


"No Drugs, More Sex & Rock 'n Roll"
Chronic Pain Management in Older Adults



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Learning Objectives

- Prevalence/Burden/Etiology/Challenges
- Key principles for management
- Approaches for common chronic MSK conditions in Older Adults
- Goal to Improve Outcomes

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Disclosures

- No Relationships with Commercial Interests
- Funding: Canadian Chiropractic Research Foundation (CCRF) and The Arthritis Society
- Founder spinemobility Research & Resource Centre-Not-for-Profit Organization

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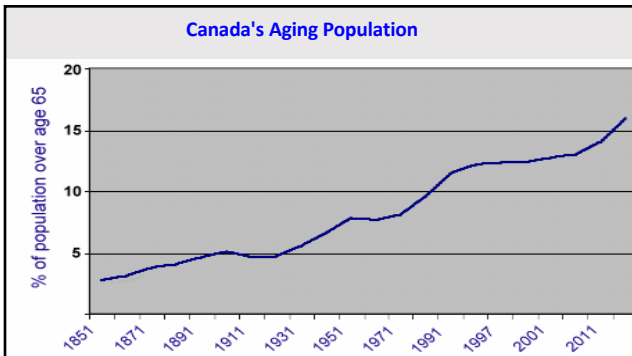


Definition
Pain > 3-6 month

Prevalence
60% of individuals over age 65
79% of individuals over age 85

Shi et al. Pain 2010,

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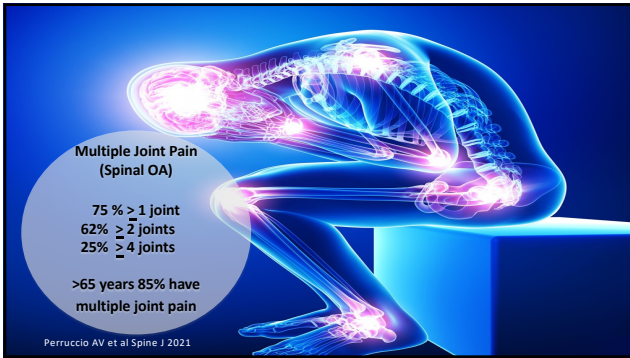


Burden

- Severity and disability risk increases with age
- LBP and lower extremities most common
- High risk for reduced mobility & Balance

Gibson, SJ 2007, Moulin, D et al., 2002, Kemp C. et al. 2005

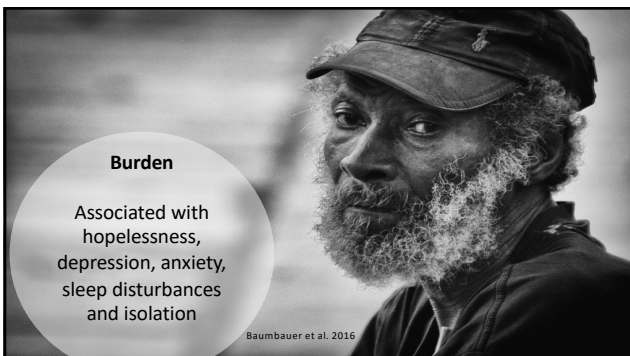
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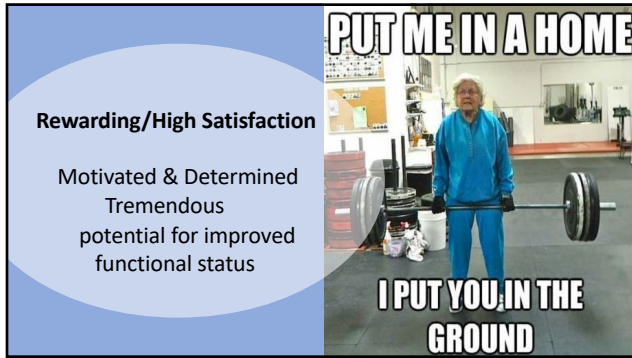
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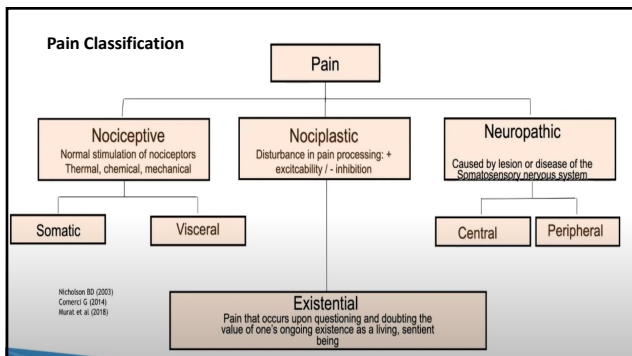
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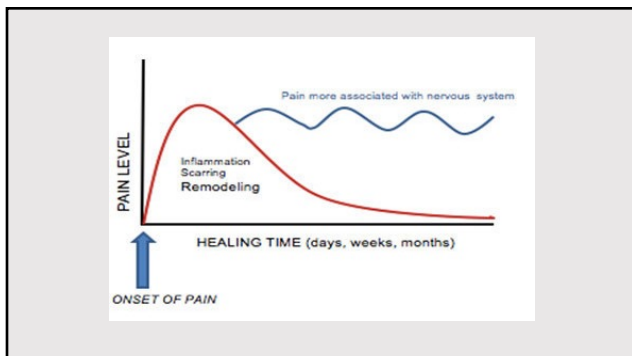
Acute Pain

- Usually obvious tissue damage
- Protective function
- Increased nervous system activity
- Pain resolves upon healing

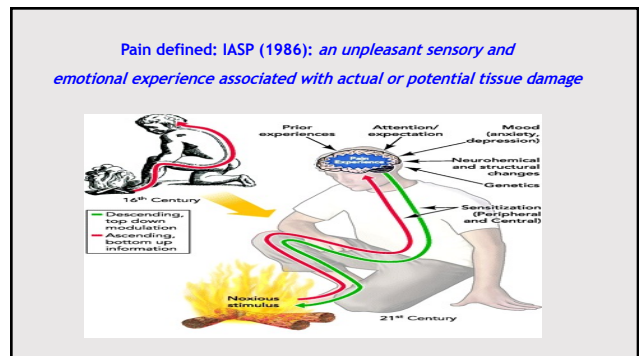
Chronic Pain

- Pain beyond expected period of healing
- Pain no longer serves a useful purpose
- Changes in pain signalling and detection
- Degrades health and function

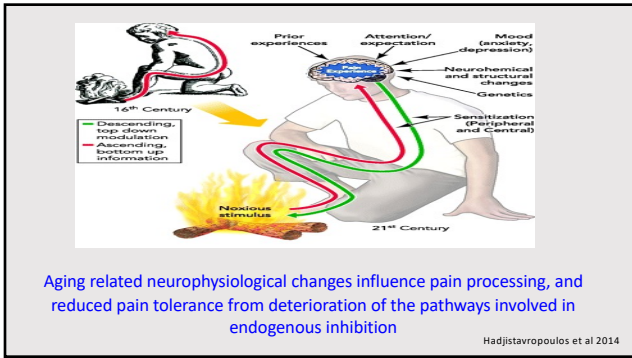
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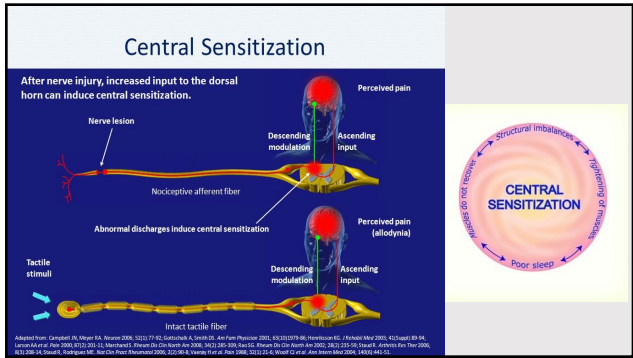
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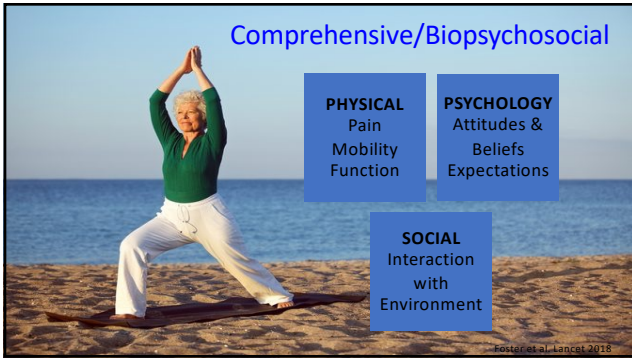
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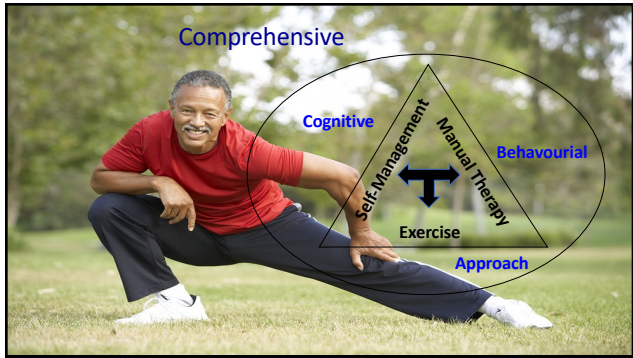
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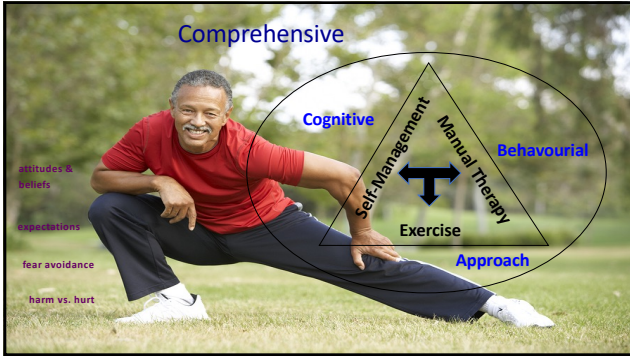
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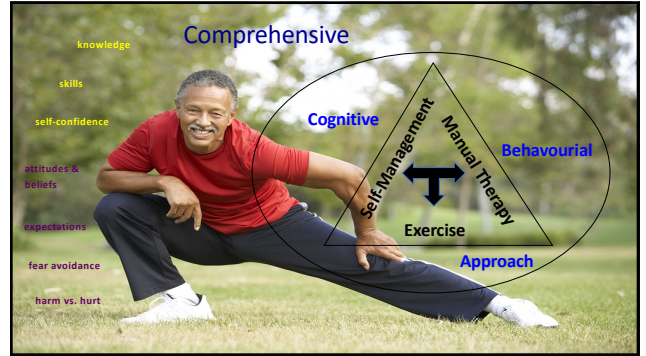
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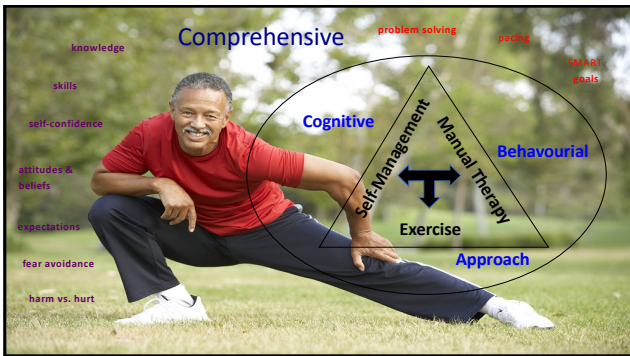
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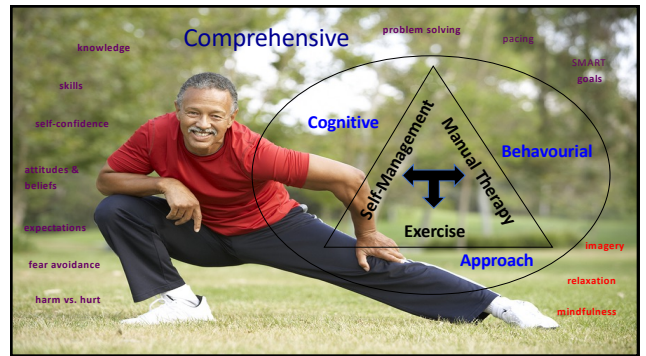
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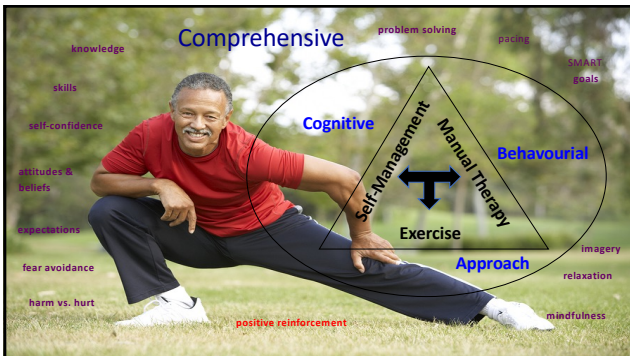
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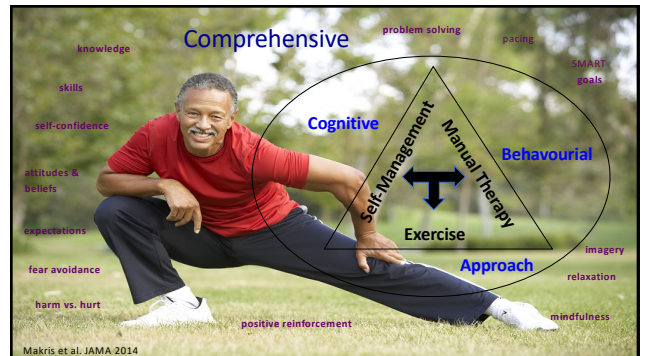
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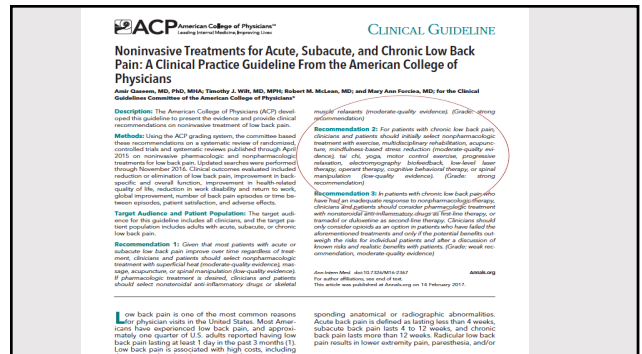
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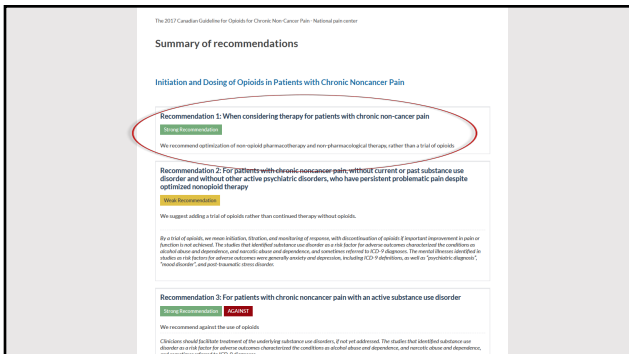
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Study	Findings
Enke O et al. Anticonvulsants for low back pain: A systematic review and meta-analysis. <i>CMAJ</i> , 2018; 190(20):E736-43.	"Most comparisons showed no benefit on pain or disability," the review noted. Gabapentinoids were associated with increased adverse events. The overall conclusion? "Gabapentinoids are ineffective for low back pain or lumbar radicular pain."
Shanthamma H et al. Benefits and safety of gabapentinoids in chronic low back pain: A systematic review and meta-analysis of randomized controlled trials. <i>PLoS Medicine</i> , 2017; 14(8):e1002369; http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002369 .	"In 3 studies comparing gabapentin to placebo, gabapentin showed no significant improvement of pain; and in the 3 studies comparing pregabalin to other analgesics, pregabalin actually fared worse in pain relief," according to the reviewers. Adverse events were common, especially dizziness, fatigue, confusion, and visual disturbances. "Despite their widespread use, our systematic review with meta-analysis found that there are very few randomized controlled trials that have attempted to assess the benefit of using gabapentin or pregabalin in patients of chronic low back pain," the authors say. "The existing evidence does not support the use of gabapentinoids for predominant chronic low back pain, and calls for larger, high quality trials to more definitively inform this issue."
Qaseem A et al. Noninvasive treatments for acute, subacute, and chronic low back pain: A clinical practice guideline from the American College of Physicians. <i>Annals of Internal Medicine</i> , 2017; 166(7):514-30; http://annals.org/aim/article/2603226/noninvasive-treatments-for-acute-subacute-chronic-low-back-pain-clinical-practice .	No evidence to support the use of anticonvulsants in acute, subacute, or chronic back pain.

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Road Map Implementation Guides

This slide features a large blue hexagonal graphic with the text "Road Map Implementation Guides" in white. To the left, there is a small thumbnail image of a document titled "Road Map Program - Resident Care Back Pain" which contains a detailed table with multiple columns and rows of data.

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Stratified Care
Risk for disability
Clinical pattern

This slide shows a blue circle on the left containing the text "Stratified Care", "Risk for disability", and "Clinical pattern". On the right, there is a photograph of an elderly man in a light blue shirt, leaning forward and holding his lower back with his right hand, appearing to be in pain.

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The Keele Start Back Screening Tool

This slide contains two parts. On the left is the "The Keele Start Back Screening Tool" form, which includes a list of 9 questions and a Likert scale from "Not at all" to "Extremely". On the right is a flowchart titled "The Start Back Tool Scoring System" that shows how the total score (3 or less vs 4 or more) and a sub-score (3 or less vs 4 or more) determine the risk level: Low risk, Medium risk, or High risk.

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Screening "Yellow Flags"

Barriers / Yellow Flags (check if positive) No Barriers

For those with low back pain > 6 weeks or non-responsive to treatment:

- Belief that pain and activity will cause physical harm
- Excessive reliance on rest, time off work or dependency on others
- Persistent low or negative moods, social withdrawal
- Belief that passive treatment (i.e. modalities) is key to recovery
- Problems at work, poor job satisfaction
- Unsupportive / dysfunctional or dependent family relationships
- Over exaggeration / catastrophizing of pain symptoms

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Personal Goal Setting (Functional Activity Goals)

This slide provides a template for setting personal goals. It includes instructions on how to write down goals and a table for tracking progress. The table has columns for "Functional Goals: Action Plan" and "Record Progress and Problem Solve Barriers" with sub-columns for Week 2, Week 3, Week 4, Week 5, and Week 6. There are six rows for goals, each with fields for "What", "When", "Where", "How much", and "How often".

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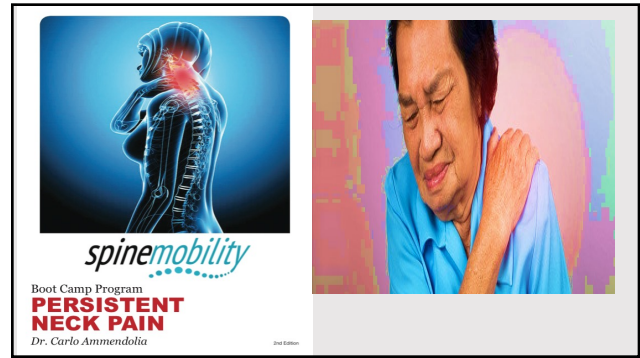
Mental Imagery Inventory and Recall

This slide describes a mental imagery exercise. It asks the user to list seven past events and personal experiences that made them happy. Below this is a table with two columns: "List Positive Memories" and "Suggest how to incorporate into daily routine". The table has seven rows, numbered 1 through 7.

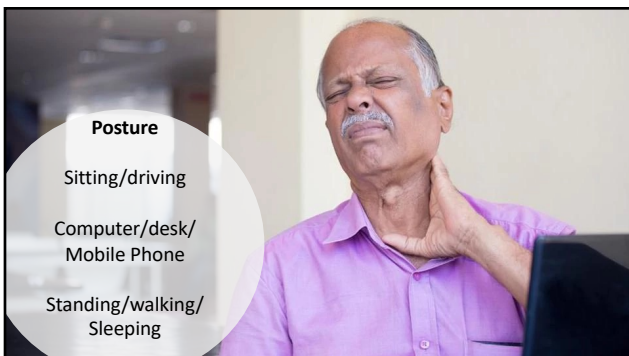
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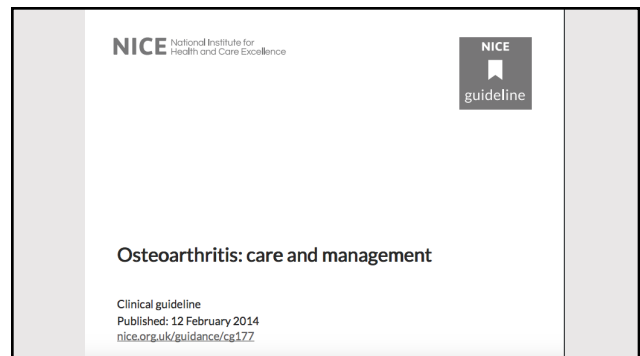
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Good Life with osteoArthritis in Denmark (GLA:D™): evidence-based education and supervised neuromuscular exercise delivered by certified physiotherapists nationwide

Søren T. Skou and Ewa M. Roos

BMC Musculoskeletal Disorders BMC series – open, inclusive and trusted 2017 18:72
<https://doi.org/10.1186/s12891-017-1432-y> | © The Author(s). 2017
 Received: 13 September 2016 | Accepted: 31 January 2017 | Published: 7 February 2017

[Open Peer Review reports](#)

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“Sarcopenia” is a most important factor to prevent frailty

Sarco = Muscle Penia = lack of

Sarcopenia
(Muscle Weakness/Loss)

<Diagnostic criteria>

1. Low muscle mass
2. Low muscle strength
3. Low physical performance

normal sarcopenia

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BALANCE WALK

- ▶ Raise your arms out to your sides near shoulder height.
- ▶ Select a spot or an object across the room (at least 10 steps away) and focus on it as you walk toward it, stepping with one foot directly in front of the other.
- ▶ Repeat 8-12 times.

Variation: As you walk, lift your back leg and pause one second before stepping forward.

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Ankylosing Spondylitis

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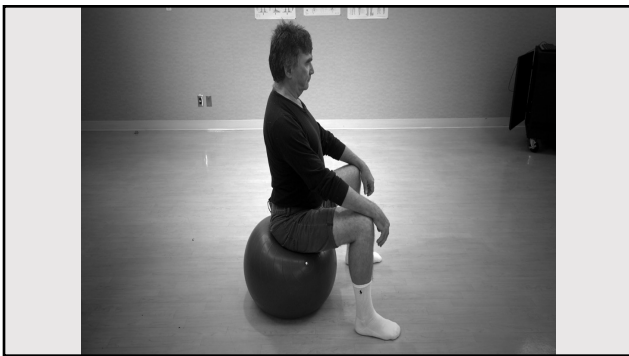
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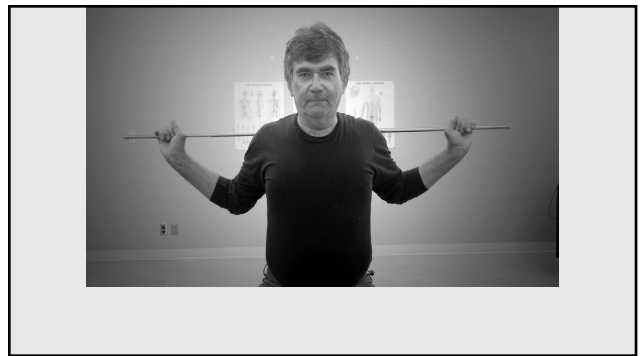
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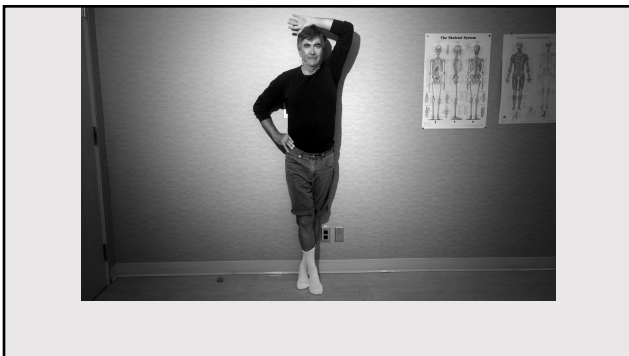
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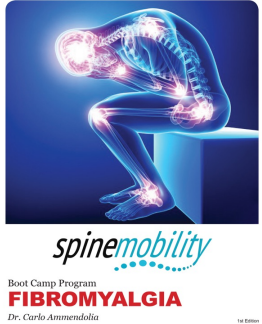
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spinemobility
 Boot Camp Program
FIBROMYALGIA
 Dr. Carlo Amendola

Fibromyalgia: The Facts

- Fibromyalgia affects up to 2% of people worldwide.
- 80%–90% of those afflicted are women.
- Fibromyalgia can present early, but is more common during middle age.
- Those with fibromyalgia often suffer from abnormalities in stage 4 deep sleep.
- Fibromyalgia commonly co-presents with IBS, RLS, memory deficits, and migraines.
- The average patient does not receive an accurate diagnosis until 5 years after onset of symptoms.

Sources: http://www.niams.nih.gov/hi/topics/fibromyalgia/fibromfifib_j and <http://www.fmwaware.org/fmifib/brochure.htm>

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DO YOU HAVE FIBROMYALGIA? You Can Map the Points of Acute Pain

Workup for Fibromyalgia

Widespread pain for 3 months. Fatigue, headaches, sleep and mood disturbances "I hurt all over" "It feels like I always have the flu"

Exclude other conditions that may present with chronic widespread pain (very much "clinician dependent")

General physical exam, neurologic exam, selected laboratory testing (ESR, thyroid tests, avoid screening serologic test Sleep and mood evaluation)

Confirm presence of tender points, absence of synovitis

Presumptive diagnosis of fibromyalgia

Tender points - sometimes called "trigger points" - on the body are areas of acute pain and sensitivity, and are a way of diagnosing fibromyalgia symptoms.

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Non-Pharmacological Management Fibromyalgia

Multi-modal
Self Management, patient active participation
Realistic goal setting, pacing, coping strategies, CBT, relaxation, mindfulness, imagery
Tailored exercise- aerobic/aquatic/stretch/Tai Chi
Manual therapy ?

Dubin R 2014 Can Fam Phys

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BMJ Open Non-operative treatment for lumbar spinal stenosis with neurogenic claudication: an updated systematic review

Carlo Ammendola, Corey Hoffmeister, Joshua Pheasant, Andrei Buzdaru, Michael Schreiner, James Young, Andrea Di Furia, Kent Stubbs, Alisa Ahmed, Carol Cancelliere, Alexia Aboodopoulou, Joseph Ornelas

OBJECTIVE Nonoperative treatment for lumbar spinal stenosis (LSS) is a growing health problem in older adults. We conducted a systematic review to determine the effectiveness of non-operative treatment of LSS with neurogenic claudication.

DESIGN A systematic review.

SETTING MEDLINE, EMBASE, CINAHL, and Cochrane databases.

RESULTS The mean age of patients included in the study was 65.5 years. The mean duration of symptoms was 10.5 years. The mean age of patients included in the study was 65.5 years. The mean duration of symptoms was 10.5 years.

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USASP Focus Article

Non-Surgical Interventions for Lumbar Spinal Stenosis Leading To Neurogenic Claudication: A Clinical Practice Guideline

André Bussières, Carolina Cancelliere, Carlo Ammendola, Christine M. Comer, Fadi Al Zoubi, Claude-Edouard Châlin, Greg Cherniack, James M. Cox, Jordan A. Gilead, Danielle Haskett, Rikke Krüger Jensen, André-Anne Marchand, Christy Tomkins-Lane, Julie O'Shaughnessy, Steven Passmore, Michael J. Schneider, Peter Shipka, Gregory Stewart, Kent Stubbs, Albert Yee, and Joseph Ornelas

School of Physical Medicine & Occupational Therapy, McGill University, Montreal, Quebec, Canada; Département Chiropratique, Université du Québec à Trois-Rivières, Québec, Canada; Faculty of Health Sciences, University of Ontario Institute of Technology, Oshawa, Canada; Faculty of Medicine, University of Toronto and Mount Sinai Hospital, Ontario, Canada; Texas Community Healthcare Network, Frisco, Texas, United Kingdom; Faculty of Medicine, University of Leeds, United Kingdom; Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, Hung Hom, Hong Kong; CHUSS MFCO CHARRL, Trois-Rivières, Québec, Canada; Family Medicine at the University of Manitoba, Winnipeg, Manitoba, Canada; Private Practice, Fort Wayne, Indiana; Department of Neurosciences, Medical College of Wisconsin, Milwaukee, Wisconsin; Private Practice, Halifax, Nova Scotia, Canada; Faculty and Department of Sports Science and Clinical Biomechanics, University of Southern Denmark, Denmark; Département Chiropratique, Université du Québec à Trois-Rivières, Québec, Canada; Department of Health and Physical Education, Saint Joseph University, Calgary, Canada; Département Chiropratique, Université du Québec à Trois-Rivières, Québec, Canada; Department of Chiropractic, University of Alberta, Edmonton, Alberta, Canada; Faculty of Knowledge and Innovation Management, University of Manitoba, Winnipeg, Manitoba, Canada; Department of Physical Therapy, University of Pittsburgh, Pennsylvania; Vocational and Translational Science Institute, University of Pittsburgh, Pennsylvania; Private Practice, Saint Albert, Alberta, Canada.

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CLINICAL UPDATES

Lumbar spinal stenosis

Rikke Krüger Jensen, Bjørnstad S Hørdahl, Frank Huygen, Bart Koes

What you need to know

- Support lumbar spinal stenosis in people over 50 who describe leg pain or paraesthesia on walking or prolonged standing, and who are walking reduced distances as a result.
- Imaging is not required during initial assessment as the correlation between imaging findings and symptoms is poor.
- Conservative treatment, which includes supervised exercise and manual therapy, is advised as first-line treatment; about 30-50% of patients with mild to moderate symptoms experience quantitative improvement in pain and ability to walk greater distances.
- Prescribe pain medication only for a short period and after careful consideration, taking into account the important side effects, especially in older people, and the absence of good evidence for efficacy.
- Refer patients with severe symptoms, neurological deficits, or no improvement after 3-6 months of conservative treatment to a spine specialist for imaging and further intervention or surgery.

Lumbar spinal stenosis (LSS) affects about 1.1% of the population, and primarily affects older adults. Pain in legs and difficulty walking can limit function and lateral recess or foraminal stenosis can cause

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ACRM Archives of Physical Medicine and Rehabilitation
 Journal homepage: www.archives-pmr.org
 Archives of Physical Medicine and Rehabilitation 2018;99:2408-19

ORIGINAL RESEARCH

Comprehensive Nonsurgical Treatment Versus Self-directed Care to Improve Walking Ability in Lumbar Spinal Stenosis: A Randomized Trial

Carlo Ammendolia, DC, PhD,^{1,2,3} Pierre Côté, DC, PhD,^{4,5,6,7} Danielle Southerst, DC,⁸ Michael Schneider, DC, PhD,⁹ Brian Budgett, DC, PhD,⁹ Claire Bombardier, MD,^{1,1} Gillian Hawker, MD,^{1,1} Y. Raja Rampersaud, MD¹

From the ¹Institute of Health Policy, Management and Evaluation, University of Toronto, Toronto, Ontario, Canada; ²Rabeca MacDonald Centre for Arthritis & Autoimmune Disease, Mount Sinai Hospital, Toronto, Ontario, Canada; ³Dalla Lana School of Public Health, University of Toronto, Toronto, Ontario, Canada; ⁴Faculty of Health Sciences, University of Ontario Institute of Technology and ⁵OUIC Centre for Disability Prevention and Rehabilitation, Toronto, Ontario, Canada; ⁶Occupational and Industrial Orthopaedic Centre, Department of Orthopaedic Surgery, NYU Langone Health, New York, NY; ⁷Department of Physical Therapy, University of Pittsburgh, Pittsburgh, PA; ⁸Canadian Memorial Chiropractic College, Toronto, Ontario, Canada; ⁹Department of Medicine, Division of Rheumatology, University of Toronto, Toronto, Ontario, Canada; ¹⁰Department of Medicine, University of Toronto, Toronto, Ontario, Canada; and ¹¹Department of Orthopaedics, Toronto Western Hospital, University Health Network, Toronto, Ontario, Canada.

Abstract
Objectives: To compare the effectiveness of a comprehensive nonsurgical training program to a self-directed approach in improving walking ability in lumbar spinal stenosis (LSS).

Check for updates

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JAMA **Open**

Comparative Clinical Effectiveness of Nonsurgical Treatment Methods in Patients With Lumbar Spinal Stenosis: A Randomized Clinical Trial

Michael Schneider, DC, PhD, Carlo Ammendolia, DC, PhD, Danielle Southerst, DC, Michael M. Sills, MD, Elizabeth Hsu, PhD, PT, David L. Tuckman, PhD, Y. Raja Rampersaud, MD, Claire Bombardier, DC, PhD, Michael H. Shea, MD, MPH, Leah A. Pines, PhD, MCh

Abstract
IMPORTANCE: Lumbar spinal stenosis (LSS) is the most common reason for spine surgery in older US adults. There is an evidence gap about nonsurgical LSS treatment options.

OBJECTIVE: To compare the comparative clinical effectiveness of a nonsurgical intervention for patients with LSS.

DESIGN, SETTING, AND PARTICIPANTS: Three-arm randomized clinical trial of 3 years' duration (November 2016 to June 2018). Analysis began in August 2018. All interventions were delivered during 6 weeks with follow-up at 2 months and 6 months at an outpatient research clinic. Patients older than 60 years with LSS were recruited from the general public. Eligibility required anatomical evidence of central canal and/or lateral recess stenosis (diagnostic resonance imaging computed tomography) and clinical symptoms associated with LSS (neurogenic claudication, leg symptoms with flexion). Analysis was intention to treat.

INTERVENTIONS: Medical care, group exercise, and manual therapy (individualized exercise). Medical care consisted of medications and/or epidural injections provided by a physician. Group exercise classes were supervised by fitness instructors in senior community centers. Manual therapy individualized exercises consisted of spinal mobilization, stretches, and strength training provided by chiropractors and physical therapists.

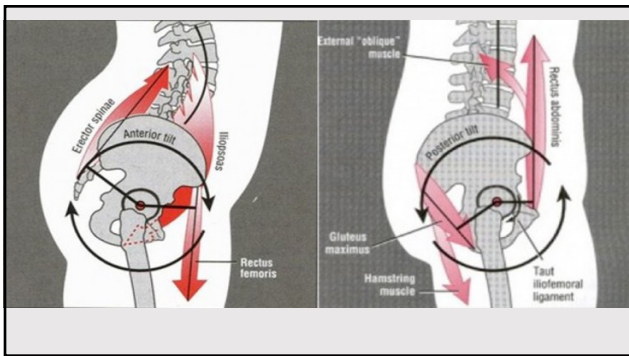
MEASUREMENTS AND MAIN RESULTS: Primary outcomes were between-group differences at 2 months in self-reported symptoms and physical function measured by the Sorele Spinal Stenosis Questionnaire (range, 0-100) and measure of walking capacity using the self-paced walking test (scored 0-100). Secondary outcomes were between-group differences at 2 months in self-reported symptoms and physical function measured by the Sorele Spinal Stenosis Questionnaire (range, 0-100) and measure of walking capacity using the self-paced walking test (scored 0-100).

RESULTS: A total of 219 participants (mean [SD] age, 72.4 [7.8] years; 137 women [62.5%]) were allocated to medical care (66 [30.1%]), group exercise (66 [30.1%]), or manual therapy (individualized exercise) (87 [39.8%]). Adjusted between-group analyses at 2 months showed manual therapy (individualized exercise) had greater improvement of symptoms and physical function compared with medical care (0.3; 95% CI, -0.6 to -0.4) or group exercise (0.4; 95% CI, -0.3 to

Key Points
Question: What is the comparative effectiveness of types of nonsurgical treatment options for patients with lumbar spinal stenosis (LSS)?
Findings: In a randomized clinical trial of 219 patients with LSS, all groups (medical care, group exercise, and manual therapy/individualized exercise) showed improvement in self-reported pain/function and walking capacity at 2 months and 6 months. The manual therapy group had greater proportion of responders at 2 months, but there were no between-group differences in responder rates at 6 months.
Meaning: Although LSS is a chronic degenerative condition, patients with LSS can show improvement in walking capacity with nonsurgical approaches.

Supplemental content:
 Author disclosures of conflicts of interest and other information are found at the end of this article.

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Learning Objectives

- Prevalence/Burden/Etiology/Challenges
- Key principles for management
- Approaches for common chronic MSK conditions in Older Adults
- Goal to Improve Outcomes

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Carlo Ammendolia DC, PhD

Project **ECHO** Ontario Pain

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Toronto Musculoskeletal Centre

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spinemobility.com

CHIROPRACTIC CHIROPRACTIC Canada

Ontario Chiropractic Association

Spine Program

Institute for Work & Health

Funded by the Canadian Chiropractic Research Foundation and The Arthritis Society

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Questions & Discussion

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