

Optimal Arthritis Management: Bridging Clinic to the Community



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American Physical Therapy Association Combined Sections Meeting
February 6, 2015

APTA CSM 2015

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Disclosures

- Julie Keysor—None
- Mary Altpeter—None
- Lori Schrodt--None



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Objectives

- Discuss evidence-based aerobic, strength training, and self-management strategies for arthritis
- Describe the application of motivation and behavior change theories to arthritis self-management and physical activity recommendation adherence.
- Discuss opportunities in the community that can promote use of evidence-based strategies.
- Discuss integration models of physical therapy practice and community programs



Presentations

- 1) Epidemiology and Clinical Management
- 2) Motivation and Behavior Change
- 3) Community Resources: Evidence- Based Health Promotion Programs



Epidemiology and Clinical Management

ARTHRITIS &
REHABILITATION
THERAPY
SERVICES

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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

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Types of Arthritis or Rheumatic Conditions

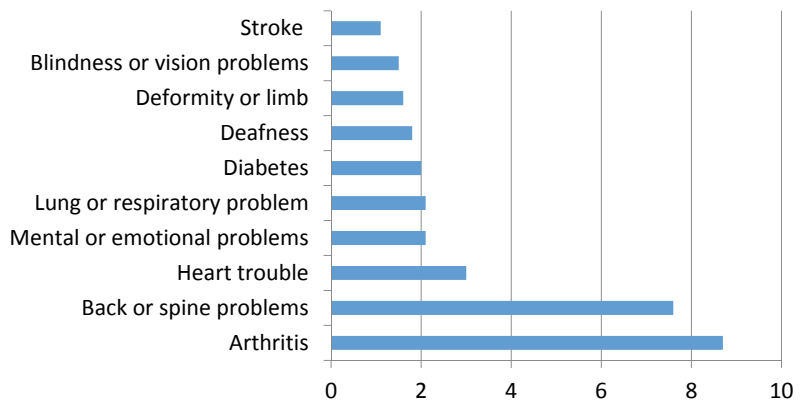
<p>Most Common Conditions</p> <ul style="list-style-type: none"> • Osteoarthritis • Rheumatoid Arthritis • Fibromyalgia • Lupus • Gout 	<p>Others...</p> <ul style="list-style-type: none"> • Psoriatic arthritis • Ankylosing spondylitis • Juvenile arthritis • Myositis
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Arthritis...the Leading Cause of Disability in the US



Condition	Relative Frequency (0-10)
Stroke	1.0
Blindness or vision problems	1.5
Deformity or limb	1.8
Deafness	2.0
Diabetes	2.2
Lung or respiratory problem	2.5
Mental or emotional problems	2.8
Heart trouble	3.5
Back or spine problems	7.5
Arthritis	8.5

Hootman JM, Brault MW, Helmick CG, Theis KA, Armour BS. MMWR 2009; 58(16):421-426.



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52,000,000 million people doctor-diagnosed arthritis



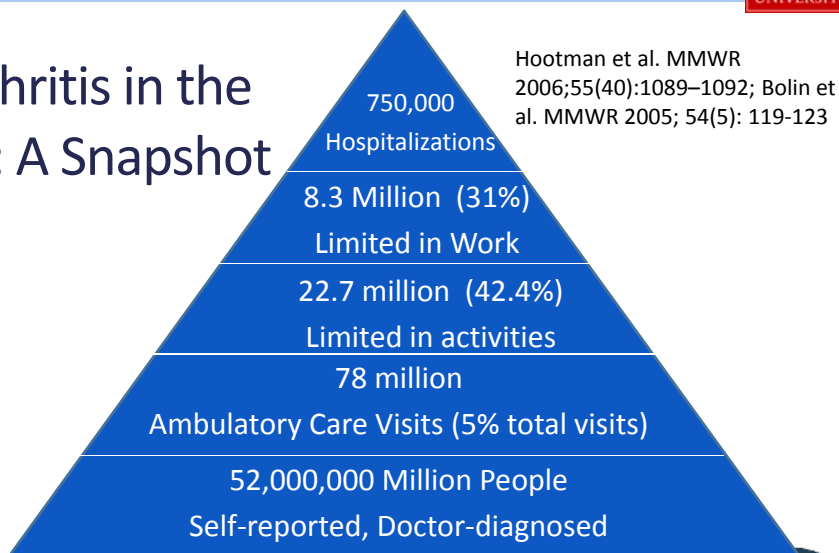
All ages; both genders; all ethnicities



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Arthritis in the US: A Snapshot

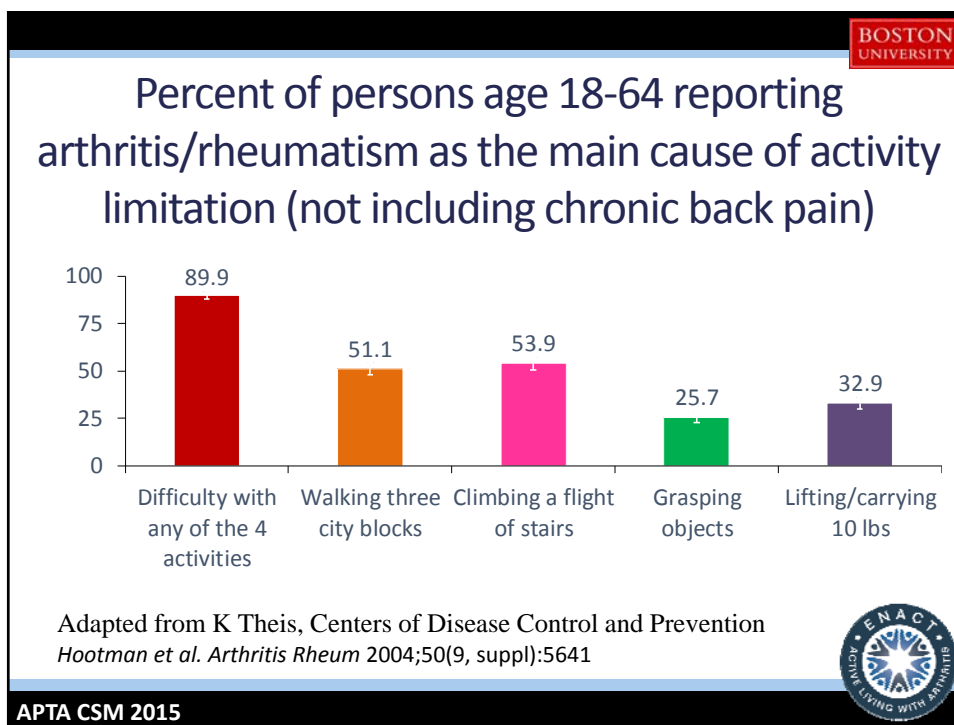
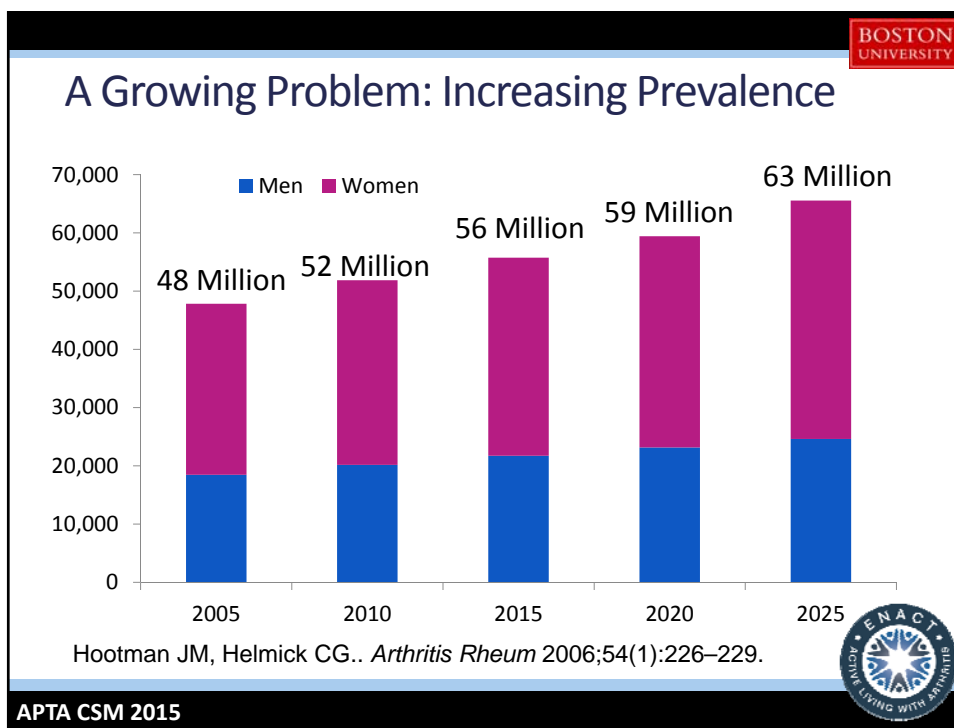


Hootman et al. MMWR 2006;55(40):1089-1092; Bolin et al. MMWR 2005; 54(5): 119-123

Adapted from Theresa Brady, Centers of Disease Control and Prevention




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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."

Shih et al., Am J Prev Med 2006;30(5):385-93

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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


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Arthritis, Your Patients, Your Practice

**Arthritis: A common primary or
secondary condition among your
patients**




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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.



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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

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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


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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




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Mrs. C (with knee OA)

- Do you treat?
 - Yes
- Evaluation:
 - Mild pain with walking, strength 4+/5 quad, hip abductors, and gluts; timed up and go test 12 seconds; WOMAC score 30/68, asymmetric gait, wide base of support
- Assuming little impact of comorbidities, what are the treatment goals?
 - Goals: Strength 5/5 t/o lower extremity; decrease timed up and go test; adhere to an exercise program; engage in 150 minutes of moderate activity weekly and resistance training 2x/week



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Treatment-Get Moving



- Start low impact activity (5-15 minutes)
- Progress activity: duration and intensity
- Posture and alignment are important!
- Monitor pain with activity
- Pain during or after activity MAY require modification of activity (May be okay if pain is not long lasting)



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Treatment: Aerobic Conditioning

- American College of Sports Medicine Guidelines for Older Adults



- 30 to 60 minutes per session
- 50-70% of heart rate reserve (HRR)
Low impact activity
- Short bouts of 10 minutes okay, particularly initially
- MOVE!



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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)



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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





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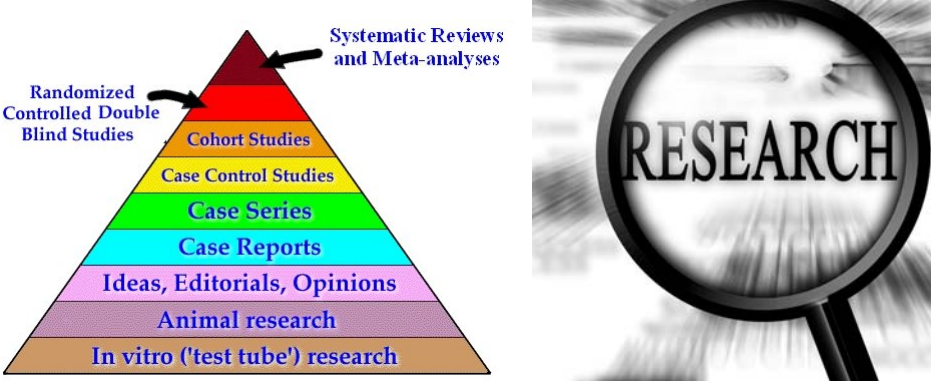
Goals for People with Arthritis?

- Engage in gentle range of motion exercise, gentle pool activity, **NO** strengthening
- Most people with arthritis (that is medically controlled) can engage in some sort of strengthening and aerobic exercise (may need to accommodate)

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Systematic Reviews and Meta-analyses

Randomized Controlled Double Blind Studies

Cohort Studies

Case Control Studies

Case Series

Case Reports

Ideas, Editorials, Opinions

Animal research

In vitro ('test tube') research

RESEARCH

What are these treatment approaches based on?

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Systematic Reviews Osteoarthritis and Rheumatoid Arthritis

	Outcomes	Effect	Level of Evidence
Aerobic training	Pain	Small-Moderate	Good
	Function	Small-Moderate	Good
Strength training	Strength	Moderate	Good
	Pain	Moderate	Good
	Function	Small	Good

Ottawa Panel. *Physical Therapy*, 84: 2004 & 85: 2005; MOVE Consensus 2005; Jamtvedt et al. *Physical Therapy* 88:2008; Fransen M., McConnell S. *The Cochrane Collaboration*, 2009; Wang et al., *Ann Inter Med* 157: 2012




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Clinical Practice Guidelines Knee Osteoarthritis

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



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Other approaches—limited evidence of benefit

- Knee bracing
- Orthotics
- Shoes
- Manual therapy




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Caution: Red Flags



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

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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




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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?



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A "Simple" Medical Model


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

↓

Patient: Okay



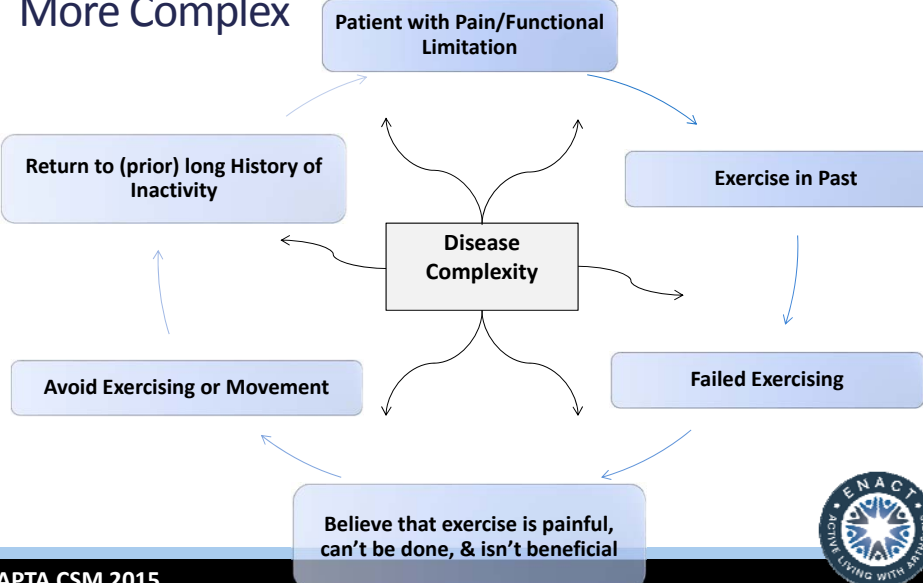
This does not happen because lifestyle and behavior changes are difficult.



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Chronic Disease Medical-Behavior Model: More Complex



Disease Complexity

Patient with Pain/Functional Limitation


Return to (prior) long History of Inactivity

Exercise in Past

Avoid Exercising or Movement

Failed Exercising

Believe that exercise is painful, can't be done, & isn't beneficial



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



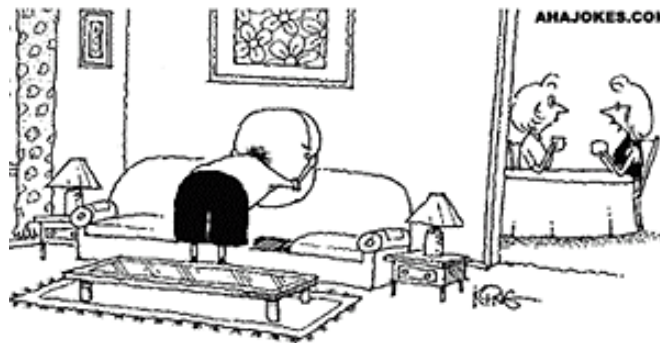
Are we doing
all we can?



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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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Thank You!

Acknowledgements:

Saralynn Allaire
Molly Vaughan
Mary Slavin
ENACT
Health and Disability Research Institute
Clinical Epidemiology Research and
Training Unit

The National NIDRR Arthritis Rehabilitation Research and
Training Center
NIDRR PR/Award #H133B10003


NIDRR NATIONAL INSTITUTE ON DISABILITY AND REHABILITATION RESEARCH

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



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