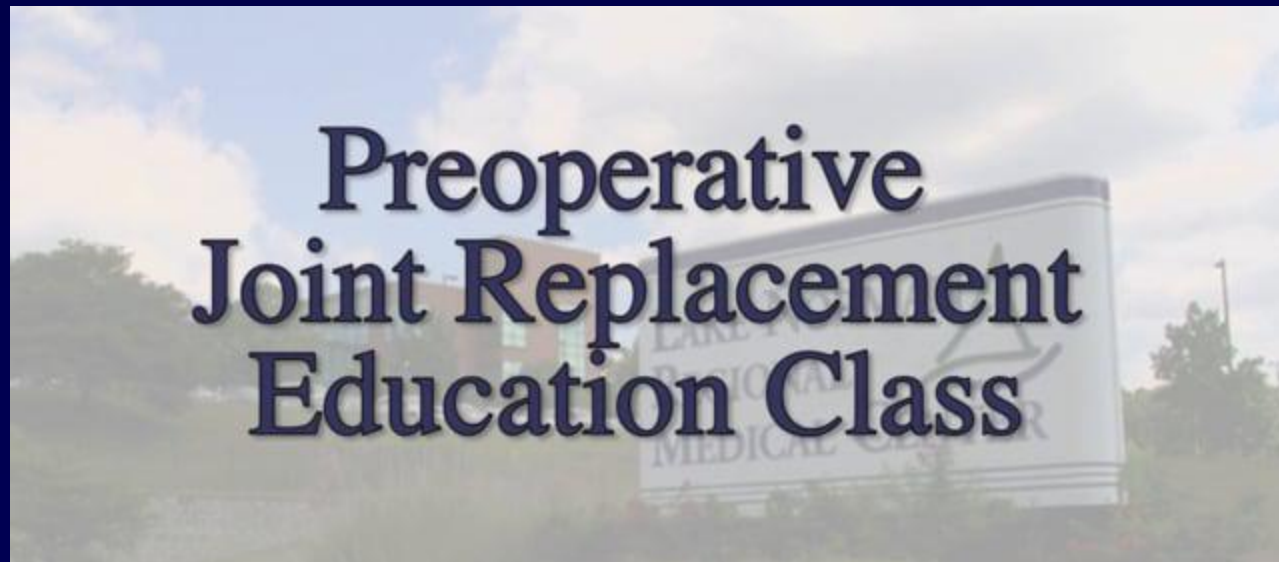
- Total hip replacement
- Total knee replacement
- Partial knee replacement

- >1 million patients annually

- Goals of surgery
 - Relieve pain
 - Improve mobility
 - Return to more active/fulfilling lifestyle

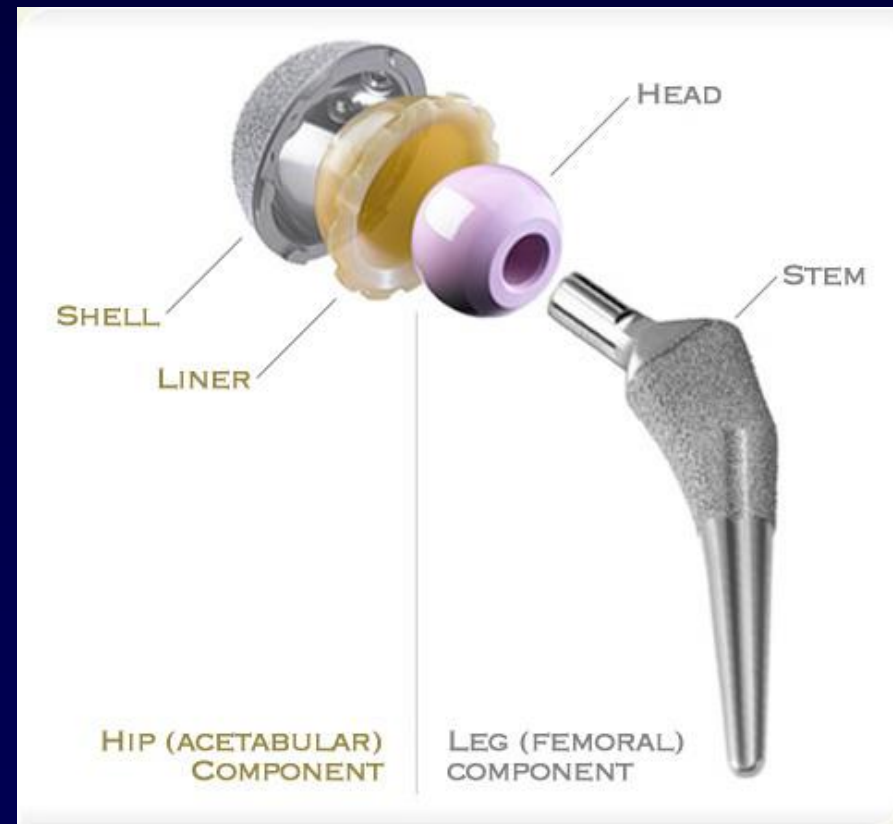
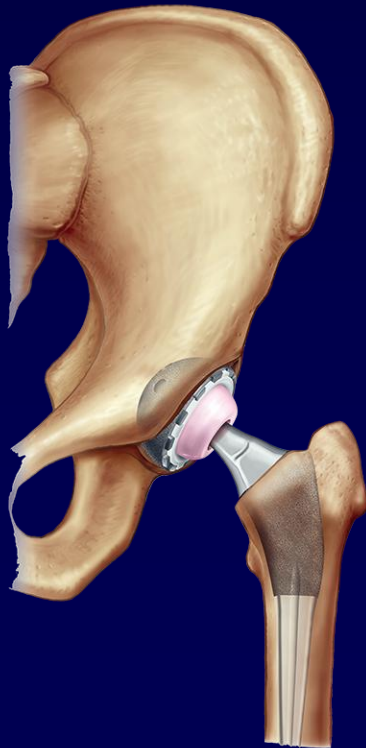
Preparing for Surgery

- Evaluation in preoperative clinic
 - May need subspecialist clearance
- Pre-op education class



What is a Hip Replacement

- Surgical procedure that removes and replaces diseased joint surfaces with implants



Surgical Steps

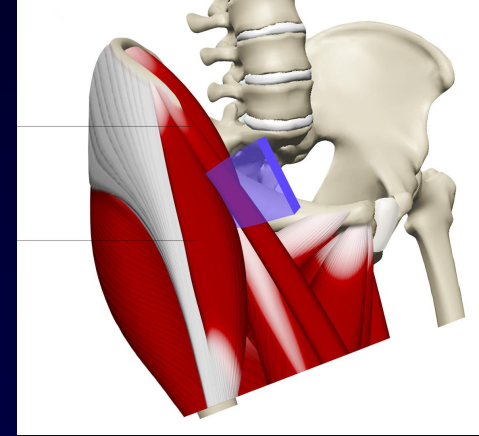


- Expose the hip joint
- Remove the head
- Prepare the socket/femur
- Trial components – insure muscle balance and length correct
- Place final implants

Anterior Approach

- *What is it?*

- Incision made on front (anterior) of leg instead of the side or back
- Surgeon works between muscles and does not have to detach them from the hip
- Utilizes a special OR table, X-ray and computer assistance for precise positioning of implants

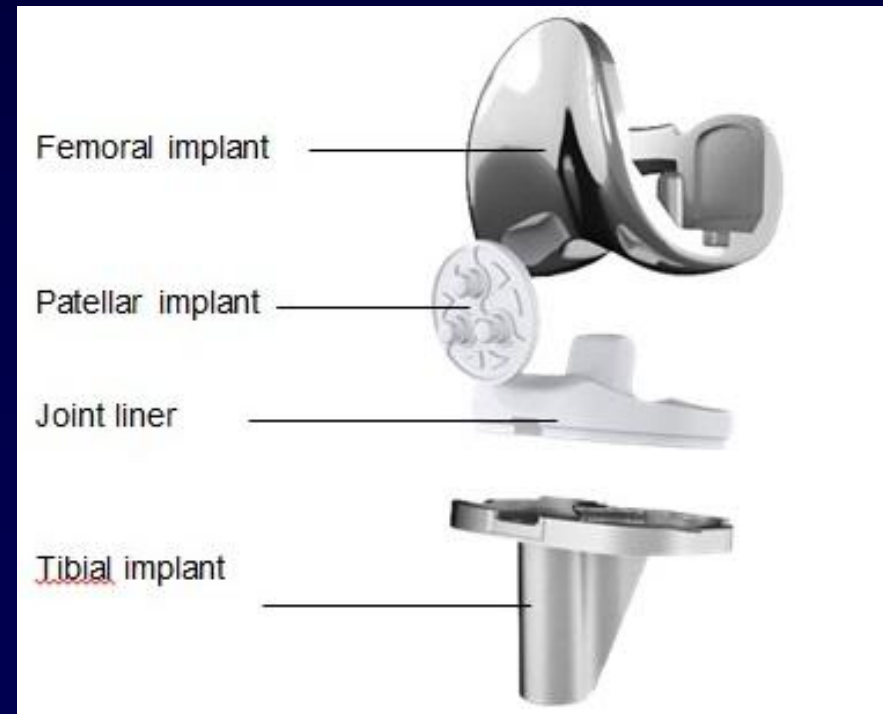


Potential Benefits of the Anterior Approach

- Less trauma to the body
- Small incision
- Potentially less pain
- Less need for medication
- Faster recovery (not waiting for muscles to heal)
- Less restrictions after surgery
- Potential for less complications

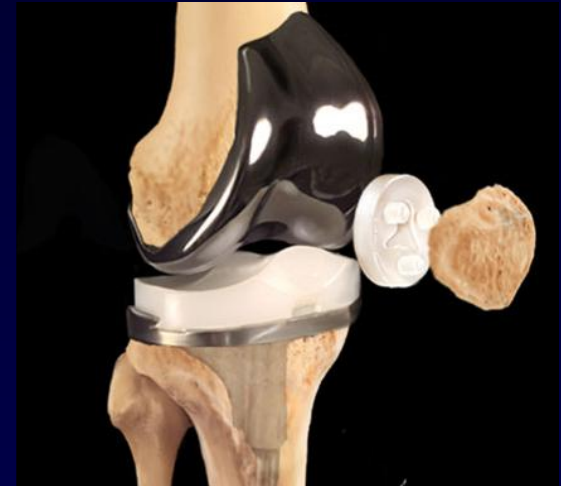
What is a Knee Replacement

- Surgical procedure that removes and replaces diseased joint surfaces with implants



Total vs Partial Knee Replacement

- Total knee replacement: replaces the entire knee
- Partial knee replacement (“uni”) replaces only the diseased part of your knee
- Discuss with your surgeon whether or not you are candidate



Knee Replacement Surgical Steps



- Expose the knee joint
- Reshape the bone ends
- Balance the ligaments and soft tissue
- Correct leg deformity
- Place final implants

What to Expect

- Out of bed on the day of surgery with therapy
- Immediate full weight bearing, no range of motion restrictions (hip or knee replacement)
- Progression of therapy as patient tolerates
- Some patients go home the day of surgery, others stay 1-2 nights (partial knee replacement home same day)
- Home with walker – transition to cane

What to Expect

- Waterproof dressing – able to shower immediately
- Sutures typically underneath the skin – dissolve on their own
- *Comprehensive Rapid Recovery Program*
 - Spinal/epidural with twilight sedation
 - Precise surgery to minimize tissue trauma
 - Multi-modal pain program to decrease pain after surgery
 - Rapid return to exercise and activity

What Happens After 20 Years

- They do not fall apart at 21 years
- Most continue to function well
- 20-25 is a reasonable expectation
- Can wear out/loosen
- Revision can be done and good results can be achieved
- Roughly 0.5-1% of hip/knee replacements revised yearly
 - At 10 years 90-95% survivorship
 - At 20 years 80-85% survivorship



Summary

- Very successful surgery
- Excellent long term results
- Patients very happy