**LOW BACK PAIN STRATEGY**

Clinically Organized Relevant Exam (CORE) Back Tool

This tool will guide the clinician to recognize common mechanical back pain syndromes and screen for other conditions where management may include investigations, referral and specific medications. This is a focused examination for clinical decision-making in primary care.

### A. HISTORY

1. Where is your pain the worst?
   - Back Dominant - Buttock
   - Leg

2. Is your pain:
   - Intermittent
   - Constant → Rule out red flags

3. Does bending forward increase your typical back or leg pain?
   - Yes
   - No

4. Have you had any unexpected accidents with your bowel or bladder function since this episode of your low back/leg pain started?
   - Yes → Rule out cauda equina syndrome
   - No

5. If age of onset < 45 years, are you experiencing morning stiffness in your back > 30 minutes?
   - Yes → Systemic inflammatory arthritis screen
   - No

### B. SCREENING

**Red Flags (check if positive)**

- **Neurological:** diffuse motor/sensory loss, progressive neurological deficits, cauda equina syndrome
- **Infection:** fever, IV drug use, immune suppressed
- **Fracture:** trauma, osteoporosis risk
- **Tumour:** hx of cancer, unexplained weight loss, significant unexpected night pain, significant fatigue
- **Inflammation:** chronic low back pain > 3 months, age of onset < 45, morning stiffness > 30 minutes, improvement with exercise, disproportionate night pain

**Radiology Criteria (check if positive)**

- **No Radiology Criteria**

**Suggested Imaging for Suspected Pathology:**

- **X-Ray:** suspected trauma or fragility fracture
- **MRI:** functionally significant or progressive neurological deficits, tumour, unresponsive radicular syndrome, neurogenic claudication, cauda equina syndrome
- **Bone Scan:** infection, systemic inflammatory process

**Surgical Referral (check if positive)**

- **No Surgical Criteria**

**Emergency Room Referral**

Acute cauda equina syndrome is a surgical emergency. Symptoms are:

- Urinary retention followed by insensible urinary overflow
- Unrecognized fecal incontinence
- Distinct loss of saddle/perineal sensation

**Surgical Referral**

- Failure to respond to evidence based compliant conservative care of at least 12 weeks
- Unbearable constant leg dominant pain
- Worsening nerve irritation tests (SLR or femoral nerve stretch)
- Expanding motor, sensory or reflex deficits
- Recurrent disabling sciatica
- Disabling neurogenic claudication

**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

---

### C. PHYSICAL EXAMINATION

**COMMENTS**

<table>
<thead>
<tr>
<th>Standing Gait</th>
<th>Normal</th>
<th>Abnormal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heel walking (L4-5)</td>
<td>Toe walking (S1)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sitting</th>
<th>Normal</th>
<th>Abnormal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patellar reflex (L3-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quadriceps power (L3-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ankle dorsiflexion power (L4-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Great toe extension power (L5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Great toe flexion power (S1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plantar response, upper motor test</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Kneeling</th>
<th>Normal</th>
<th>Abnormal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ankle reflex (S1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lying</th>
<th>Normal</th>
<th>Abnormal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Femoral nerve stretch (L3-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glutaeus maximus power (S1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saddle sensation testing (S2-3-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passive back extension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(patient uses arms to elevate upper body)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** Tests above that are in green indicate suggested minimum requirements

Consider asking your patients:

Please rate your pain by circling the one number that best describes your pain at its **WORST** in the last week:

| Pain as bad as you can imagine |
|---|---|---|---|---|---|---|---|---|---|
| No pain at all | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Please rate your pain by circling the one number that best describes your pain at its **LEAST** in the last week:

| Pain as bad as you can imagine |
|---|---|---|---|---|---|---|---|---|---|
| No pain at all | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**What can you NOT do now that you could do before the onset of your low back pain?**
D. ASSESSMENT (check most applicable box)

**Mechanical Back Dominant Pain**

<table>
<thead>
<tr>
<th>Pattern 1</th>
<th>Pattern 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermittent or constant back pain, flexion aggravated, extension relieved</td>
<td>Intermittent back pain, extension aggravated, flexion relieved/no change</td>
</tr>
</tbody>
</table>

Normal neurological

**Mechanical Leg Dominant Pain**

<table>
<thead>
<tr>
<th>Pattern 3</th>
<th>Pattern 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant leg pain, aggravated by flexion</td>
<td>Intermittent leg pain, aggravated with walking and relieved with sitting</td>
</tr>
</tbody>
</table>

Positive SLR and/or conduction deficit

May have decreased root conduction

E. PATIENT EDUCATION

**Mechanical Back Dominant Pain**

- Flexion Aggravated
  - Repeated passive extension in lying progressing to standing
- Extension Aggravated
  - Sitting trunk flexion
  - Knees-to-chest stretch
- Flexion / Extension Aggravated
  - Neutral positions
  - Small progressions

**Mechanical Leg Dominant Pain**

- Non-spine related pain
- Spine pain does not fit mechanical pattern

F. GOAL SETTING & PATIENT SELF-MANAGEMENT

- Patient not appropriate for self-management
- Patient self-management not discussed at this visit

1. What is it about your low back pain that worries you the most?

2. Is there anything you feel you can do to improve your low back pain?

3. How confident are you that you can carry out your goal?

Not at all confident 0 1 2 3 4 5 6 7 8 9 10 Very confident

G. RECOMMENDATIONS

**Goal Specific Rehabilitation**

- Chiropractic Therapy
- Physiotherapy
- Exercise/Education
- Weight Management
- Massage Therapy
- Other:_________

**Specialist referral**

- Cognitive Behavioural Therapy
- Multi-disciplinary Pain Clinic
- Rheumatologist
- Spine Surgeon
- Physiatrist
- Other:_________

**Medication (if required)**

- Analgesic
- Muscle relaxant
- NSAID
- Opioid
- Other

H. FOLLOW-UP

- PRN
- 2 weeks
- 4 weeks
- 6 weeks
- 3 months
- 6 months
- 1 year
- Other:_________

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 recuring 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.

Resources, references and additional information on how to use this tool in your practice can be found in the CORE Back Tool Guide, available at www.effectivepractice.org/lowbackpain and ontario.ca/lowbackpain.

This tool was created through the Government of Ontario’s Provincial Low Back Pain Strategy under the clinical leadership of Drs. Julia Alleyne, Hamilton Hall and Raja Rampersaud with the review and advice of the Education Planning Committee and primary care focus groups facilitated by Centre for Effective Practice. This tool and further information on the development of the Low Back Pain Toolkit, including committee membership and additional tools, are available at www.effectivepractice.org/lowbackpain and ontario.ca/lowbackpain.

The CORE Back Tool is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 2.5 Canada License.

January 2013

If you’re interested in building upon this work or using the tool for commercial purposes, please contact info@effectivepractice.org.