Welcome to Pathways in Management
Osteoarthritis and Chronic Low Back Pain

Supported by an educational grant from Pfizer/Lilly.

Today's Faculty

Wendy L. Wright, DNP(c), MS, ANP-BC, FNP-BC, FAANP, FAAN, FNAP

Disclosures

Master Faculty/Curriculum Planners
Our Master Faculty have no relevant financial relationships to disclose.

Blair Cushing, DO
Benjamin Smith, PA-C
Doug Martin, MD
Wendy Wright, ANP-BC, FNP-BC
Cheri Olson, MD

Curriculum Planners
Our planners have no relevant financial relationships to disclose.

Mary W. Allen, CPHP, FACHEP
Jerri L. Davis, CPHP
Christopher Larrison
Sheila Robertson, APRN
Shelly B. Rodrigues, CAE, FACHEP
Phyllis Zimmer, MN, FNP, FAANP, FAAN

Our Goal Is To Help You...

Provide successful strategies and resources for the management of OA and CLBP
Support the art and science of medicine
Increase your knowledge and confidence in caring for patients with OA and CLBP
Support a partnership between clinician and patient

Learning Objectives

This activity will improve your ability to:

- Develop practical, evidence-based strategies to manage pain and improve function for patients with osteoarthritis (OA) and chronic low back pain (CLBP), establishing positive and realistic goals with your patients.
- Assessing and implementing the nationally accepted guidelines and standards of care for OA and CLBP.
- Describe pathophysiology so patients understand the etiology of their pain and treatment rationale.
- Use appropriate assessment, management, and educational tools and resources to support the care of patients with OA and CLBP.

Organization Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAFP</td>
<td>American Academy of Family Physicians</td>
</tr>
<tr>
<td>AAGS</td>
<td>American Academy of Geriatric Surgeons</td>
</tr>
<tr>
<td>ACHRM</td>
<td>American College of Health Care Resources Management</td>
</tr>
<tr>
<td>ACOEM</td>
<td>American College of Occupational and Environmental Medicine</td>
</tr>
<tr>
<td>ACCP</td>
<td>American College of Chest Physicians</td>
</tr>
<tr>
<td>ACCS</td>
<td>American College of Cardiology</td>
</tr>
<tr>
<td>ACCS</td>
<td>American College of Clinical Medical Care</td>
</tr>
<tr>
<td>ACOS</td>
<td>American College of Obstetrics and Gynecology</td>
</tr>
<tr>
<td>ACR</td>
<td>American College of Radiology</td>
</tr>
<tr>
<td>ACM</td>
<td>American College of Medical Genetics</td>
</tr>
<tr>
<td>AMIA</td>
<td>American Medical Informatics Association</td>
</tr>
<tr>
<td>ANA</td>
<td>American Nurses Association</td>
</tr>
<tr>
<td>AO</td>
<td>American Osteopathic Association</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Healthcare Epidemiology of Hospitals</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Healthcare Research and Quality</td>
</tr>
<tr>
<td>ASH</td>
<td>American Society for Hematology</td>
</tr>
<tr>
<td>ASH</td>
<td>American Society for Hemostasis and Thrombosis</td>
</tr>
<tr>
<td>ASH</td>
<td>American Society for Hemostasis and Thrombosis Research</td>
</tr>
<tr>
<td>ASH</td>
<td>American Society for Hypertension</td>
</tr>
<tr>
<td>ASH</td>
<td>American Society for Hypertension in Women</td>
</tr>
<tr>
<td>ASH</td>
<td>American Society for Investigative Pathology</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Healthcare Epidemiology of Hospitals</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Healthcare Research and Quality</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for HIV Research</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Human Genetics and Genomics</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Immunology</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Laboratory Animal Science</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Medical Informatics</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Medical Microbiology</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Microbiology</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Non-Invasive Imaging and Interventional Cardiology</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Foundation</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Foundation</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Staff</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Trustee</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Trustee Foundation</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Trustee Staff</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Trustee Trustee</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Trustee Trustee Foundation</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Trustee Trustee Foundation Staff</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Trustee Trustee Trustee Trustee Foundation</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Trustee Trustee Trustee Trustee Foundation Staff</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Trustee Trustee Trustee Trustee Trustee Trustee Foundation Staff</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Trustee Trustee Trustee Trustee Trustee Trustee Trustee Trustee Foundation Staff</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Trustee Trustee Trustee Trustee Trustee Trustee Trustee Trustee Trustee Foundation Staff</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Trustee Trustee Trustee Trustee Trustee Trustee Trustee Trustee Trustee Trustee Foundation Staff</td>
</tr>
<tr>
<td>ASHP</td>
<td>American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Trustee Trustee Trustee Trustee Trustee Trustee Trustee Trustee Trustee Trustee Trustee Foundation Staff</td>
</tr>
</tbody>
</table>
| ASHP | American Society for Nuclear Cardiology and Interventional Cardiology Research Trust Fund Trustee Trustee Trustee Trustee Trustee Truste
Throughout this Education

www.PathwaysInManagement.org

Prevalence in our Patients
Twenty-five most common diagnoses
1. Hypertension
2. Hyperlipidemia
3. Diabetes
4. Back pain
5. Anxiety
6. Obesity
7. Allergic rhinitis
8. Reflux esophagitis
9. Respiratory problems
10. Hyperthyroidism
11. Visual refractive errors
12. General medical exam
13. Osteoarthritis
14. Fibromyalgia
15. Malaise and fatigue
16. Pain in joint

2013 Data from PracticeFusion EHR

Patient 1: Sue with Knee Pain
• 62-year-old
• Knee OA >3 years
• BMI = 30
• No prescribed medications
• Tried OTC meds, weight management

Patient 2: Juan with Back Pain
• 53-year-old
• CLBP >3 years
• BMI = 39
• Tried OTC meds, weight management
• Pain is interfering with activities at home and work

Ask Yourself
What do you think when you see patients like Sue and Juan on your schedule?
• How confident are you that you will be able to make a noticeable difference in these patients’ pain and function?
• What are your expectations for these patients?
• What do you think the patients’ expectations are?

Let’s start by reviewing the components of a good assessment ...
Components of a Good Assessment

• History
• Physical
• Diagnostics
• Labs
• Imaging
• Red Flags

Be thorough, don't assume.

History and Physical

Knee Physical Exam
- Redness/swelling
- Palpate site of pain
- Effusion
- Neurologic
- Identify any significant or abnormal findings

Back Physical Exam
- Rash
- Asymmetry
- Range of motion
- Palpate site of pain, check function
- Neurologic
- Identify any significant or abnormal findings

Example: Arthritis Foundation - https://www.youtube.com/watch?v=jubPNt0seOM
Example: Stanford Video Clip youtube.com/watch?v=q1gX9hORtLY

Functional and Pain Assessment

Functional Assessment
- Becoming standard of care to assess and record a patient’s function
- Trackability
- Can assess a wide range of function
- Can be performed by a variety of caregivers

Pain Assessment
- Standard of care
- Trackability
- Integrated into EHRs

Screen for Depression and Anxiety

• Depression
  - Multiple tools available including
    - PHQ-9, PHQ-2
    - SIS-25CAPS
    - HAM-D
    - CES-D (Center for Epidemiological Studies Depression Scale)
    - Beck Depression Inventory
    - Zung Self-Rated Depression Scale

• Anxiety
  - GAD-7
  - Somatization

Select the appropriate tools for your EHR and clinic setting.
Osteoarthritis and Chronic Low Back Pain

Wendy L. Wright, MS, ANP-BC, FNP-BC, FAANP, FAAN, FNAP

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".

Possible Sources of Back Pain

- Back Strain
- Disc herniation
- Osteoarthritis/spinal stenosis
- Spondylolisthesis
- Ankylosing spondylitis
- Infection
- Cancer
- Fracture
- Non-spinal causes: including abdominal aortic aneurism, kidney stone, infection, or stomach ulcer.

80% to 85% of back pain is caused by back strain and is referred to as "mechanical low back pain".
Any recommendations for creating a better partnership with my patients with OA and CLBP?

Goals in Setting Expectations

Positive approach
- OA (mild and moderate): Function can be improved, pain can be reduced
- Back: Assume the patient that LBP is common, has an excellent prognosis and, in most cases, is not debilitating on a long-term basis (ACOEM)

Patient-provider journey
- Build a therapeutic alliance, partner with and empower patients, work together—take time and “I’m here for you”, together identify what patients will do for themselves

Use multiple pathways and evidence-based strategies
- Blend science with the “art” of medicine

Focus on Return to Function

Target Improved Function
- At least as important as pain rating
- What is achievable?
- Is patient motivated?

Decreased Pain
- Is it realistic?
- If patients have linked the single goal of decreased pain to the goal of happiness, they may be unhappy while pursuing this goal despite other achievements or experiences

I know there are multiple guidelines for OA and CLBP.

What are the most helpful key points for practice?

Engaging Sue and Juan

Communication approach
Come alongside
Motivational interviewing
Patient education
Use other professionals in your practice or community?

It’s not just about the patients, but also about the clinicians:
Reframe success;
You may not totally fix the problem, but making a difference in some way is success (similar to losing 10% of weight or cutting down on smoking as a start).


Guideline Considerations

What they tell us:
- Commonalities where authorities all agree
- Levels of evidence in recommendations

What they don’t tell us:
- The evidence is lacking, and more research is desperately needed (AAOS Knee OA)
- Absence of evidence ≠ absence of efficacy
- Controversies (eg, injections for CLBP: evidence vs practice)
- Influence of reimbursement
Are there any algorithms we can use to guide us as we develop a treatment plan?

OA Guidelines

<table>
<thead>
<tr>
<th>Organization</th>
<th>Year</th>
<th>Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAFP</td>
<td>2014</td>
<td>Reference AAFP Guideline</td>
</tr>
<tr>
<td>AAOS</td>
<td>2013</td>
<td>Knee non-arthroplasty</td>
</tr>
<tr>
<td>ACOEM</td>
<td>2015</td>
<td>Knee algorithm</td>
</tr>
<tr>
<td>ACRheum</td>
<td>2012</td>
<td>Recommendations for OA of hand, hip, knee</td>
</tr>
<tr>
<td>AHRQ (DHHS)</td>
<td>2017</td>
<td>OA knee</td>
</tr>
<tr>
<td>AHRQ (DHHS)</td>
<td>2018</td>
<td>Non-pharma Treatment of Chronic Pain</td>
</tr>
<tr>
<td>Choosing Wisely</td>
<td>Various</td>
<td>Selected recommendations</td>
</tr>
</tbody>
</table>

OA Knee Guideline: AHRQ

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Evid. Strength</th>
<th>Pain</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-level Laser Therapies</td>
<td>Low</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>Spinal Manipulation</td>
<td>Low</td>
<td>M</td>
<td>S, M</td>
</tr>
<tr>
<td>Massage</td>
<td>Mod</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Yoga</td>
<td>Low - Mod</td>
<td>S, M</td>
<td>S, M</td>
</tr>
<tr>
<td>Multidisciplinary Rehabilitation</td>
<td>Low - Mod</td>
<td>S, L</td>
<td>S, M</td>
</tr>
<tr>
<td>Acupuncture</td>
<td>Low - Mod</td>
<td>S, L</td>
<td>-</td>
</tr>
<tr>
<td>Mindfulness-based stress reduction</td>
<td>Low - Mod</td>
<td>S, L</td>
<td>S, M, L</td>
</tr>
<tr>
<td>Cognitive Behavioral Therapy</td>
<td>Mod</td>
<td>S, M, L</td>
<td>S, M, L</td>
</tr>
<tr>
<td>Exercise</td>
<td>Low - Mod</td>
<td>S, M, L</td>
<td>S, M, L</td>
</tr>
</tbody>
</table>

CLBP Guidelines

<table>
<thead>
<tr>
<th>Organization</th>
<th>Year</th>
<th>Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAFP</td>
<td>2017</td>
<td>Adopted ACP guideline</td>
</tr>
<tr>
<td>ACOEM</td>
<td>2016</td>
<td>Low Back Disorders (incl. algorithm)</td>
</tr>
<tr>
<td>ACP</td>
<td>2017</td>
<td>Low Back Pain</td>
</tr>
<tr>
<td>ACRad</td>
<td>2015</td>
<td>Appropriate Use Criteria</td>
</tr>
<tr>
<td>AHRQ</td>
<td>2016</td>
<td>Noninvasive Nonpharmacological Treatments for Chronic Pain</td>
</tr>
<tr>
<td>AOA</td>
<td>2016</td>
<td>Osteopathic Manipulation LBP</td>
</tr>
<tr>
<td>Choosing Wisely</td>
<td>Various</td>
<td>Selected recommendations</td>
</tr>
</tbody>
</table>

CLBP Guideline: AHRQ

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Evid. Strength</th>
<th>Pain</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-level Laser Therapies</td>
<td>Low</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>Spinal Manipulation</td>
<td>Low</td>
<td>S, M</td>
<td>S, M</td>
</tr>
<tr>
<td>Massage</td>
<td>Low</td>
<td>M</td>
<td>S, M</td>
</tr>
<tr>
<td>Yoga</td>
<td>Low - Mod</td>
<td>S, M</td>
<td>S, M</td>
</tr>
<tr>
<td>Qigong</td>
<td>Low</td>
<td>S, M</td>
<td>S, M</td>
</tr>
<tr>
<td>Multidisciplinary Rehabilitation</td>
<td>Mod</td>
<td>S, M, L</td>
<td>S, M, L</td>
</tr>
</tbody>
</table>

Algorithm Excerpt: Knee OA

ACOEM Recommends:
1. Consider activity modification, weight loss, NSAIDs, acetaminophen
2. Change NSAID
3. Consider viscosupplementation, injections, glucocorticoid injections
4. Consider surgical management, arthroplasty

ACOEM https://www.mdguidelines.com/mda/knee-osteoarthrosis
Osteoarthritis and Chronic Low Back Pain
Wendy L. Wright, MS, ANP-BC, FNP-BC, FAANP, FAAN, FNAP

Low Back Algorithm

ACOEM Recommends
1. NSAIDs, topiramate, skeletal muscle relaxants, and carefully considered opioids for short term treatment
2. Consider yoga, spinal manipulative techniques, physical therapy
3. Consider duloxetine, cognitive behavioral therapy, and multidisciplinary rehabilitation
4. Keep Active!
5. Patient education is key!

Evidence on Movement

Encourage active treatment plan, avoid prolonged bed rest or passive modalities (CW).

Knee | Back
--- | ---
All patients in a walking exercise program (ACOEM) | Nonpharmacologic should be first line therapy and include exercise (ACP)
Strong recommendation for cardiovascular and/or resistance land-based exercise, aquatic exercise, and weight loss (ACRheum) | Prescribe activity including progressive walking program (ACOEM)
Evidence supports exercise, including PT (AAOS) | 
Exercise has beneficial medium/long-term outcomes (AHRQ)

First Line Treatments

Knee | Back
--- | ---
Consider activity modification, weight loss (ACOEM) | First line non-pharmacologic: include exercise, cognitive therapy, acupuncture, yoga, biofeedback, manipulation (ACP)
NSAIDs (ACOEM, ACP) | Activity: walking program (ACOEM)
NSAIDs, acetaminophen | 

Neuroanatomy of the pain pathway and analgesic targets in OA

Osteoarthritis and Chronic Low Back Pain
Wendy L. Wright, MS, ANP-BC, FNP-BC, FAANP, FAAN, FNAP

Medications

<table>
<thead>
<tr>
<th>Knee</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence-based medicine supported NSAIDs, tramadol (AAOS)</td>
<td>If non-pharmacological inadequate, move to pharmacological: NSAIDs first (ACP)</td>
</tr>
<tr>
<td>Little evidence for acetaminophen, opioids, topical (AAOS)</td>
<td>Tramadol or duloxetine after NSAID (ACP)</td>
</tr>
<tr>
<td>Some recommendation to start with topicals to minimize GI toxicity (Cochrane)</td>
<td>Do NOT use opiates first (CW)</td>
</tr>
<tr>
<td>No recommendation regarding opioid analgesics (ACP)</td>
<td>No evidence of benefit for acetaminophen, antiepileptics, TCA (ACP)</td>
</tr>
<tr>
<td>No recommendation regarding duloxetine (ACRheum)</td>
<td>No recommendation regarding duloxetine (ACRheum)</td>
</tr>
</tbody>
</table>

Evidence-based  Some Evidence  No Evidence

Knee Injections

<table>
<thead>
<tr>
<th>Knee Injections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some evidence for steroid injections (AAOS)</td>
</tr>
<tr>
<td>No evidence-based value for viscosupplement (hyaluronic acid) injections in improvement of function for moderate to severe knee OA (ACOEM)</td>
</tr>
<tr>
<td>No recommendation for intra-articular hyaluronate injections (ACRheum)</td>
</tr>
</tbody>
</table>

Knee Recommendations

<table>
<thead>
<tr>
<th>Knee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Either ice or heat can be helpful (ACOEM)</td>
</tr>
<tr>
<td>No recommendation for:</td>
</tr>
<tr>
<td>- Participation in balance exercises (alone or with strengthening exercises)</td>
</tr>
<tr>
<td>- Wearing lateral wedged insoles</td>
</tr>
<tr>
<td>- Receiving manual therapy alone (ACRheum)</td>
</tr>
</tbody>
</table>

Adding Pharmacotherapy

Exercise only

Exercise + OTC NSAIDs
Exercise + Prescription
Exercise + Other, including specialist referral

Osteopathic Manipulative Treatment

Osteopathic Manipulative Therapy (OMT) is “the therapeutic application of manually guided forces by an osteopathic physician to improve physiologic function and/or support homeostasis that has been altered by somatic dysfunction. OMT employs a variety of techniques.”

AOA consensus recommendation:
1. Evidence points in favor of using OMT to treat LBP
2. Greatest benefit appears to be pain control > improvement in functionality

Knee Bracing

Knee sleeves are controversial.

Off-loader bracing can be helpful for moderate to severe cases (ACOEM).

No recommendation for wearing knee braces, or using laterally developed patellar taping (ACRheum).
**Osteoarthritis and Chronic Low Back Pain**

**Wendy L. Wright, MS, ANP-BC, FNP-BC, FAANP, FAAN, FNAP**

---

So many options to improve physical function are available.  
Where should I start?

---

**Personalizing the Plan**

<table>
<thead>
<tr>
<th>Patient</th>
<th>Clinician</th>
</tr>
</thead>
<tbody>
<tr>
<td>Move</td>
<td>Coach patient in behavior change</td>
</tr>
<tr>
<td>Water Aerobics</td>
<td>Prescribe NSAIDs (oral, topical)</td>
</tr>
<tr>
<td>Heat and Ice</td>
<td>Chronic Disease Management</td>
</tr>
<tr>
<td>Knee Braces</td>
<td>Prescribe movement</td>
</tr>
<tr>
<td>Make movement a habit</td>
<td>Community-based activities</td>
</tr>
<tr>
<td>Core Strengthening</td>
<td>Silver Sneakers</td>
</tr>
<tr>
<td>Community</td>
<td>Heat and Ice</td>
</tr>
<tr>
<td></td>
<td>Exercise Prescription</td>
</tr>
<tr>
<td></td>
<td>Patient Education</td>
</tr>
<tr>
<td></td>
<td>Referral</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
</tr>
</tbody>
</table>

---

**What is your Treatment Plan?**

---

**Other Considerations:**

How would your treatment plan change if...

<table>
<thead>
<tr>
<th>Sue (Knee OA)</th>
<th>Juan (Back)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat/Ice</td>
<td>Has work-related pain?</td>
</tr>
<tr>
<td>Exercise Prescription</td>
<td>Is sleep impaired?</td>
</tr>
<tr>
<td>NSAID</td>
<td>Lives on farm 30 miles from town?</td>
</tr>
<tr>
<td>Patient Education</td>
<td>Wants to use CBD or medical marijuana?</td>
</tr>
<tr>
<td>Referral</td>
<td>Lives on farm 30 miles from town?</td>
</tr>
<tr>
<td>Follow-up</td>
<td>Wants to use CBD or medical marijuana?</td>
</tr>
</tbody>
</table>

---

**Engaging Sue and Juan**

Communication approach  
Come alongside  
Motivational interviewing  
Patient education  
Use other professionals in your practice or community

---

How can I best manage patients like Sue and Juan in my office?
Osteoarthritis and Chronic Low Back Pain
Wendy L. Wright, MS, ANP-BC, FNP-BC, FAANP, FAAN, FNAP

Practical Patient and Practice Management

Key Points
- You can make a difference in your patient’s lives for a condition that may be frustrating (for them AND you!!)
- It’s not about eliminating disease, it’s about the patient being able to achieve life goals.
- Partner with patients to reframe the conversation to focus on function (not pain) and find what motivates them to MOVE!
- Access www.PathwaysInManagement for tools and resources

Summary
- These are common conditions: approx 84% of adults experience low back pain within their lifetime and 80% over age 55 exhibit some OA.
- You can make a difference in your patient’s lives for a condition that may be frustrating!
- It’s not about eliminating disease, it is about the patient being able to achieve life goals.
- Build a therapeutic alliance with your patient through regular check-ins, and good problem solving.
- Imaging should be highly selective and not “routine.”
- Keep patients moving.
- Be creative in your recommendations.
- Art and science of medicine.
- Use medications appropriately.

Monday in the Office
- Next 10 patients
- Chart review
  - Implement PEG or another functional assessment
  - Implement exercise prescription
  - Patient education
  - Prescribe McGill back exercises or yoga program
- Reduce number of patients receiving imaging for uncomplicated back pain (include CW imaging as a tool)

Visit www.PathwaysInManagement.org

Thank you for attending!

Supported by an educational grant from Pfizer/Lilly.
Osteoarthritis and Chronic Low Back Pain
Wendy L. Wright, MS, ANP-BC, FNP-BC, FAANP, FAAN, FNAP

FUNCTIONAL ASSESSMENT TOOLS

Yoga will help improve flexibility, strength, balance, and focus, and should be considered for anyone with osteoarthritis or chronic low back pain. Yoga can reduce pain and disability, and can be practiced safely. Find a yoga practice that is right for you.

https://www.youtube.com/user/YOGABYCANDACE

Losing a pound results in a 4-pound reduction in knee-joint load for each step. Obesity is the most important factor risk in osteoarthritis of the knee.

PathwaysInManagement.org

Don't base restrictions only on pain.

Rarely necessary to restrict anyone with low back pain to less than 20 pounds material handling.

Avoid prescribing light duty. Instead, be specific about activities that are allowed.

Focus on function.

Base prescription upon objectively verifiable findings.

Write prescription for transitional duty.

Expectancy: Set appropriate treatment and improvement goals and expectations with the patient to improve adherence.

Centrality: Coordinate care through a central health care provider.

Immediacy: Timely action minimizes worse outcomes.

Proximity: Keeping the worker within the workplace improves outcomes as they return to their routine and social work patterns.

Simplicity: Communicate the return to work plan using easy to understand terminology. Complex language can be incorrectly interpreted.

Retain a return to work prescription.

Tools available at www.PathwaysInManagement.org

---

THE BRIEF PAIN INVENTORY SHORT FORM:

The Brief Pain Inventory (BPI) is a short, self-administered, practical questionnaire that is "user-friendly" and assesses pain location, intensity, and pattern as well as patient beliefs and the impact of pain on the patient's quality of life.

The tool validated in primary care clinics to get quick snapshot of the effect on pain on the patient's function with the advantage it is changeable.

The BPI is a standard instrument for osteoarthritis of the knee.

The Oswestry Disability Index is an index derived from the Oswestry Low Back Pain Questionnaire to quantify disability.

Tool validated in primary care clinics to get quick snapshot of the effect on pain on the patient's function with the advantage it is changeable.

Tools available at www.PathwaysInManagement.org

---

THE PEG TOOL:

The PEG tool is a functional assessment tool designed to determine the impact of pain on the patient's work ability.

Tools available at www.PathwaysInManagement.org

---

THE 5% RISK FACTORS:

- Obesity
- Physical inactivity
- Smoking
- Inflammation
- Trauma

These factors increase risk for osteoarthritis.


https://yogawithadriene.com/chair-yoga/

iTunes and SoundCloud. Each session offers a unique sequence of asana, breath work, and stillness.

YOGA SESH offers alignment-focused Vinyasa Yoga and Yin Yoga classes by Caitlin Rose Kenny available on

FIND A REGULAR TIME TO PRACTICE

Start with short videos – try chair yoga.

Keep a log and record the days you do yoga.

Look for yoga classes in your community or check the online resources listed below.


The Oswestry Disability Index is an index derived from the Oswestry Low Back Pain Questionnaire to quantify disability.

Long form:

Short Form:

The Brief Pain Inventory (BPI) is a short, self-administered, practical questionnaire that is "user-friendly" and assesses pain location, intensity, and pattern as well as patient beliefs and the impact of pain on the patient's quality of life.

The BPI is a standard instrument for osteoarthritis of the knee.

The Oswestry Disability Index is an index derived from the Oswestry Low Back Pain Questionnaire to quantify disability.

Tool validated in primary care clinics to get quick snapshot of the effect on pain on the patient's function with the advantage it is changeable.

Tools available at www.PathwaysInManagement.org

---

THE 5% RISK FACTORS:

- Obesity
- Physical inactivity
- Smoking
- Inflammation
- Trauma

These factors increase risk for osteoarthritis.

EVIDENCE FOR MEDICATIONS, INJECTIONS, AND EXERCISE

Evidence supports exercise, including PT (AAOS) (ACRheum) (AHRQ). Exercise has been shown to improve gait, range of motion, and exercise tolerance. A strong recommendation for cardiovascular and/or resistance training is made for all patients in a walking exercise program (ACOEM). No recommendation regarding duloxetine (ACRheum) (ACRheum) (AAOS) (Cochrane). Little evidence for acetaminophen, opioids, and topicals (AAOS). No recommendation for intra-articular hyaluronate injections (ACRheum). No evidence-based value for viscosupplement (hyaluronic acid) injections in improvement of function for moderate to severe knee OA.

Exercise tolerance
- Improve gait
- Improve range of motion

Medical guidelines suggest 4-6 visits is plenty...some would even say less. The goal of therapy is to establish activities that the patient can complete on their own. Most evidence-based instructions to exercise for tolerance and improvement of endurance.

Set specific deficits that you have found on your examination that you wish to have the physical therapist improve upon; examples are range of motion or gait deficits. Include the exact diagnosis so the therapist can identify the appropriate approach to improve function. Communicate appropriate expectations with your patients prior to their appointment. Therapists may begin with bicycle or aquatic activities as patients may not immediately tolerate walking or treadmill work.

Osteoarthritis and Chronic Low Back Pain
Wendy L. Wright, MS, ANP-BC, FNP-BC, FAANP, FAAN, FNAP