# HANDLING BACK PAIN - History

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1. Where is your pain the worst? (*this is to differentiate back-dominant vs. leg-dominant pain*) **Leg pain below the knee is most helpful*
2. Is the pain intermittent *(even for a few seconds)* or constant?
3. How do the symptoms limit you? Personal care, house, yard, recreation, work.

| Intermittent back-dominant pain is mechanical and benign and patient can be reassured |
|---|

About 90% of patients with acute low back problems spontaneously recover activity tolerance within 1 month.

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**Red Flags** for potentially serious conditions

| **Possible fracture** | **Possible tumor or infection** | **Possible cauda equina syndrome** |
|---|---|---|
| Major trauma, such as MVA or fall from height<br><br>Minor trauma or even strenuous lifting in potentially osteoporotic patient**<br><br>**Major risks for osteoporosis:<br>- elderly > 65<br>- post menopausal<br>- steroid use<br>- alcohol<br>- past OP # | Age over 50 or under 20<br><br>History of cancer.<br><br>Constitutional symptoms such as recent fever or chills or unexplained weight loss.<br><br>Recent factors for spinal infection; recent bacterial infection (e.g. urinary tract infection); IV drug abuse; or immune suppression (steroids, transplant, or HIV).<br><br>Pain that is worse when supine; severe nighttime pain. | Saddle anesthesia<br><br>Recent onset of bladder dysfunction, such as urinary retention, increased frequency or overflow incontinence<br><br>Severe or progressive neurological deficit in the lower extremity. |

## Examination

## Investigations (if no red flags – not needed in first month)

| Lumbar-sacral x-ray | CBC, ESR, CRP, U/A | Immediate consultation |
|---|---|---|
| | Bone scan | Imaging |

### Associations with chronic pain syndrome:

- Blame Compensation
- Family issues
- Poor sleep
- Legal issues

### Secondary gain – F A C E

- Finance
- Affect
- Control
- Escape

*List not exhaustive*

## BACK PAIN - NON-PHARMACOLOGICAL TREATMENT OPTIONS*

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| | |
|---|---|
| **Activity as tolerated ✓** | ♦for acute or recurrent low back pain (**LBP**) of less than 3 weeks, **resuming ACTIVITY AS TOLERATED is encouraged!** For uncomplicated back pain, **bed-rest generally unnecessary and actually associated with longer recovery**[1] Specific exercises helpful only in chronic lower back pain.[2,3] |
| **Physiotherapy** | ♦useful in acute (<30 days), subacute (30-90 days), persistent (3-6 months) and chronic (>6 months) LBP; active exercise better than passive tx |
| **Spinal Manipulation** | ♦conflicting results; some short-term improvement in pain & activity levels[4]; most useful in subacute illness; **Massage** – somewhat effective in persistent LBP[5] |
| **Psychosocial intervention** | ♦**important** for interrupting progression to **chronic pain behavior pattern**; factors should always be explored when progress is slower than expected |
| **Multidisciplinary intervention** | ♦intensive coordinated multidisciplinary programs are effective for recurrent/persistent low back pain of 3 months or more duration[6,7] |

**Other: Patient education** re. pain, posture, etc.; **Hot / Cold therapy** -useful acute relief; **TENS** -some efficacy?; **Lumbar support** -not particularly effective[8]; **Acupuncture** -unclear[9]; **Radiofrequency neurotomy**…

## BACK PAIN – PHARMACOLOGICAL TREATMENT OPTIONS*

| Class | Role | Comments | Sample Agents | Trade Name | Sample Dose | $ /30day |
|---|---|---|---|---|---|---|
| **Acetaminophen** | ✓ option in **mild-mod** pain; ≤4g/day | ♦if chronic, monitor hepatic/renal fx | Acetaminophen 325,500mg | Tylenol | $650_{mg}$-1g QID | $15 OTC ✗▼ |
| **Acetaminophen with Codeine** | ✓ useful for relieving pain in **acute**, uncomplicated back pain<br>☒ not generally recommended in subacute/chronic pain | ♦Caution: may be **habit forming** in some patients; hepatotoxicity when used with muscle relaxants; adverse **GI effects** common with codeine | Acet.300mg + Caffeine +Codeine 8mg<br>Acet.300mg + Caffeine +Codeine 30mg | Tylenol #1<br>Tylenol #3 | 2 tabs q4-6h (max 12tabs/d)<br>1-2 tabs q4-6h (max 12tabs/d) | $55 OTC* ✗⊗ *max 50tab/mo in SK<br>$35 |
| NSAIDs | ✓ **effective for acute**, uncomplicated low back pain; **equal efficacy** but pts may respond to one & not another[10]<br>♦less effective if sciatica or nerve root complications; lack evidence in chronic | ♦Caution: risk of **ulcers**; worsening **renal** function, HF, HTN; CNS effects<br>♦***coxibs*** somewhat less likely to cause adverse GI events (ulcers); may be preferred in high-GI-risk patients | Ibuprofen 200,300,400,600mg; susp<br>Ketorolac 10mg tab;30mg inj<br>Naproxen 125,250,375,500mg<br>Celecoxib 100,200mg<br>Rofecoxib 12.5, 25mg , susp | Motrin/Advil<br>Toradol {7d max}<br>Naprosyn<br>Celebrex<br>Vioxx ≤50mg od ≤7d | 600mg TID<br>10mg po QID<br>375mg BID<br>200mg OD-BID<br>12.5-25mg OD | $15 OTC ≤400mg tab<br>$70✗ ✆<br>$15<br>$54-100☎ ✆<br>$52☎ ✆ |
| **Strong Opioids**<br><br>"**Patient contract**" regarding usage is important to avoid overuse/abuse! | ♦useful for **fixed periods in severe acute pain**, especially if NSAIDs ineffective, not tolerated or contraindicated; ♦**in sub-acute & chronic pain**, **long-acting** (SR) opioids may be indicated in conjunction with non-pharmacological therapies **if** pain is a significant barrier to **function!** | ♦Caution!!: **sedation**, **constipation**; sporadic use/overuse may adversely affect **cognitive/overall function**<br>♦**careful patient selection** important to limit dependence or intentional abuse; when used appropriately, addiction is not a major problem. ♦**Duragesic**® **cautions**:12hr onset delay; potent; lack of low strength; delayed resp depression | Hydromorphone SR 3,6,12,24,30mg cap<br>Oxycodone SR 10,20,40,80mg<br>Morphine SR 12hr 15,30,60,100,200mg<br>Morphine SR 24hr 20,50,100mg<br>Morphine pump options<br>Fentanyl **Patch** 25,50,75,100ug/hr | Hydromorph-Contin<br>Oxycontin<br>MOS-SR 30,60mg<br>MS-Contin/Ratio<br>Kadian<br>-<br>Duragesic | 3-6mg q12h<br>10-20mg q12h<br>30mg q12h<br>15-30mg q12h<br>20-50mg **q24h**<br>variable<br>25ug/hr ≅ 90 mg/d morphine | $50-70 ✆<br>$60-90 ✆<br>$45<br>$35-48<br>$35-55<br>$+++<br>$+++ ☎▼ |
| **Muscle Relaxants**<br><br>(misnomer?: some suggest little/no actual relaxant effect) | ✓ **possible short-term role** for symptom relief during **first week**[11,12]; little evidence to support their use in literature; (**effect linked to sedation!**)<br>☒ not generally for chronic use in LBP | ♦Caution: **drowsiness, impaired cognitive/overall function; falls, dependence**; hepatic toxicity with chronic use &/or acetaminophen. (**risk may often exceed benefit**) | Baclofen 10,20mg tab; intrathecal<br>Cyclobenzaprine 10mg<br>Dantrolene 25, 100mg cap<br>Tizanidine 4mg tab (2mg tab✗ )<br>Diazepam / Clonazepam<br>Methocarbamol +Acetam.<br>Methocarbamol +ASA | Lioresal<br>Flexeril (TCA like)<br>Dantrium<br>Zanaflex<br>Valium / Rivotril<br>Robaxacet /ES<br>Robaxisal /ES | 5-10mg TID<br>5-10mg TID<br>25-100mg TID<br>2-4mg TID<br>various<br>2 tabs QID<br>2 tabs QID | $18-28<br>$27-47 ☎ ✆<br>$44-83<br>$44-80 ☎ ✆<br>$15-25<br>$95 OTC ✗⊗<br>$95 OTC ✗✆ |
| **Tricyclic Antidepressants** (TCAs)<br><br>(antidepressants with both serotonegic/ norepinephrine activity appear to have better efficacy in tx of pain)[13] | ♦**may be indicated if comorbidities: depression**, **poor sleep**, **neuropathic** (burning) pain or persistent **headache**<br>♦some non-TCA antidepressants (e.g. venlafaxine) also alternatives<br>♦literature equivocal re. efficacy in LBP[14], but useful in **chronic pain**[15] (**amitriptyline** most studied in chronic pain) | ♦Caution: **dose-dependant SE's** - hypotension, dry mouth, drowsiness, confusion, constipation, urinary retention, wt gain; arrhythmia potential<br>♦**start low-dose HS,↑ slowly &/or consider 2° amine TCAs** (e.g. **nortriptyline**[16] & desipramine) often **better tolerated** than amitriptyline | 1° TCAs<br>**Amitriptyline** 10,25,50mg (10-150mg HS)<br>2° TCAs<br>Desipramine 10,25,50,75,100mg (10-150mg HS)<br>**Nortriptyline** 10,25mg cap (**10-75mg** HS) | Elavil<br>Norpramin<br>Aventyl | 25-50mg HS<br>25-50mg HS<br>10-25mg HS | $11-15<br>$15-20<br>$11-15 |
| **Anticonvulsants** | ♦indicated only for specific types of neuropathic (lancinating/stabbing) pain | ♦Caution: somnolence, dizziness, etc.; many DI's with carbamazepine | Carbamazepine 200mg<br>Gabapentin 100,300,400mg | Tegretol<br>Neurontin | 200mg BID<br>300mg BID-TID | $14<br>$40-60 |

**Other:** Topical Rubs OTC ♦Often contain menthol or capsaicin; These may provide some temporary local relief but not particularly useful in back pain ♦**Epidural steroids** may be cautiously useful in spinal stenosis ♦**Botox injection** ☎✆ costly; effectiveness dependent on expertise ♦**Miacalcin** ☎✆ if vertebral fractures ♦**Bisphosphinates** ☎✆ in Paget's, OP etc. ♦**Methotrimeprazine** –additive analgesic/sedation

=↓dose for renal dysfx **DI's**=drug interaction **fx**=function **GI**=stomach **HF**=heart failure **HTN**=hypertentsion **SE**=side effect **SR**=sustained release **tx**=treatment ✗ =non-formulary in SK ☎= exception drug status SK ✆=prior NIHB ⊗not NIHB **OTC**=over the counter

***Overall approach to low back pain is to MOVE FROM PASSIVE modalities** (drugs, chiropractic therapy, massage therapy and passive physical therapy) **TO ACTIVE rehabilitation consisting of EXERCISES!**

♦ **acute** (<30 days), **subacute** (30-90 days), **persistent** (3-6 months), **chronic** (>6 months)

**Red Flags** (possible fracture, tumor or infection, or cauda equina syndrome) are potentially serious conditions. See www.RxFiles.ca/acrobat/CHT-BackPain-2pg.pdf

**Treatment of Low Back Pain** [17,18]

**Red Flags (assessment considerations):**

- pain when recumbent
- saddle anesthesia
- pseudoclaudication
- age >55y or <20
- recent UTI
- trauma (major
- pain persisting >1mo

**Tx Guidelines:**

- symptomatic relief can be accomplished with OTC medication and/or spinal manipulation
- during acute phase, bed rest >4 days may further debilitate the patient
- low-stress aerobic activity & exercise OK in first 2 weeks; may delay trunk muscle exercises
- recommend return to work/normal activities as soon as possible
- if problems persist, reassessment required
- address nonphysical factors (psych/socioeconomic )-

**Back Pain Treatment Options: REFERENCES**


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