Sustainable
Integrated
Evidence based
Spine care.

The management of low back pain without serious pathology or neurological deficits

April 21, 2016

Geoff Outerbridge

Non-specific/mechanical LBP

- Most patients complaining of low back pain experience symptoms from a minor mechanical malfunction.
- Fewer than 5% have a more sinister explanation
- The vast majority of patients are presenting to primary care with non-specific/mechanical low back pain
- 90% are not due to serious pathology and do need investigations or surgical referrals

MEDICATION/IMAGING
TIME OFF WORK

PASSIVE CARE

ACTIVE/SELF CARE

EDUCATION

EDUCATION ACTIVE/SELF CARE/RTW

PASSIVE CARE

MEDICATION/IMAGING

The literature has identified common barriers to optimal low back pain care that are consistent across health care systems internationally.

Patient	Provider	System
• Lack of understanding for reason to investigation/ refer • Lack of self-management strategies • Request for more medications • Request for time off work • Lack of understanding of urgent symptoms versus pain escalation	• Dealing with complex chronic low back pain • Patient expectations for MRI requests & referrals • Psychosocial patient needs • Lack of patient educational resources • Work related restrictions • Medication (Opioid Management)	• Poor communication between patient providers for care • Lack of coordinated patient education material • Lack of web resources • Lack of consensus on guidelines • Lack of common approach between providers assessment and treatment

Assessment:
History
Physical and neurological exam
screen for red flags
Screen for psychosocial risk factors
(yellow flags)

Red flags?

YES → Consider referring for evaluation and treatment (Emergency or relevant specialist)

NO

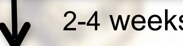
Acute and sub-acute (first episode)
(Pain duration under 12 weeks)

Manual therapist

Or

MO (CORE Low Back tool)

- Educate patients that back pain typically resolves within a few weeks (refer to patient information sheet)
- Prescribe self-care strategies and continuation of usual activities as tolerated.
- Encourage early return to work
- Recommend physical activity and/or exercise
- Consider analgesics



Re-assess (including red flags) if patient is not returning to normal function or symptoms are worsening.

Consider manual therapy and activity/education recommendations

Chronic or recurrent
(Pain duration Over 12 weeks)

Prescribe physical or therapeutic activity
If no prior conservative care - consider manual therapy

Referral options:
- Community-based active rehabilitation program
- Community-based self management/cognitive behavioural therapy program

Additional options:
- Progressive muscle relaxation
- Acupuncture
- Massage therapy, TENS as an adjunct to active therapy
- Aqua therapy and yoga

Moderate to severe pain

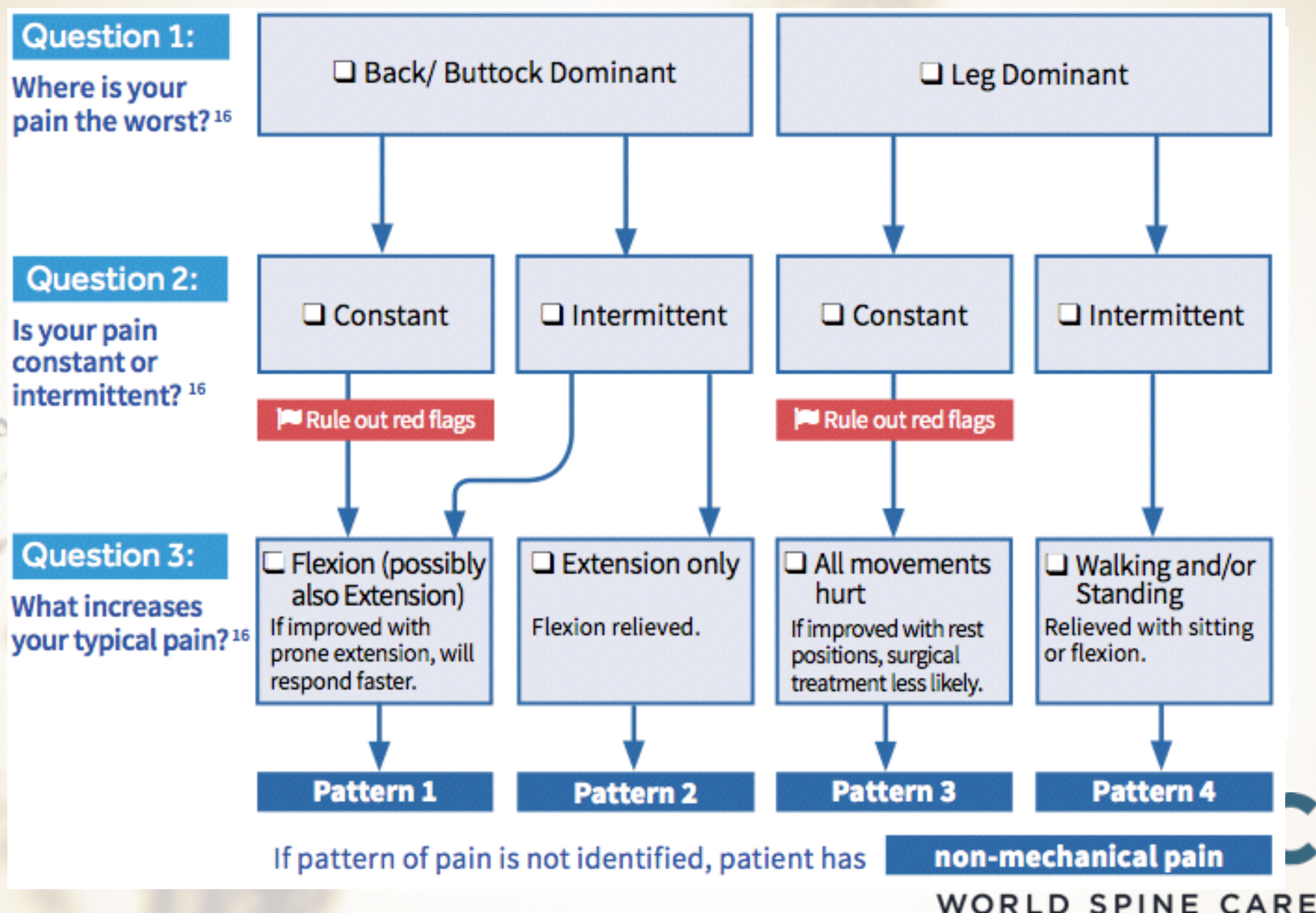
Referral options:
- Multidisciplinary chronic pain program

Overview of the Clinically Oriented Relevant Exam (CORE) Low back tool

CORE program will help:

- Understand current guidelines for diagnosis and management of LBP
- Develop a clinical approach to mechanical back pain
- Improve skills to facilitate patient self management
- Incorporate useful tools and resources into your practice

MOHLTC Ontario


Question 1:
Where is your pain the worst? 16
Back/ Buttock Dominant
Leg Dominant
Question 2:
Is your pain constant or intermittent? 16
Constant
Intermittent
Constant
Intermittent
Rule out red flags
Rule out red flags
Question 3:
What increases your typical pain? 16
Flexion (possibly also Extension)
If improved with prone extension, will respond faster.
Extension only
Flexion relieved.
All movements hurt
If improved with rest positions, surgical treatment less likely.
Walking and/or Standing
Relieved with sitting or flexion.
Pattern 1
Pattern 2
Pattern 3
Pattern 4
If pattern of pain is not identified, patient has
non-mechanical pain
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Question 4: Is there anything you can NOT do now that you could do before the onset of your low back pain?[16]

❑ No

❑ Yes → Rule out Yellow Flags

What? ____________________ **Why?** ❑ Back/Buttock Pain ❑ Leg Pain

Confirm this is consistent with Question 1

Question 5: Have you had any unexpected accidents with your bowel or bladder function since **this** episode of your low back pain started?[16]

❑ No

❑ Yes → Rule out Cauda Equina Syndrome

Question 6: If age of onset < 45 years, are you experiencing morning stiffness in your back > 30 minutes?[17]

❑ No

❑ Yes → Systemic Inflammatory Arthritis Screen[18]

	Pattern 1
Commonly Called[27]	Disc Pain
Medication[5,6,7] ④	❑ Acetaminophen ❑ NSAID
Recovery Positions[28]	
Starter Exercises[29]	Repeated prone lying passive extensions (i.e. hips on ground, arms straight). 10 reps, 3 x day
Exercises	ISAEC[35]; HealthLink BC[34]; SASK Pattern 1[30]
Functional Activities[36]	❑ Encourage short frequent walking ❑ Reduce sitting activities ❑ Use extension roll for short duration sitting
Follow-up	❑ **2–4 weeks** if referred to therapy, or prescribed medication ❑ **PRN** if given home program and relief noted in office visit
Self Management[37-40] ⑥	Once pain is reduced, engage patient for self management goals

Pattern 1

- Back dominant pain
- Worse with flexion
- Neurological examination is normal
- Constant **or** Intermittent

Better with 5 prone passive extensions
Pattern 1 Prone Extension Positive (PEP)
The patient has a directional preference.

No change/worse with 5 prone passive extensions
Pattern 1 Prone Extension Negative (PEN)
The patient has no directional preference.

	Pattern 1
Commonly Called[27]	Disc Pain
Medication[5,6,7] ④	❑ Acetaminophen ❑ NSAID
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Starter Exercises[29]	Repeated prone lying passive extensions (i.e. hips on ground, arms straight). 10 reps, 3 x day
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Self Management[37-40] ⑥	Once pain is reduced, engage patient for self management goals

Therapy

Pattern 1 PEP – Educate and Exercise

- Reduce Sitting / Flexion
- Increase extension
  - – Walking
  - – Lumbar Roll
- Prescribe Prone Extensions
- When range improves and pain decrease - Core stability

Pattern 1 PEN – Educate and Exercise

- Increase extension gradually and progressively from unweighted flexion
- Then, Prescribe Prone Extensions

	Pattern 1	Pattern 2
Commonly Called[27]	Disc Pain	Facet Joint Pain
Medication[5,6,7] ④	❑ Acetaminophen ❑ NSAID	❑ Acetaminophen ❑ NSAID
Recovery Positions[28]		
Starter Exercises[29]	Repeated prone lying passive extensions (i.e. hips on ground, arms straight). 10 reps, 3 x day	Sitting in a chair, bend forward and stretch in flexion. Use hands on knees to push trunk upright. Small frequent repetitions through the day
Exercises	ISAEC[35]; HealthLink BC[34]; SASK Pattern 1[30]	ISAEC[35]; HealthLink BC[34]; SASK Pattern 2[31]
Functional Activities[36]	❑ Encourage short frequent walking ❑ Reduce sitting activities ❑ Use extension roll for short duration sitting	❑ Encourage sitting or standing with foot stool ❑ Reduce back extension and overhead reach
Follow-up	❑ **2–4 weeks** if referred to therapy, or prescribed medication ❑ **PRN** if given home program and relief noted in office visit	❑ **2–4 weeks** if referred to therapy, or prescribed medication ❑ **PRN** if given home program and relief noted in office visit
Self Management[37-40] ⑥	Once pain is reduced, engage patient for self management goals	Self management can be initiated in 1st or 2nd session with most patients

ern 2

dominant pain

e with extension

r worse with flexion

ys intermittent

ain is constant or if there is any pain on the patient is Pattern 1

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	Pattern 1	Pattern 2	Pattern 3
Commonly Called[27]	Disc Pain	Facet Joint Pain	Compressed Nerve Pain
Medication[5,6,7] (4)	❑ Acetaminophen ❑ NSAID	❑ Acetaminophen ❑ NSAID	❑ May require opioids if 1st line pain meds not sufficient (5)
Recovery Positions[28]			
Starter Exercises[29]	Repeated prone lying passive extensions (i.e. hips on ground, arms straight). 10 reps, 3 x day	Sitting in a chair, bend forward and stretch in flexion. Use hands on knees to push trunk upright. Small frequent repetitions through the day	"Z" lie (see image above) **Caution:** exercise will aggravate the pain so start with pain reducing positions
Exercises	ISAEC[35]; HealthLink BC[34]; SASK Pattern 1[30]	ISAEC[35]; HealthLink BC[34]; SASK Pattern 2[31]	ISAEC[35]; HealthLink BC[34]; SASK Pattern 3[32]
Functional Activities[36]	❑ Encourage short frequent walking ❑ Reduce sitting activities ❑ Use extension roll for short duration sitting	❑ Encourage sitting or standing with foot stool ❑ Reduce back extension and overhead reach	❑ Change positions frequently from sit to stand to lie to walk
Follow-up	❑ **2-4 weeks** if referred to therapy, or prescribed medication ❑ **PRN** if given home program and relief noted in office visit	❑ **2-4 weeks** if referred to therapy, or prescribed medication ❑ **PRN** if given home program and relief noted in office visit	❑ **2 weeks** for pain management and neurological review
Self Management[37-40] (6)	Once pain is reduced, engage patient for self management goals	Self management can be initiated in 1st or 2nd session with most patients	Patient is not usually suitable for self management due to high pain levels and possible surgical intervention

y back movement

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loss

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Pattern 4 PEP

- Leg dominant pain
- Always intermittent
- Worse with flexion

- Rarely a positive irritative test and/or conduction loss

- Always better with unloaded back extension movement or position

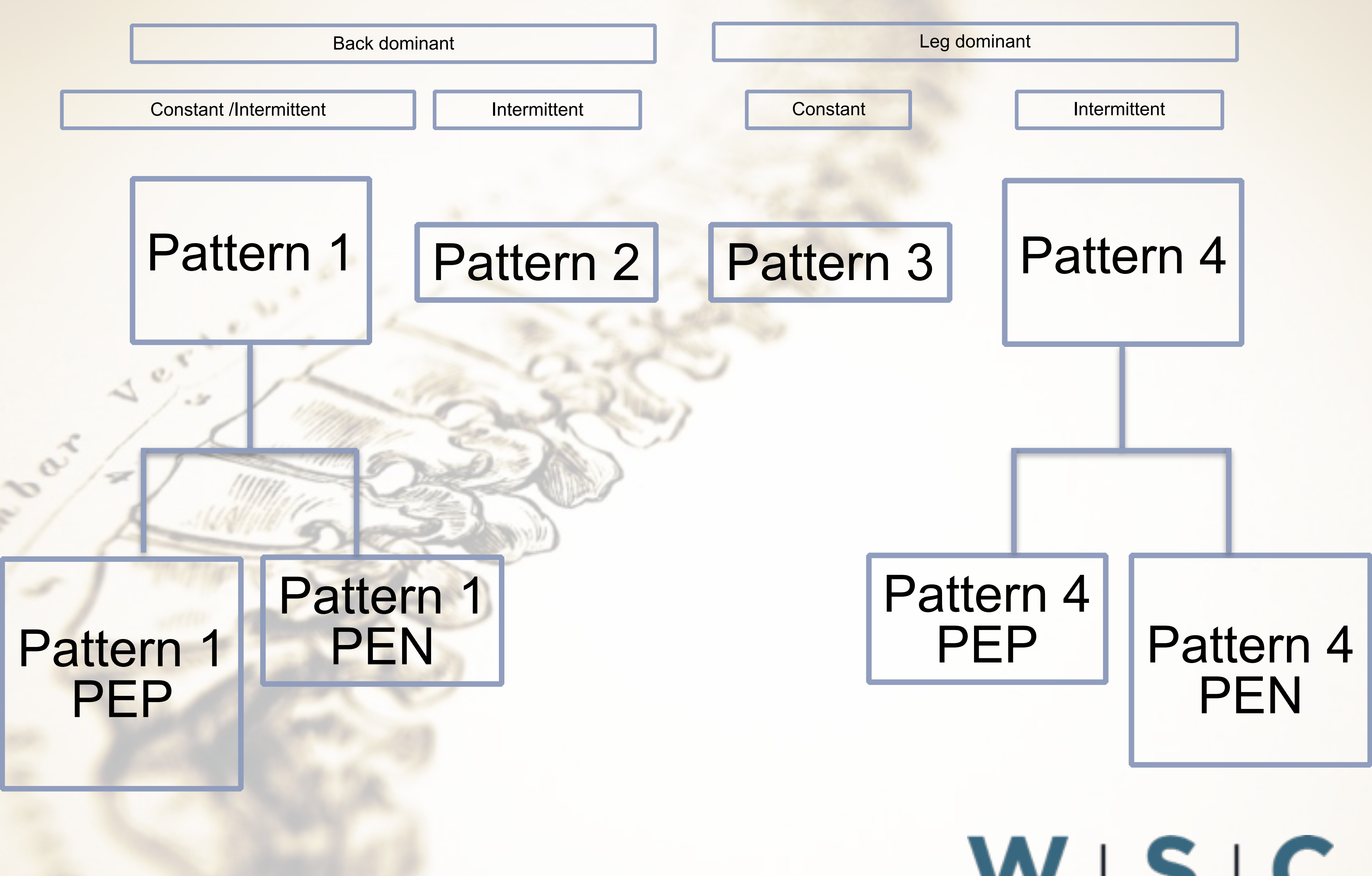
Leg dominant pain that responds to mechanical treatment.

Pattern 4 PEN: Neurogenic claudication

- Leg dominant pain
- Always intermittent
- Worse with activity in extension
- Better with rest in flexion
- May have transient weakness

- Negative irritative tests
- Possible permanent conduction loss

	Pattern 1	Pattern 2	Pattern 3	Pattern 4
Commonly Called[27]	Disc Pain	Facet Joint Pain	Compressed Nerve Pain	Symptomatic Spinal Stenosis (Neurogenic Claudication)
Medication[5,6,7] ④	❑ Acetaminophen ❑ NSAID	❑ Acetaminophen ❑ NSAID	❑ May require opioids if 1st line pain meds not sufficient ⑤	❑ Acetaminophen ❑ NSAID
Recovery Positions[28]				
Starter Exercises[29]	Repeated prone lying passive extensions (i.e. hips on ground, arms straight). 10 reps, 3 x day	Sitting in a chair, bend forward and stretch in flexion. Use hands on knees to push trunk upright. Small frequent repetitions through the day	"Z" lie (see image above) **Caution:** exercise will aggravate the pain so start with pain reducing positions	Rest in a seated or other flexed position to relieve the leg pain
Exercises	ISAEC[35]; HealthLink BC[34]; SASK Pattern 1[30]	ISAEC[35]; HealthLink BC[34]; SASK Pattern 2[31]	ISAEC[35]; HealthLink BC[34]; SASK Pattern 3[32]	ISAEC[35]; HealthLink BC[34]; SASK Pattern 4[33]
Functional Activities[36]	❑ Encourage short frequent walking ❑ Reduce sitting activities ❑ Use extension roll for short duration sitting	❑ Encourage sitting or standing with foot stool ❑ Reduce back extension and overhead reach	❑ Change positions frequently from sit to stand to lie to walk	❑ Use support with walking or standing. Use frequent sitting breaks
Follow-up	❑ **2–4 weeks** if referred to therapy, or prescribed medication ❑ **PRN** if given home program and relief noted in office visit	❑ **2–4 weeks** if referred to therapy, or prescribed medication ❑ **PRN** if given home program and relief noted in office visit	❑ **2 weeks** for pain management and neurological review	❑ **6–12 weeks** for symptom management and determination of functional impact
Self Management[37-40] ⑥	Once pain is reduced, engage patient for self management goals	Self management can be initiated in 1st or 2nd session with most patients	Patient is not usually suitable for self management due to high pain levels and possible surgical intervention	Self management can be initiated in 1st or 2nd session with most patients



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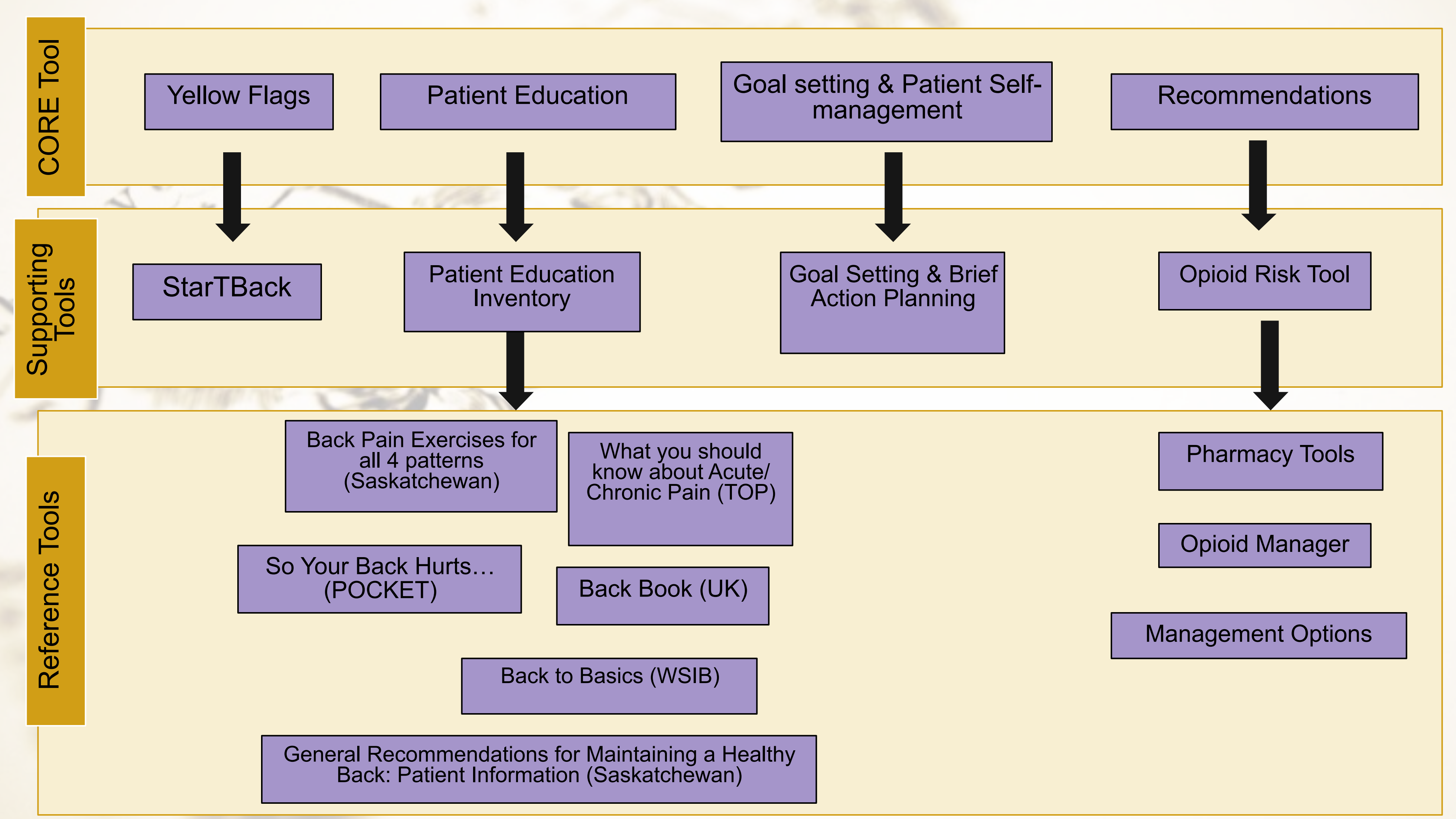
Reference Tools



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- About Your Spine
- Education seminars and conferences
- Media
- Research articles
- Useful Links

Thanks to Julia Alleyne and Centre for effective practice of Ontario

Key messages for Your Patient

- ❑ Your examination today **does not demonstrate that there are any red flags present to indicate serious pathology**, but if your symptoms persist for > 6 weeks, schedule a follow-up appointment.
- ❑ **Imaging tests** like X-rays, CT scans and MRIs are not helpful for recovery or management of acute or recurring low back pain unless there are signs of serious pathology.
- ❑ **Low back pain is often recurring** and recovery can happen without needing to see a healthcare provider. You can learn how to manage low back pain when it happens and use this information to help you recover next time.
- ❑ **You may need pain medication** to help you return to your daily activities and initiate exercise more comfortably. It is activity, however, and not the medication that will help you recover more quickly.
- ❑ If you are **feeling symptoms of sadness or anxiety**, this could be related to your condition and could impact your recovery, schedule a follow-up appointment.

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