Active Living with Arthritis:
Innovations of ENACT

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Disclosures

- Julie Keysor—None
- Jessica Maxwell—None
- Aileen Ledingham—None
Objectives

• Discuss the impact of arthritis on activity and participation
• Discuss ENACT’s initiatives to address priority areas of arthritis rehabilitation
• Discuss some novel approaches in exercise adherence and work disability prevention
• Discuss new findings of participation outcomes after knee joint replacement

Arthritis and Disability: Impact and Epidemiology

Julie Keysor, PT, PhD
What is Arthritis?

The term arthritis is used to describe more than 100 rheumatic diseases and conditions that affect joints, the tissues which surround the joint and other connective tissue.

Pain, activity limitation, and participation restriction are common.

Types of Arthritis or Rheumatic Conditions

Most Common Conditions
- Osteoarthritis
- Rheumatoid Arthritis
- Fibromyalgia
- Lupus
- Gout

Others...
- Psoriatic arthritis
- Ankylosing spondylitis
- Juvenile arthritis
- Myositis
Arthritis…the Leading Cause of Disability in the US


52,000,000 million people doctor-diagnosed arthritis

All ages; both genders; all ethnicities
Arthritis in the US: A Snapshot

- 750,000 Hospitalizations
- 8.3 Million (31%) Limited in Work
- 22.7 million (42.4%) Limited in activities
- 78 million Ambulatory Care Visits (5% total visits)
- 52,000,000 Million People Self-reported, Doctor-diagnosed

Adapted from Theresa Brady, Centers of Disease Control and Prevention

Hootman et al. MMWR 2006;55(40):1089–1092; Bolin et al. MMWR 2005; 54(5): 119-123

A Growing Problem: Increasing Prevalence

Percent of persons age 18-64 reporting arthritis/rheumatism as the main cause of activity limitation (not including chronic back pain)

- Difficulty with any of the 4 activities: 89.9%
- Walking three city blocks: 51.1%
- Climbing a flight of stairs: 53.9%
- Grasping objects: 25.7%
- Lifting/carrying 10 lbs: 32.9%

Adapted from K Theis, Centers of Disease Control and Prevention
Hootman et al. Arthritis Rheum 2004;50(9, suppl):S641

44% older adults with arthritis are inactive vs. 36% older adults without arthritis

13% of older adults with arthritis do resistive exercise

"My doctor told me to increase my exercise program, so I switched from not exercising three times a week to not exercising six times a week."

People with Arthritis Can and Should Move!

- Recommended aerobic activity: low impact moderate, 150 minutes per week; short bouts of 10 minutes okay, particularly initially

Summary

- Arthritis is the most prevalent chronic painful musculoskeletal condition among adults
- Arthritis is the leading cause of disability among older adults
- Arthritis is a chronic, often progressive, condition that results in pain, activity limitations, and participation restrictions
- Affects all ages, both genders, and all ethnicities
Arthritis, Your Patients, Your Practice

Arthritis: A common primary or secondary condition among your patients

Scenario 1: You received a referral for Mrs. S from her primary care physician for knee range of motion and strengthening with a dx of arthritis

Scenario 2: Mrs. S sought physical therapy care from you after a recommendation from her primary care physician who told her she likely had a little arthritis.
Mrs. S...Does she have knee OA?
- 75 years old
- Female
- Knee pain constant; worse in the morning; some pain with activity
- Stiffness 1-2 hours in the morning
- Noticeable joint warmth and swelling
- Stiffness less than 30 minutes
- Crepitus

Maybe...but meets 1987 ACR criteria of rheumatoid arthritis
Yes, meets ACR diagnostic criteria

Mrs. S has an inflamed knee, metacarpal swelling, and wrist swelling
- Do you treat?
  - Flare: treat inflammation
    - active ROM and isometric strengthening
    - protect loading of joint during flare
    - maybe ice
- Questions:
  - Is she getting any treatment for her joint inflammation?
  - Has she seen a rheumatologist or primary care physician for this?
  - How long has she had joint swelling?
  - What is she doing for the joint inflammation?
- Referral:
  - Referral to rheumatologist for inflammatory disease management
Mrs. S now has inflammation under control and is referred from rheumatologist to PT

- Patient reports pain with exercise and difficulty walking in the community, doing household activities, and caring for grandchildren
- Evaluation:
  - Mild pain with walking, strength 4+/5 quad, hip abductors, and gluts; timed up and go test 12 seconds; gait shows asymmetrical step length and wide base of support
- What are your treatment goals?
  - Goals: Strength 5/5 t/o lower extremity; decrease timed up and go; adhere to an exercise program during flare; engage in 150 minutes of moderate activity weekly and resistance training 2x/week

Strongly recommended: (ACR 2012 Practice Guidelines; EULAR 2013 Practice Guidelines; OARSI 2014 Practice Guidelines)
- Aerobic and/or aquatic exercise
- Resistance exercises
Systematic Reviews
Osteoarthritis and Rheumatoid Arthritis

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<th>Outcomes</th>
<th>Effect</th>
<th>Level of Evidence</th>
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<td>Pain</td>
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<td><strong>Strength training</strong></td>
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Overall Treatment Considerations

- Posture and positioning
- Strengthen tissues without overloading joint
- Pace activities (24-7 approach)
- Respect joint pain
- Teach people how to modify activity if pain is present
Treatment—Strength Training

• Progressive resistance training
  • American College of Sports Medicine Recommendations for Older Adults
  • ~60-80% 1 RM, 8-12 reps, 1-3 sets, with 1-3 min rest between sets.
  • For endurance training, use lighter loads (50-60%) with higher reps (10-15 or more)
  • Need to achieve enough resistance to improve strength and need to progress to optimal strength

• Neuromuscular training
  • Closed chain sensorimotor learning and dynamic motor control
  • NEMEX-TJR (Eva Ageberg, Anne Link, Ewa M Roos, 2010)

Other approaches—limited evidence of benefit

• Knee bracing
• Orthotics
• Shoes
• Manual therapy
Caution: Red Flags

- Uncontrolled disease activity
- Current Severe Pain
  - Pain non-arthritis joints and tissues
- Balance/functional impairments
- Patient not responding to exercise

RED FLAGS...Connect with health care team and re-evaluate approach

- Physical therapist
- Rheumatologist
- Pain management
- Orthopedist
- Rehabilitation medicine
- Gerontologist
- Occupational therapist
- Psychologist
- Social worker
Your patient is doing well with PT treatment. Strength increased and gait speed has improved. Will your patient maintain these improvements after discharge? Is she doing the right activities to optimize her health?

A “Simple” Medical Model

Health Care Provider: Exercise is good for you. You need to exercise.

Patient: Okay

This does not happen because lifestyle and behavior changes are difficult.
Chronic Disease Medical-Behavior Model: More Complex

We know exercise is good for people with arthritis. Being active with arthritis is not easy!

Are we doing all we can?
Have they acquired enough change in behavior to be active after discharge?

The doctor said he needed more activity. So I hide his T.V. remote three times a week.

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12 miles north of Boston...44 inches of snow so far...12 more inches on the way