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Exercise for Joint Replacements What Fitness Professionals Need to Know Medical Fitness Network Webinar May 9, 2017

Course Type: Recorded 1 Hour Webinar

Course Level: All Levels

Course Objectives

1. Discuss current concepts and statistics in joint replacements.
2. Describe osteoarthritis including why people get it, treatments, and exercises for this condition.
3. Discuss total knee replacement including goals for full recovery, acute recovery, long term recovery, exercises, and precautions.
4. Discuss total hip replacement including goals for full recovery, acute recovery, long term recovery, exercises, limitations, and precautions.
5. List 4 ways to work with medical providers for clients with joint replacement.

Course Description

The growing population of older adults means that many fitness professionals will be working with clients with hip and knee replacements. Joint replacement surgeries are on the rise and are happening at younger and younger ages. In this webinar, Dr. Cody Sipe will discuss strategies, techniques, exercises that are safe and effective with these clients. This is critical knowledge for anyone working with the 50+ population.

About the Presenter

Cody Sipe, PhD

- 24 years industry experience as trainer, director, studio owner, professor and researcher
- Over 100 presentations internationally
- Over 35 published articles
- Co-Founder, Functional Aging Institute
- 2005 IDEA Program Director of the Year
- IDEA Spokesperson for Older Adult Fitness
- Advisory Boards for National Posture Institute, Act!vate Brain and Body, MFN

Course Outline

Current Concepts in Joint Replacement

- Who is getting them?
- Why are they getting them?
- What are the expected outcomes after surgery?
- What do they do in PT?

How should fitness professionals train clients with joint replacements?

- Are you really ready for the longevity revolution?
- Total Hip Arthroplasty – 2.5mil

- Total Knee Replacement – 4.7mil
- Osteoarthritis is the #1 Reason

What is Osteoarthritis?

- “Wear and Tear” condition or a disease?
- Who gets it?
 - Too much “pounding”
 - Obese
 - Chronically Inactive
 - Imprecise joint structures
- Treatments

What is Osteoarthritis?

- “Wear and Tear” condition or disease?
- Who gets it?
- Treatments
 - NSAID’s/Ice
 - Steroid injections
 - Synthetic injections
 - Stem cell therapy
 - Avoiding damaging activities
 - Exercise/Weight Loss
 - Braces

Exercise for OA

- No exercise during active inflammation
 - Red, swollen, painful
- Cardio
 - Non-weight bearing
 - Swimming
- Flexibility
- Strength
 - Extended general and joint-specific warm-up
 - Mild intensity (lower weight, higher reps)
 - “whole joint” approach

Impaired Aerobic Capacity

Nustep or Recumbent Bicycle preferred over walking or elliptical trainer due to reduced joint loading

Total Knee Replacement (TKR)

- 650,000 in 2010
- First used in 1950’s
- Safe
- Effective
- Durable
- Getting Better
 - New Materials
 - New Techniques

Anatomy of the Knee

Total Knee Replacement

Long-Term Recovery

- Functional Gait
- Balance
- Multidirectional Squats
- Lunges

Pain and Swelling Management

- Elevate leg
- Apply ice
- Use NSAIDs

TKR Acute Recovery

TKR Long-Term Recovery

- Continued Range of Motion activities
- Muscle strengthening
 - Flexion
 - Extension
- Avoiding high-impact activities
- Weight Loss if warranted

TKR Exercises

- Cardio
 - Nustep
 - Recumbent Bike
 - Elliptical Trainer
 - Swimming
- Range of Motion
 - Quads, Hams, Calves
- Strengthening
 - Open vs Closed Chain
 - Functional Movement Patterns

TKR Exercises

- Mini-Lunges
- Lunges
- Multi-Directional Lunges
- MDL w/ Corball
- Seated Hamstring Curls
- Planks with feet on ball
- Planks on ball with hamstring curl

Total Hip Arthroplasty

Hip Replacement

Limitations

Acute Phase

- No low chairs
- Don't cross your legs at knees
- Limit stair climbing
- Walk with assistive device

Early Recovery (up to 8 wks)

- Keep knee lower than hip
- Limit hip IR/ER
- Don't bend at waist beyond 90 degrees
- Kneel on the operated leg

Exercises

Acute Phase

- Ankle Pumps and Rotations
- Bed Knee Bends
- Lying Abductions
- Quad Set and Straight Leg Raises
- Early Recovery
- Walking unassisted
- Swimming (after wound healing)
- Standing Knee Raises
- Standing Hip Abduction
- Standing Hip Extensions
- Stair Climbing (up and down)

Hip Replacement Acute Recovery

Common Precautions

- Don't cross your legs at the knees for at least 8 weeks.
- Don't bring your knee up higher than your hip.
- Don't lean forward while sitting or as you sit down.

- Don't try to pick up something on the floor while you are sitting.
- Don't turn your feet excessively inward or outward when you bend down.
- Do keep the leg facing forward.
- Do keep the affected leg in front as you sit or stand.
- Don't reach down to pull up blankets when lying in bed.
- Don't bend at the waist beyond 90 degrees.
- Don't stand pigeon-toed.
- Do use a high kitchen or bar stool in the kitchen.
- Don't kneel on the knee on the unoperated leg (the good side).
- Do kneel on the knee on the operated leg (the bad side).
- Don't use pain as a guide for what you may or may not do.
- Do use ice to reduce pain and swelling, but remember that ice will diminish sensation. Don't apply ice directly to the skin; use an ice pack or wrap it in a damp towel.
- Do apply heat before exercising to assist with range of motion. Use a heating pad or hot, damp towel for 15 to 20 minutes.
- Do cut back on your exercises if your muscles begin to ache, but don't stop doing them!

Hip Replacement

Advanced Exercises

- Resisted hip flexion, extension, abduction
- Cycling (backwards first)
- Walking
- Stair Climbing (“up with the bad”, “down with the good” at first)
- Squats
- Multi-directional Lunges

Hip Replacement Long-Term Recovery

- Cardiovascular
 - Nustep, Upright Bike, Elliptical Trainer, Swimming
- Range of Motion
 - Piriformis
- Strengthening

Hip Replacement Long-Term Recovery

- Cardiovascular
- Range of Motion
 - Quads, Hams, Calves
 - Piriformis
 - Sciatica
- Strengthening
 - Gluteal muscles
 - All movement and stabilizing patterns
 - Flex/Ext, Abd/Add, IR/ER

Hip Exercises

- Resisted Walking
 - Front/Back
 - Side to Side
 - Diagonal F/B
- Bridges
 - One-Legged
- Mini-Lunges
 - Progressions
- Resisted Hip Rotation
 - Seated
 - Standing
- Standing Palof Press with Hip Stabilization
- Tall Kneeling
 - Press/Row
 - Chop/Lift

Train the Whole Person

Working With Medical Providers

- Use a Release of Medical Information form if necessary
- Speak directly to the physical therapists about their patients whenever possible
- Ask for the PT for their recommendations if they have recently been released from PT
- Send follow-up information back to therapist to place in patient file

Exercise Precautions

- If they are a recent patient make sure they are “approved” for the movement patterns
- Years of compensation leads to movement dysfunction so assess functional patterns and not just the parts
- Help them differentiate pain from discomfort
- Be patient and don't progress too quickly

Question and Answer Segment