



Center for Muscle & Joint Therapy, Inc.

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Center for Muscle & Joint Therapy, Inc.

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- **EXPERIENCE: 22 years Private Practice in Superior, 3 years prior at St. Luke's Hospital.**
- **SPECIALIZING IN:**
 - **Orthopaedic Care. Pre- and Post-Surgical Care.**
 - **Promote Work/Life Wellness in the Workplace.**
 - **Balance & Dizziness (Vertigo) Diagnosis & Treatment**

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- **SPECIALIZING IN:**
 - **Orthopaedic Care. Pre- and Post-Surgical Care.**
 - **Promote Work/Life Wellness in the Workplace.**
 - **Balance & Dizziness (Vertigo) Treatment**

Physical Therapy Role in Treating Arthritis

Agenda

1. Reduce pain & inflammation
 - A. Causes of pain & inflammation
 - B. PT Treatment Options: **Modalities**
2. Avoid joint trauma through education
 - A. When & when not to exercise: **Active Rest**
 - B. When to use **Hot and Cold**
3. Instruct exercise that is functional & increases /maintains joint health
 - A. **Stretching**
 - B. **Range of Motion**
 - C. **Isometrics Exercise**
 - D. **Isotonic Exercise**
4. Assure muscle balance & good posture



Physical Therapy Role in Treating Arthritis

1. Physical Therapy options to decrease pain & inflammation in joint such as the knee, hip, & shoulder.
 - A. What causes joint pain & inflammation?
 1. Overuse of joint
 2. Muscle imbalance
 3. Poor body mechanics & posture
 - B. Treat pain with modalities such as:
 1. Ultrasound
 2. Electrical Stimulation
 3. Kinesiotape for Edema
 4. Massage for muscle tightness & edema relief
 5. Hot & cold

Physical Therapy Role in Treating Arthritis

2. Avoid joint trauma through education

- A. When experiencing an arthritic flare up of pain - use **Active Rest** strategies
- B. When feeling okay – use gentle range of motion & functional exercises
- C. Ice/Heat Accordingly



Avoid Joint Trauma

Active Rest

Moving the affected area in a way that does not increase pain or swelling.

- ❖ The joint is not overstressed during Active Rest.
- ❖ Contracting/moving muscles moves excess fluid out of joint, increasing blood flow for faster rate of healing.
- ❖ Active rest helps prevent muscle atrophy that can occur over time when a body part is not being used normally.

Examples of Active Rest



1. HEEL SLIDES



2. QUAD SETS

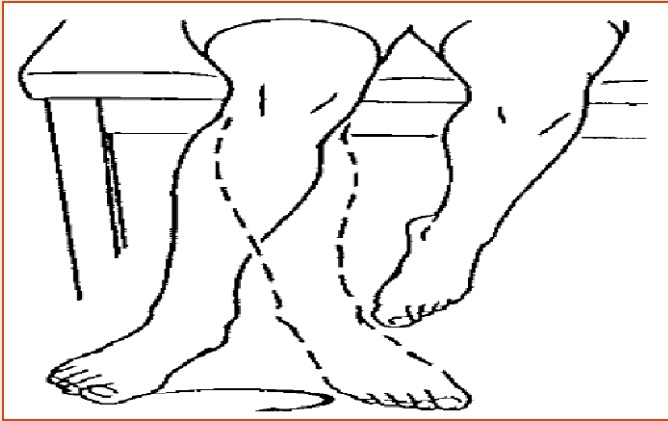
- Push Down
- Hold 5 Seconds

3. GLUT SETS

- Squeeze/Clench Buttocks
- Hold 5 Seconds

Examples of Active Rest

4. ANKLE CIRCLES



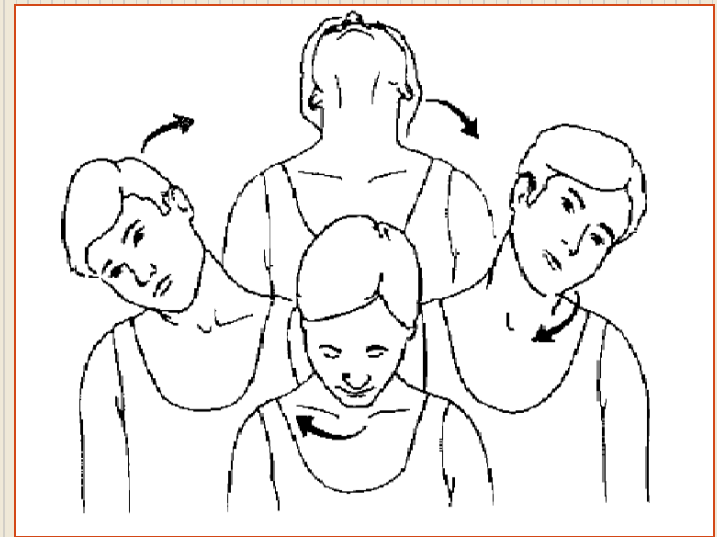
5. HEEL & TOE TAPS

-Alternate up/down



Examples of Active Rest

6. GENTLE ARM PULLEYS



7. NECK CIRCLES

8. WALKING WITH A CANE, CRUTCH, OR WALKER TO DE-WEIGHT THE JOINTS

Cooling or Heating . . .

- ICE: When a joint is inflamed due to a flare up.

Types of ice applications

1. Ice pack/Ice bag

- Place towel between ice pack and skin.
- Apply ice pack NO LONGER than 15 minutes each time.
- Space applications several hours apart to avoid tissue damage.

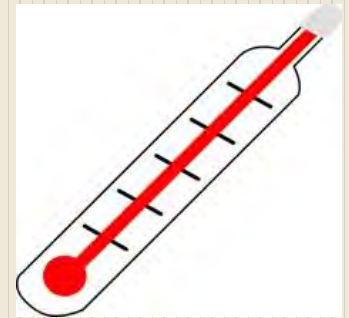


2. Ice cup

- Fill a Dixie cup filled part way with water and freeze.
- Tear off top rim of cup to expose ice surface.
- Apply directly to affected area for 30 seconds to 1 minute, moving continually.

Cooling or Heating. . .

HEAT: When you are NOT experiencing INCREASED joint pain or swelling.



- ❖ Heat if a joint is sore and stiff. It is ok to heat to a maximum of 20 minutes.
(If you note a recent increase in swelling – ice instead)
- ❖ Heat to warm up joints prior to activity or exercise. Heat promotes blood flow to affected area, improves function of muscles/joint, and decreases stiffness.
- ❖ Space heat treatments several hours apart to protect skin from burning. Use medium vs high heat setting.

When to Exercise; When Not to . .

General Rule

When experiencing INCREASED joint pain/swelling, do not exercise that area. Instead . . Active Rest.

Physical Therapy's Job

To instruct exercise that is functional & increases/maintains joint health and mobility.

Exercise for Strength & Mobility

Exercise programs vary greatly by individual.

Goal of the Exercise Program

- To gain mobility
- To gain strength
- To promote good muscle balance for upright posture
- To decrease pain

Mobility Includes . . .

1. Stretching
2. Joint Movement or “Range of Motion.”

Mobility: Stretching

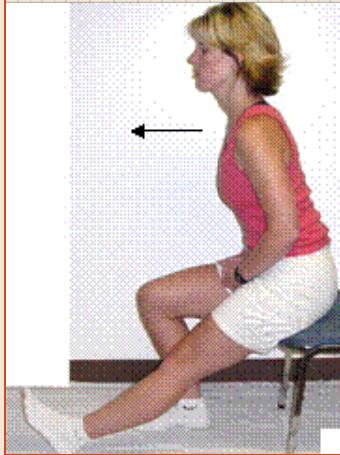
- ❖ Stretch intermittently through day to decrease joint and muscle stiffness.
- ❖ Pain free stretch for 30-60 second hold.
 - 1-2 repetitions each session.
 - 3-5 sessions per day

Stretches

HAMSTRING



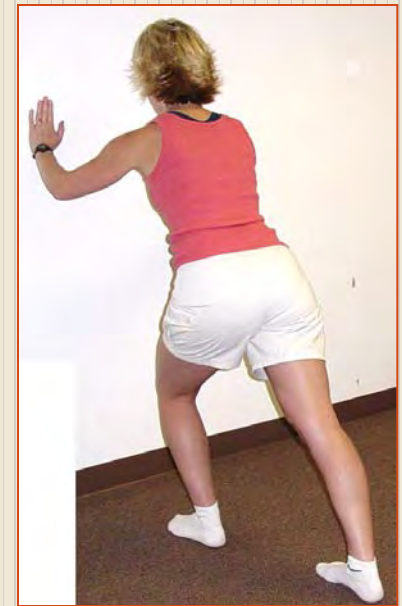
Seated



Standing



CALF/HIP FLEXOR

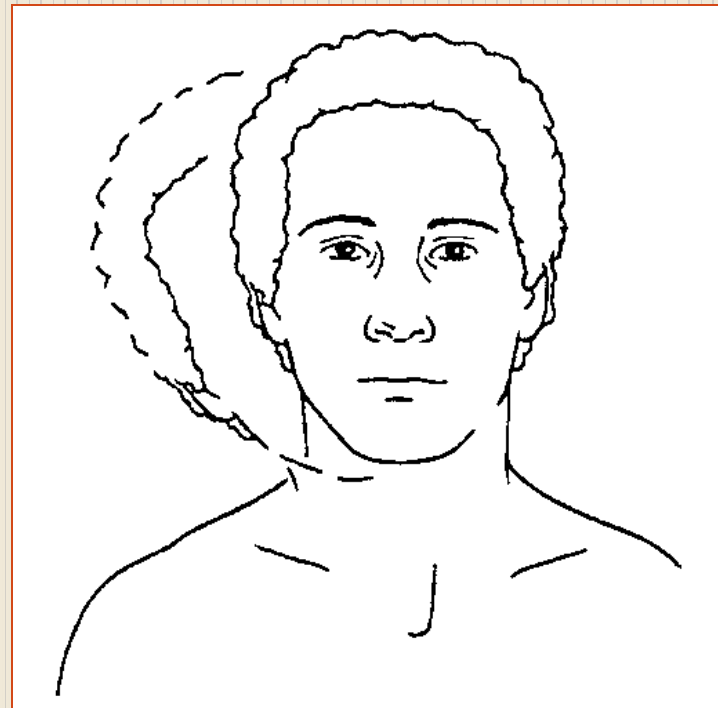


Stretches

REACH UP
WALL



NECK SIDE
BEND



Joint Movement: Range of Motion

Move joint several times through range of motion – only in pain free range. Discomfort should diminish in 8-10 repetitions.

1. FINGER STRETCH



2. WRIST STRETCH



Joint Movement: Range of Motion

3. BACKWARD SHOULDER ROLLS



4. LEG PUMPS - SEATED



5. MARCH - STANDING

Joint Movement: Range of Motion

6. Chest Press



7. Overhead Press



7. Ankle Circles



Strength . . .

Exercises can be done 2 ways:

1. Without movement of joint (when flare up is present). “Isometrics”
2. With movement of joint. “Isotonic exercise.”

Isometrics

Contracting muscles with minimal joint movement to increase blood flow and strength without joint irritation.

Pelvic Tilt



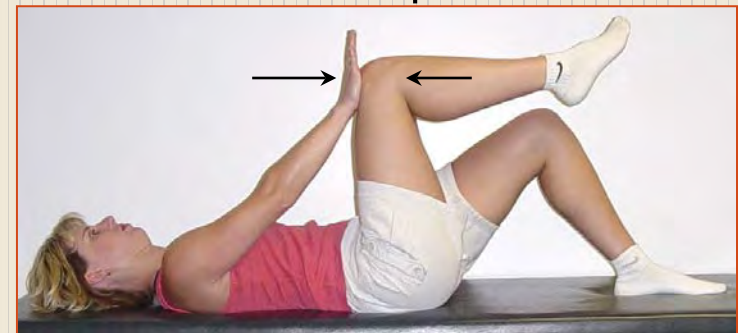
Quad Sets



Glut Sets

- Squeeze/Clench Buttocks
- Hold 5 seconds

Isometric Hip Flexion

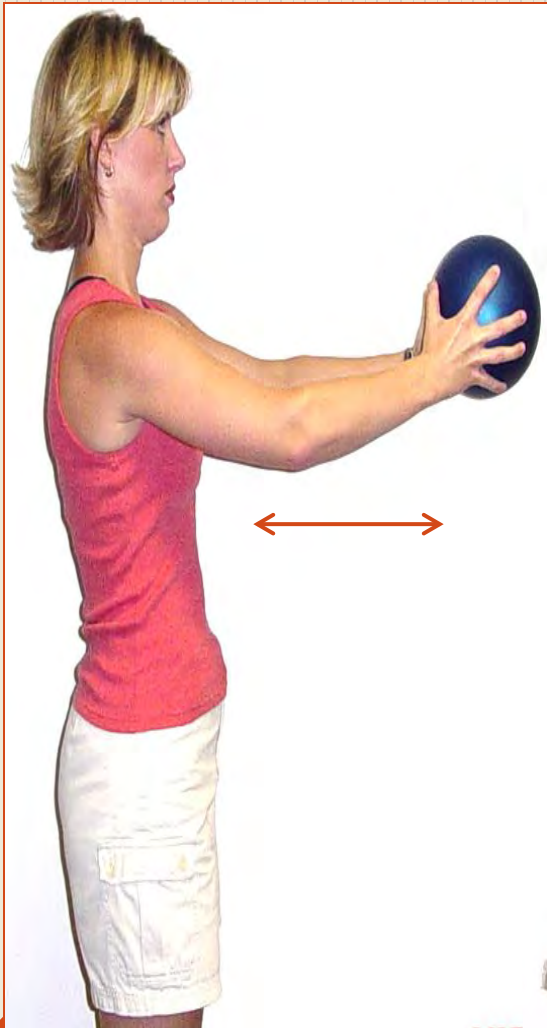


Isotonics

- Move through pain free range of motion with or without light resistance.
- Sets of 5-10 reps, 1-3 sets per session.
- Avoid pain, rest when fatigued. Avoid compensation if you can't control movement.

Isotonics

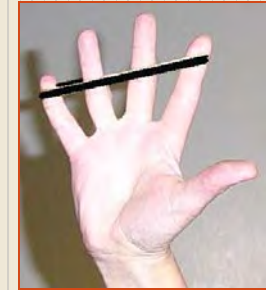
1. BALL TO WALL



2. BICEP CURL

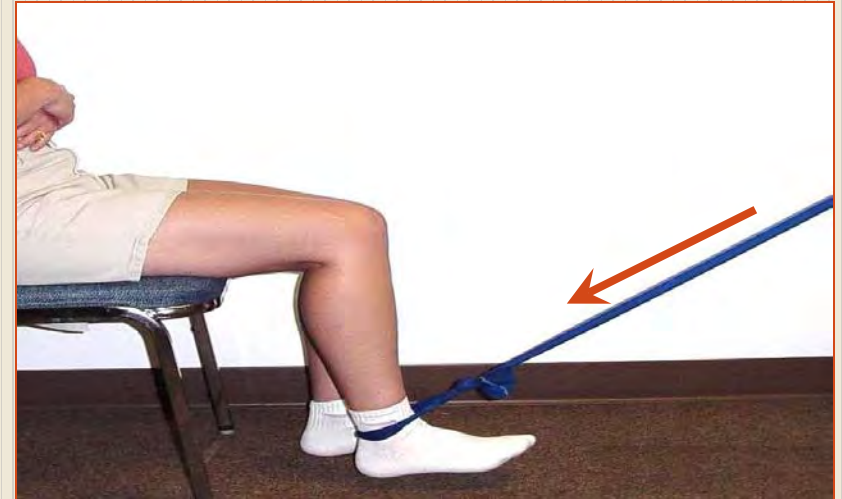


3. RUBBERBAND EXTENSION



Isotonics

4. KNEE FLEXION

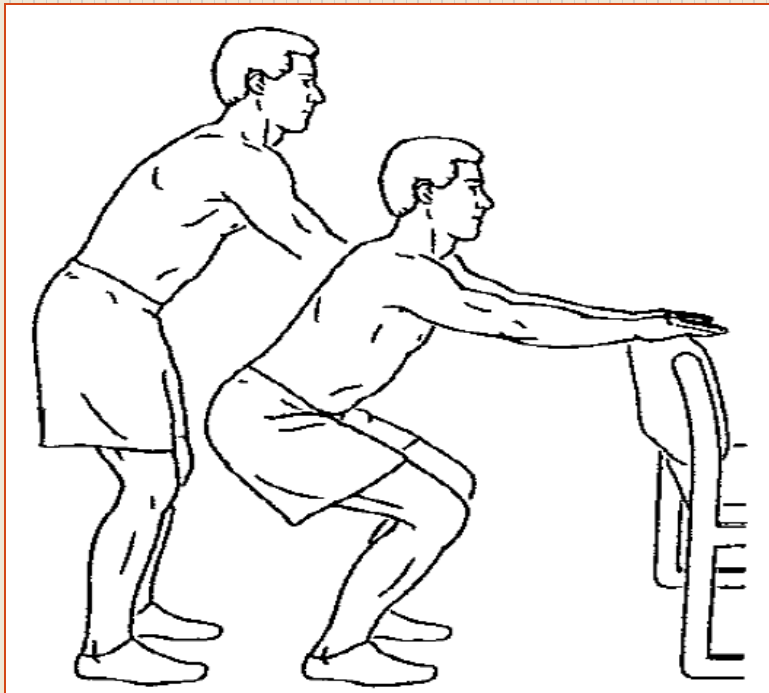


5. LEG PRESS

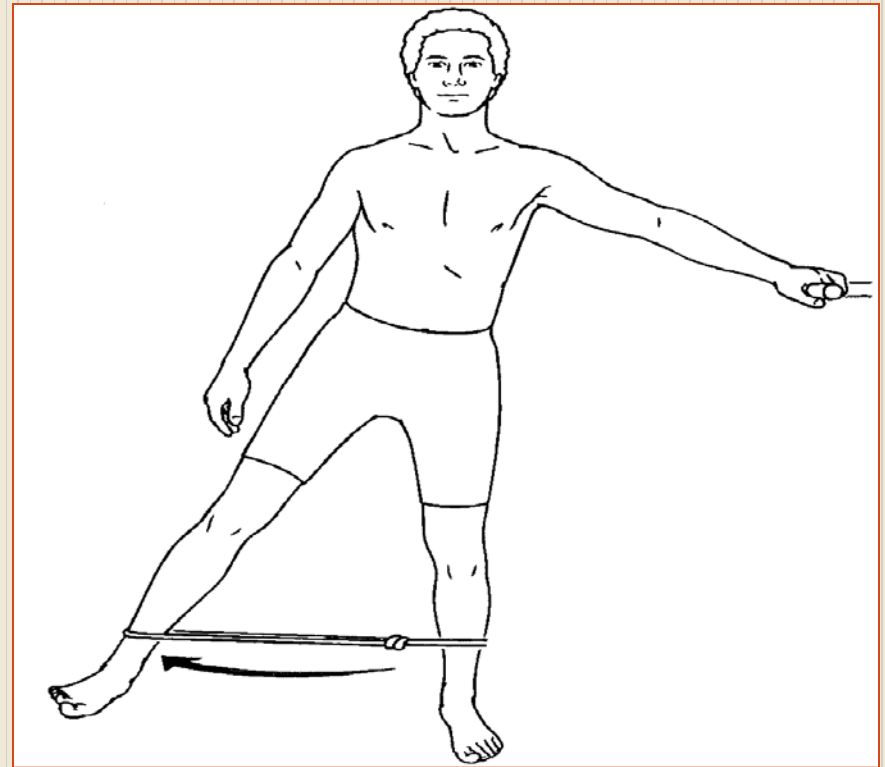


Isotonics

6. SUPPORTED SQUATS



7. HIP ABDUCTION



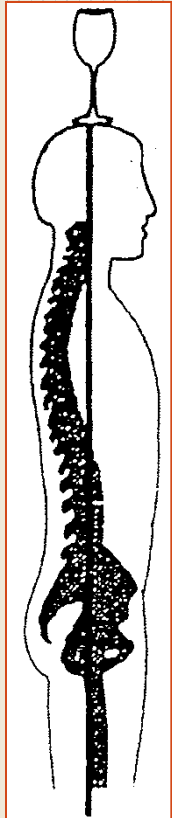
Muscle Balance & Posture

- ❖ Joint trauma or arthritic joints can change the way we walk, sit, stand
- ❖ Muscle imbalances can result, leading to poor posture and possibly permanent joint changes.
- ❖ To address this, we use postural strengthening daily.

Posture

POSTURE STRENGTHENING EXERCISES

Balance the water glass. Hands at side, press fingers toward floor. Tighten front of thighs. Hold 3-5 seconds



Posture



5. HOLD FOR 5 SECONDS

4. HEAD LEVEL, NOT FORWARD

3. SHOULDERS DOWN & BACK

2. TIGHTEN ABS

1. TIGHTEN BUTTOCKS

PRACTICE!

Recap

- ❖ Arthritis is degenerative but we can use what you've learned today to maintain function & mobility.
- ❖ Learn to recognize a flare up of pain, swelling, inflammation.
- ❖ Use ice & elevation plus Active Rest strategies to decrease joint strain.
- ❖ Stretch & progress to active range of motion as flare up subsides.
- ❖ On good days, perform functional strengthening exercises such as supported squats, reaching patterns, ankle pumps with or without light resistance – as your body tolerates.
- ❖ Pay attention to and practice good posture to protect your joints & increase your mobility for good quality of life.

QUESTIONS?

