### Red Flags

Red Flags help identify rare but potentially serious conditions. They include:
- Features of Cauda Equina Syndrome including sudden or progressive onset of loss of bladder/bowel control, saddle anaesthesia (emergency)
- Severe worsening pain, especially at night or when lying down (urgent)
- Significant trauma (urgent)
- Weight loss, history of cancer, fever (urgent)
- Use of steroids or intravenous drugs (urgent)
- Patient with first episode of severe back pain over 50 years old, especially over 65 (soon)
- Widespread neurological signs (soon)

**EMERGENCY -** referral within hours  
**URGENT -** referral within 24 - 48 hours  
**SOON -** referral within weeks

### Yellow Flags

Yellow Flags indicate psychosocial barriers to recovery. They include:
- Belief that pain and activity are harmful  
- ‘Sickness behaviours’ (like extended rest)  
- Low or negative mood, social withdrawal  
- Treatment expectations that do not fit best practice  
- Problems with claim and compensation  
- History of back pain, time off, other claims  
- Problems at work, poor job satisfaction  
- Heavy work, unsociable hours (shift work)  
- Overprotective family or lack of support

### Conduct a full assessment:

- History taking  
- Physical and neurological exam  
- Evaluation of Red Flags  
- Psychosocial risk factors/Yellow Flags

**Any Red Flags?**

- **Yes**
- **No**

### Acute and Subacute

(Within 12 weeks of pain onset)

- Educate patient that low back pain typically resolves within a few weeks, but that recurrences are common (refer to patient information sheet and brochure)
- Prescribe self-care strategies including alternating cold and heat, continuation of usual activities as tolerated
- Encourage early return to work
- Prescribe exercise or therapeutic exercise
- Consider analgesics in this order:
  - Acetaminophen
  - NSAIDs
  - Short-course muscle relaxants
  - Short-acting opioids (rarely, for severe pain)

**One to Six Weeks**

- Reassess (including Red Flags) if patient is not returning to normal function or symptoms are worsening

### Consider Referral

- Physical therapist
- Chiropractor
- Osteopathic physician
- Physician specializing in musculoskeletal medicine
- Spinal surgeon (for unresolved radicular symptoms)
- Multidisciplinary pain program (if not returning to work)

### Chronic

(More than 12 weeks since pain onset)

- Educate patient with a clear diagnosis, advice to stay active, and discussion of hurt vs. harm and activity pacing
- Prescribe exercise or therapeutic exercise
- Analgesics Options
  - Acetaminophen
  - NSAIDs (consider PPI)
  - Short-term cyclobenzaprine if prominent muscle spasm
  - Low-dose analgesic antidepressants
  - See medication table in the complete guideline for recommendations if neuropathic pain suspected
- Referral Options
  - Community-based active rehabilitation program
  - Community-based self-management/cognitive behavioural therapy program
- Additional Options
  - Progressive relaxation or EMG biofeedback
  - Acupuncture, as a short-term or adjunct therapy
  - Massage, as an adjunct therapy
  - Yoga and aqua therapy

**Moderate to Severe Pain**

- Tramadol, opioids for carefully selected patients with documented functional goals to monitor for improvement (refer to Canadian National Opioid Guideline endorsed by the College of Physicians and Surgeons of Alberta - see p. 2)
- Referral Options
  - Multidisciplinary chronic pain program
  - Injection therapies in carefully selected patients
  - Surgery in carefully selected patients

### Consider referring for evaluation (including lab tests and imaging as indicated) and treatment

- e. g., emergency room, relevant specialist, rheumatologist (in the case of inflammatory disease)
### Key Messages
- Do a full clinical assessment; rule out red flags and yellow flags
- In the absence of red flags, reassure the patient there is no reason to suspect a serious cause
- Reinforce that pain typically resolves in a few weeks without intervention, but may recur
- Recommend exercise and therapeutic exercise
- If pain continues beyond six weeks, reassess and consider additional treatment and referrals
- The goal of chronic pain management is improved quality of life
- Check for yellow flags and if present, follow good clinical practice
- Encourage and support pain self-management
- Monitor patient for relative benefit versus side effects

### Contraindications
Evidence indicates these actions are ineffective or harmful
- Lab tests and diagnostic imaging in the absence of red flags
- Prolonged bed rest
- Traction (including motorized)
- Ultrasound
- Oral and systemic steroids
- Epidural steroid injections in the absence of radicular pain
- TENS for acute pain
- TENS as solo treatment for chronic pain

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### Medication Table

<table>
<thead>
<tr>
<th>Pain Type</th>
<th>Medication</th>
<th>Dosage Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute and sub-acute low back pain or flare-up of chronic low back/spinal pain</td>
<td><strong>1st line</strong> Acetaminophen</td>
<td>Up to 1000 mg QID (max of 3000 mg/day long-term)</td>
</tr>
<tr>
<td></td>
<td><strong>2nd line</strong> Ibuprofen</td>
<td>Up to 800 mg TID (max of 800 mg QID)</td>
</tr>
<tr>
<td></td>
<td>NSAIDs (consider PPIs if &gt;45 years of age) Diclofenac</td>
<td>Up to 50 mg BID</td>
</tr>
<tr>
<td></td>
<td><strong>Add:</strong> Cyclobenzaprine for prominent muscle spasm</td>
<td>10 to 30 mg/day; Greatest benefit seen within one week; therapy up to 2 weeks may be justified</td>
</tr>
<tr>
<td></td>
<td>If already on a controlled release opioid: add a short-acting opioid or increase controlled release opioid by 20 to 25%</td>
<td>See opioids below</td>
</tr>
<tr>
<td>Chronic low back/spinal pain</td>
<td><strong>1st and 2nd lines</strong> See acute pain, above</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>3rd line</strong> Amitriptyline Nortriptyline* Fewer adverse effects</td>
<td>10 to 100 mg HS</td>
</tr>
<tr>
<td></td>
<td><strong>3rd line</strong> Codeine</td>
<td>30 to 60 mg every 3 to 4 hours</td>
</tr>
<tr>
<td></td>
<td><strong>3rd line</strong> Controlled release codeine</td>
<td>50 to 100 mg Q8h, may also be given Q12h</td>
</tr>
<tr>
<td></td>
<td><strong>4th line</strong> Tramadol**</td>
<td>Slow titration max 400mg/day. Note: Monitor total daily acetaminophen dose when using tramadol - acetaminophen combination</td>
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<tr>
<td></td>
<td><strong>5th line</strong> Morphine sulfate</td>
<td>15 to 45 mg BID</td>
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<tr>
<td></td>
<td><strong>5th line</strong> Hydromorphone HCl</td>
<td>3 to 10 mg BID</td>
</tr>
<tr>
<td></td>
<td><strong>5th line</strong> Oxycodone HCl</td>
<td>10 to 30 mg BID</td>
</tr>
<tr>
<td></td>
<td><strong>5th line</strong> Fentanyl patch</td>
<td>12.5 to 25 mcg/hr Q3 days</td>
</tr>
</tbody>
</table>

**for carefully selected patients with documented functional goals to monitor for improvement**

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*See the guideline’s companion documents 'Clinical Assessment of Psychosocial Yellow Flags' and 'Management of Psychosocial Yellow Flags' on the TOP website*

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- This guideline was written to provide primary healthcare providers and patients with guidance about appropriate prevention, assessment, and intervention strategies
- It was developed by a multidisciplinary team of Alberta clinicians and researchers
- This guideline is for adults 18 years of age or older with low back pain and is not applicable to pregnant women
- It is recognized that not all recommended treatment options are available in all communities
- For further details on the recommendations visit: http://tinyurl.com/top-lowbackpain