

SSM Health presents:

Preparing for your  
**Anatomic Total Shoulder**  
or  
**Reverse Total Shoulder Replacement**

*Through our exceptional health care services, we reveal the healing presence of God.*



SSMHealth

July 2020

# Exceptional Health Care Objectives

- Review shoulder anatomy
- Review arthritis and treatments
- Review shoulder replacement surgeries
- Review preparation for surgery and discharge from hospital
- Review physical therapy exercise expectations and precautions

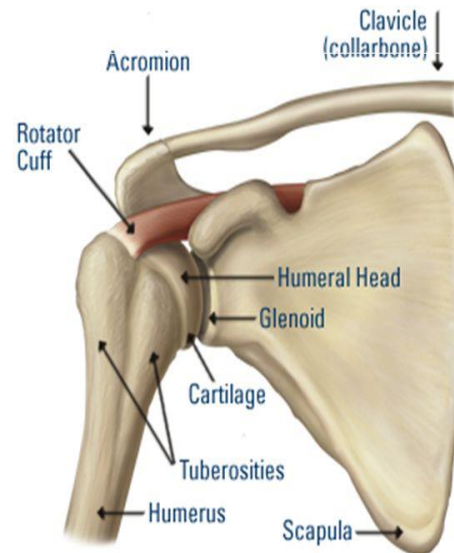


# Shoulder Joint

## Most flexible joint in the body

- Glenohumeral joint: ball and socket
  - Humeral head (ball) – rounded portion of humerus
  - Glenoid (socket) – dish-shaped outer edge of scapula
  - Clavicle
- Articular cartilage

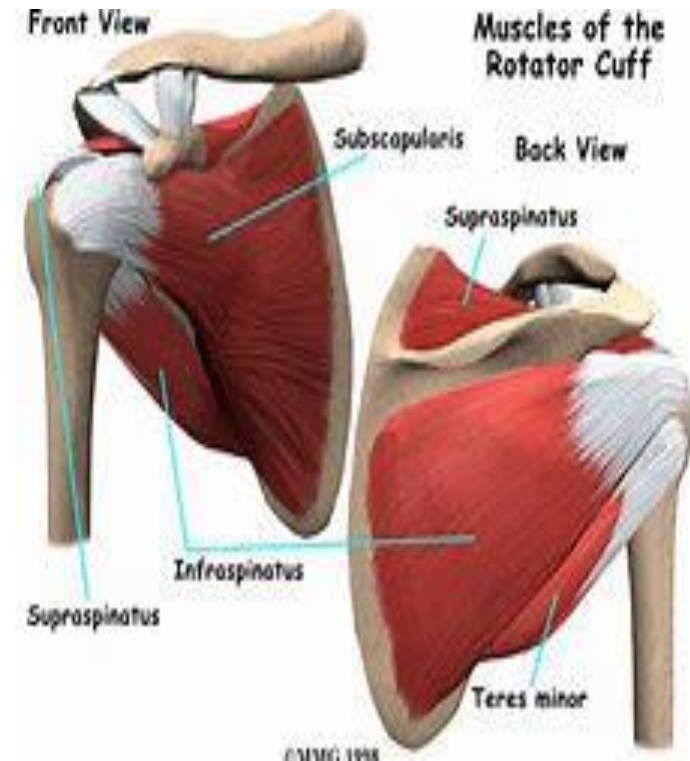
### Shoulder Joint



# Shoulder Joint

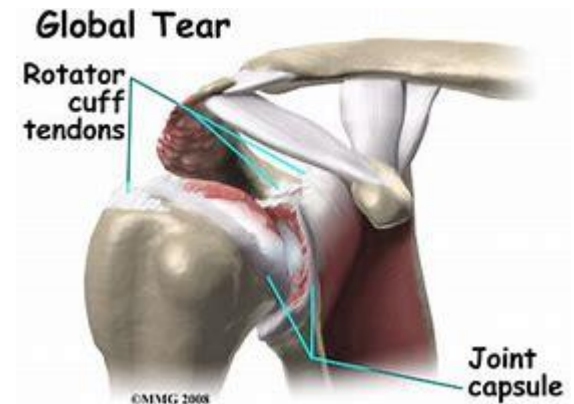
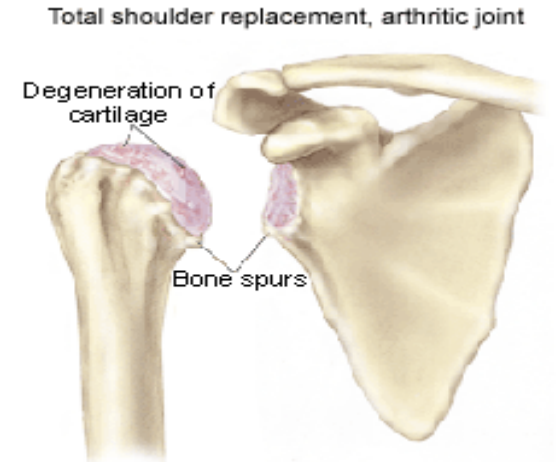
Most flexible joint in the body

- Rotator cuff
  - Made up of 4 muscles
  - Attached from scapula (shoulder blade) to humerus (arm bone)
  - Rotates arm and holds the ball against the socket
  - Can tear
    - Degeneration
    - Trauma



# Arthritis Basics

- Definition
  - Destruction of the articular cartilage
- Types
  - Osteoarthritis / Degenerative Joint Disease (DJD)
  - Post-traumatic arthritis
  - Rheumatoid/ inflammatory arthritis
  - AVN (avascular necrosis)
  - Rotator cuff tear arthropathy
- Symptoms
  - Pain
  - Limited shoulder ROM
  - Tenderness



# Arthritis Basics

## X-ray of normal shoulder

- Space between bones at the shoulder joint
- Smooth surfaces
- Normal bone alignment



# Arthritis Basics

X-ray of severe shoulder arthritis

- Articular cartilage wear and loss of joint space
- Bone deformity
- Bone spurs (osteophytes)



# Arthritis Basics

Normal Shoulder



Osteoarthritis





# Arthritis Basics

Normal Shoulder



Cuff Tear Arthropathy



# Shoulder Arthritis Treatment

## 1. Lifestyle changes

- Modify activity to avoid pain

## 2. Medications and injections

- Anti-inflammatory medications
  - OTC / RX - NSAIDS
- Corticosteroid injections
  - Decrease inflammation

## 3. Physical therapy

- Can be helpful in cuff tears/ cuff tear arthropathy
  - Improves function

## 4. Shoulder Replacement Surgery



# Anatomic Total Shoulder Replacement

- Arthritis of the shoulder joint
- Intact rotator cuff
- Remove worn cartilage and bone
- Resurface with metal and plastic
- Replace the ball (humeral head) with a metal ball, and the worn socket with a new plastic socket



# Reverse Total Shoulder Replacement

- Arthritis of the shoulder joint
- **AND** rotator cuff tear
- Remove worn bone and cartilage
- Resurface with metal and plastic
- The ball is placed on the socket, and the socket is placed on the ball (humerus)

A reverse will compensate for a torn rotator cuff and allow arm to lift overhead



# Reverse Total Shoulder Replacement

- Can also be used for:
  - Failed anatomic shoulder replacement
  - Severe fractures of the proximal humerus
  - Malunion/nonunion of the proximal humerus (armbone)
  - Massive irreparable rotator cuff tear



# Total Shoulder Replacement

## Results

- Pain relief — more than 90% of patients will be free of more than 90% of their pain.
- Excellent function
  - ✓ Improvement in joint motion
  - ✓ return to activity



# Risks and Complications

1. Bleeding
2. Infection
3. Nerve, blood vessel or tendon injury
4. Fractures
5. Medical complications such as pneumonia
6. Dislocation
7. Need for revision surgery



# Risks and Complications

## Infection prevention

- How the hospital prevents infection

- Surgical soap application at surgical site
- Preventive antibiotics before surgery



*Less than 1% infection rate for surgeons*

- How YOU can prevent an infection

- Shower with chlorhexidine the night before and the morning of surgery
- Benzoyl peroxide (acne) wash for 3 days before surgery
- Hand washing after toileting, after blowing nose, and before eating
- Antibiotics before any invasive dental work after your surgery



# Risks and Complications

*These are all RARE but can occur*

- **Blood clots**
  - Prevention/exercise
  - Sequentials and low dose aspirin
- **Shoulder dislocation**
  - Precautions for 6-12 weeks after surgery
- **Nerve damage**
  - If it occurs, usually resolves < 1 year
- **Stress fracture**



# Risks and Complications

## Constipation prevention

- Resolve constipation before surgery
- Drink plenty of water
- Eat foods high in fiber—vegetables and fruits
- Use OTC medication (such as Mira lax, Senna, or milk of magnesia)
- Glycerin suppositories or enema may be necessary if above is not successful
- Talk to your pharmacist

*Constipation occurs from inactivity and use of narcotic pain medication*



# Risks and Complications

## Pneumonia prevention

- Get out of bed on the day of surgery
- Early ambulation or walking
- Incentive spirometer
- Stop smoking before surgery



*Pneumonia risk is increased after surgery due to anesthesia medications and inactivity.*

# Risks and Complications

## Quit smoking

- One cigarette contains > 600 ingredients, > 69 carcinogens in cigarette smoke
- Nicotine and other ingredients cause:
  - High risk of postoperative complications that will require ICU treatment
  - Inability to heal wounds
  - Higher chance of acquiring an infection in the joint

*Stop smoking 4-6 weeks before surgery!*

- Handout available with resources

# Preparing For Surgery

Primary care physician (PCP)

- Medical clearance



# Preparing For Surgery

## *Pre-Surgical Testing Appointment*

- What to bring with you
  - Completed forms (therapy self-assessment checklist)
  - Medications
  - Insurance card and driver's license
  - Copy of your Living Will or Advance Directive, if you have one
  - If you have an implanted defibrillator or pacemaker, bring specific brand information



# Preparing For Surgery

## *Pre-Surgical Testing*

Allow 1-1½ hours for this appointment

- Results of blood work, EKG, echocardiogram (echo), and/or stress test if completed within the past 6 months (if not recent, can be done at this visit)
- Anesthesiologist, if needed

## Reminders

- Tylenol starting 72 hours before surgery
- DO NOT EAT after midnight on day of surgery
- Drink Gatorade or other clear liquids up until 2 hours before your hospital arrival



# Preparing For Surgery

**DO NOT** eat after midnight

Clear liquids allowed until **2 hours** before arrival to hospital

## **NOT** considered a Clear Liquid Diet

- Liquids you cannot see through
- **No** milk, creamer or sugar in coffee
- **No** milk or milk products
- **No** almond milk
- **No** soy milk
- **No** orange juice
- **No** grapefruit juice
- **No** tomato juice
- **No** carbonated beverages
- **No** alcoholic beverages

## What a **Clear Liquid** includes:

- any liquid you can see through
- Gatorade or G2
- water
- flavored water (coconut water is OK)
- hot or iced tea
- black coffee
- clear, fat-free broth
- apple juice
- cranberry juice
- grape juice
- gelatin
- ice pops **without** fruit pieces, pulp or seeds





# Preparing For Surgery

## Nutrition and Surgery

*If you are diabetic or pre diabetic:*

- Blood sugar needs to be controlled before and after surgery.

***Good nutrition can help you:***

1. Maintain lean muscle and strength
2. Prevent infection
3. Reduce the chance of readmission to hospital



# Preparing For Surgery

## Nutrition and Surgery

***Starting now and for at least a month after surgery:***

- Follow Anti-Inflammatory Diet – see nutrition handout
- Try to eat at least 100 grams of protein every day.
- Focus on drinking non-sugary beverages such as water, tea or coffee instead of soda.
  
- A high-protein diet can be contraindicated if you have been diagnosed with chronic kidney disease



# Preparing For Surgery

## Trouble eating protein

- Drink 2 oral nutrition supplements per day.
- Look for supplements that are high in protein and fewer than 300 calories.



# Preparing For Surgery

## PAL Program

- An adult family member/friend to help guide you through recovery
- Available for:
  - Transportation
  - Help at home
  - Appointments



# Preparing for Surgery

## Physical/Occupational Therapy

### *Preparing Home Environment*

- Review fall prevention tips in your book
- Eliminate obvious hazards (throw rugs and clutter)
- Add safety modifications (grab bars, nonslip mats, and night lights)
- Pets

### *Preventing a Fall After Surgery*

- Prepare your home before surgery
- Take your time to move, and think ahead (rise from chair slowly)
- Wear the proper foot wear
- PAL should stay overnight for the first few nights



***\*1 in 4 patients will fall***  
***\*50% of falls happen during first 7 days***



# Preparing for Surgery

## Physical/Occupational Therapy

- Positioning
  - usually most comfortable in a recliner or propped up in bed
- Proper clothing – large pullover shirt (not button up), elastic loose-fitting pants, slip-on shoes (long-handle reacher, sponge)

\*\*\*Please bring your Shoulder Replacement education book with you to the hospital



# Preparing for Surgery

## Physical/Occupational Therapy

### *Restrictions*

- No weight bearing on arm for 3-4 weeks
- Shoulder precautions will be reviewed in hospital
- No pushing, pulling or lifting more than 1 lb for 4 weeks
- Wear sling for 3-4 weeks when up moving about and sleeping
  - Remove sling and prop arm up on pillow when seated.
  - remove sling several times a day for hand and elbow range of motion
- No driving for 3-6 weeks, until out of sling and comfortable controlling a car
- 3 phases of therapy
  - progress through phases by direction of surgeon



# Physical/Occupational Therapy

## Activity

- Up the day of surgery
- Therapy in hospital, including PT and OT
- Instruction for preventing falls
- PAL training, if needed
- Activities of daily living
- Walking, transfers, stairs, car transfers, EXERCISES!

*Bring comfortable clothes for therapy*

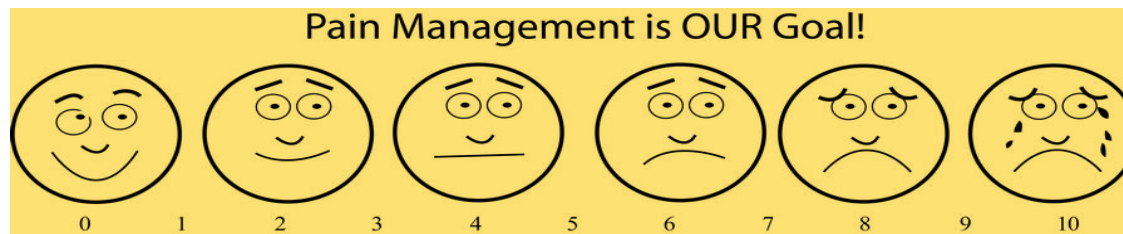




# Team Approach to Treatment of Pain

- Goal is to control pain at a tolerable level.
- Opioid use before surgery may make pain control more difficult to control after surgery

*\*try to reduce pre-op narcotic intake by 50%*



# Team Approach to Treatment of Pain

- Education - *knowledge*  
is pain medication
- Anti-inflammatory medications
- Opioid medication
- Cold therapy
- Positioning and movement
- Relaxation techniques



# Team Approach to Treatment of Pain

anxiety + fear = more pain

calm + movement (therapy/walking) = pain control

- Your brain's awareness of pain changes (emotions, memories, beliefs and environment).
- Your brain's sensitivity to pain changes after surgery (it's normal).
- Consistent movement (therapy and walking) reduces pain over time.

*Knowledge is Power **over pain** – your doctor, nurse, and physical therapist can help answer your questions*



# Day of Surgery

- A nurse will go over your day of surgery instructions and will tell you:
  - When to arrive for surgery
  - Where to report for surgery
  - Where your PAL should wait during your surgery
  - When your PAL should bring your suitcase to your room
  - When you should expect to be discharged from the hospital



# Surgery

## 1. Anesthesia

- General with block
  - Block can last up to 48-72 hours

## 2. Duration of surgery

## 3. Family waiting area

## 4. Recovery room



# Postoperative Care

## Wound care

- Silver dressing
- Steri strips
- When can I shower?



# Discharge Preparations

- Length of stay: 1 day
- Home care – PT, OT, nursing



- Feelings of being tired, decreased appetite and changes in sleeping patterns are normal after surgery
- Important to follow good nutrition, drink plenty of fluids, and complete exercises to gain range of motion

# Discharge from the Hospital

- Physical therapy
- Medical doctor will see you before discharge
- Pain prescription for home
- Ask nurse for pain medication before leaving hospital
- Your nurse will review your medications
- A unit staff member will discharge you in a wheelchair

*Make sure you are “very ready” for discharge 😊*





**Thank you  
for attending!**

*Please complete our survey*

*QUESTIONS?*



**SSMHealth**