NOTE: Please refer to The Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain, May 2010.

# Evidence-Based Recommendations for Medical Management of Chronic Non-Malignant Pain

## *Reference Guide for Clinicians*

*Facilitated by the College of Physicians and Surgeons of Ontario*

*November 2000*

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# Reference Guide for Clinicians for the Medical Management of Chronic Non-Malignant Pain



## Overview

This is a reference guide extracted from the Evidence-Based Recommendations for Medical Management of Chronic Non-Malignant Pain.

The Task Force dealt with evidence-based guidelines in Chronic Non-Malignant Pain in the following categories:

- Headache
- Neuropathic Pain
- Musculoskeletal Pain
- Opioid Use

## Limitations

Focus of the Task Force was limited by resources and by the findings of the needs assessment. Hence, the resulting document does not include all possible treatments relevant to chronic non-malignant pain. The Task Force chose as a focus some of the most important topics identified in the physicians' survey and the focus group. The current document deals with the medical management of pain. Other topics (neurosurgical management of pain, nerve blocks, management of addicts, etc) can be included in subsequent years.

Not all systematic reviews relevant to the work of the Task Force were located in the preparation period - however, they will be reviewed and included in

subsequent years. It is significant that the Task Force reached essentially consistent conclusions to those reached by the Oxford group (McQuay and Moore, 1998).

The Task Force concentrated mainly on systematic reviews and meta-analyses, which tend to be more conservative estimates of efficacy. These types of studies tend to give greater weight to good quality RCTs. On the other hand, several of the systematic reviews made use of a similar sets of RCTs, so that the conclusions are not strengthened by multiple systematic reviews -- for example those on laser or Transcutaneous Electrical Nerve Stimulation (TENS). For some of these, the evidence level remains *Level II or Level III.*

Recent RCTs are not likely included in the meta-analyses reported in this project - hence some recent research may not be represented this year, but can be included in subsequent years.

The Task Force concentrated almost exclusively on chronic pain. Some procedures which show no significant efficacy in chronic pain do show efficacy in pain of shorter duration, for example, NSAID for low back pain. The conclusion of non-efficacy in this document resource does not mean that the procedures or treatments are never effective, but only that the efficacy in chronic pain populations has not been demonstrated. Patient selection and clinical experience will be factors in efficacious use.

## Levels of Evidence

A unified system was used to represent the levels of evidence for each conclusion. The source for this rating system was McQuay, H. And Moore, A. An Evidence-based Resource for Pain Relief, Oxford U. Press 1998.

| Level of Evidence | Description |
|---|---|
| I | Strong evidence from at least one systematic review of multiple well-designed randomized controlled trials. |
| II | Strong evidence from at least one properly designed randomized controlled trial of appropriate size. |
| III | Evidence from well-designed trials without randomization, single group pre-post, cohort, time series, or matched case-controlled studies |
| IV | Evidence from well-designed non-experimental studies from more than one center or research group. |
| V | Opinions of respected authorities, based on clinical evidence, descriptive studies, or reports of expert committees. |

## Applicability

The recommendations of this resource are applicable to the adult population with persistent non-malignant pain, with or without a definite diagnosis, and with or without psychosocial complications.

Physicians should direct patients to other practitioners or clinics when it is in the best interests of treatment efficacy and patient benefit.

# Chronic Headache

The Task Force defined chronic headache as pain occurring at least 3 days per week, persisting for at least 6 months.

## Suggested Management

- Physicians should be aware that there are uncontrolled trials which support the use of either repetitive injections of dihydroergotamine, a course of dexamethasone, or a short course of nerve blocks. If the patient is overusing abortive medication there is Level II evidence that they must cease doing so if they are to be improved by treatment.
- There is evidence to support the non-drug methods of relaxation, biofeedback, and cognitive therapy.
- Evidence based drug treatments include tricyclic antidepressants, and specific serotonin re-uptake inhibitors.

## Chronic Headache Treatment Summary

| | EMG Biofeedback | Relaxation | Relaxation & Biofeedback | Cognitive | Specific Serotonin re-uptake inhibitors | Tricyclic Antidepressants |
|---|---|---|---|---|---|---|
| Results | 48% of patients improved | 36% of patients improved | 56% of patients improved | 53% of patients improved | Fluoxetine better than placebo | Maprotiline & Doxepin better than placebo |
| Results | | | | | Paroxetine & Fluvoxamine better than baseline | |
| Level of Evidence<br><br>Level of Evidence | III | III | III | III | II<br>Fluoxetine<br><br>III<br>Paroxetine & Fluvoxamine | II |
| Recommended or Not | YES | YES | YES | YES | YES | YES |

## Migraine Headache

The diagnosis of migraine requires the following features:

- There have been at least five attacks
- Each attack, untreated, lasts from 2 to 72 hours
- At least two of the following criteria must be met:
  - Location — unilateral (occurs in 70% of patients)
  - Quality — throbbing (pulsating, pounding)
  - Intensity — bad enough to interfere with daily activities
  - Aggravated — by physical activity.
- At least one of the following symptoms:
  - nausea
  - vomiting
  - both photo and phonophobia.

Once the diagnosis has been established patients should be altered to common and avoidable triggers for migraine, including alcohol, caffeine, nitrates, MSG, aspartame, citrus fruits, perfumes and fluorescent lights.

Treatment of acute attacks can begin with simple analgesics such as aspirin, NSAIDS or acetaminophone (with or without codeine) and if these are ineffective the other useful drugs are listed in the following table.

Nausea is extremely common and is accompanied by gastroparesis so it is best treated with metoclopramide as it is an anti-emetic and pro-kinetics.

When attacks are so frequent or so severe as to cause significant dysfunction at home or at work then prophylaxis should be considered. This may be with medications chosen from the groups in the acommpanying table or by non-pharmaceutical methods such as relaxation and biofeedback. When choosing a medication, attention must be paid to potential side effects in relation to the patient's general health, and a list of the common side effects appears in the table. It is often necessary to try several drugs before a satisfactory response occurs.

## Recommended Medications for the Acute Treatment of Migraine Headaches

| Medication | Main Side Effects |
|---|---|
| Aspirin, preferably soluble (e.g. Alka Seltzer up to 1000 mg) | Gastrointestinal pain, ulceration, bleeding |
| Ibuprofen 400-800 mg / Naproxen 275-550 mg | Gastrointestinal pain, ulceration, bleeding |
| Acetaminophen 625-1300 mg | No convincing evidence of efficacy |
| Sumatriptan 50-100 mg p.o., 20 mg nasal, 6 mg s.c.<br>Naratriptan 2.5 -5.0 mg p.o.<br>Zolmitriptan 2.5-5.0 mg p.o.<br>Rizatripatan 10 mg p.o. | All may cause chest or throat tightness, tingling, tiredness, nausea. Contraindicated in Atherosclerotic heart disease. |
| Dihydoergotamine 1 mg IM or IV, or 1-2 mg nasally (2-4 puffs) | Chest pain, vomiting++ (needs to be combined with metoclopramide)<br>Contraindicated in Atherosclerotic heart disease |
| Ergotamine 1-2 mg p.o. or suppository | Chest tightness, vomiting ++<br>Contraindicated in Atherosclerotic heart disease |
| Acetaminophen + caffeine+butalbarbital +/- codeine | Drowsiness, habituation |
| Ketoralac 30-60 mg IM | Nausea, abdominal pain |
| Lidocaine 2% intranasal drops or soaked Q-tip | Bad taste |
| Chlorpromazine 50 mg IM, 0.1 mg/kg IV drip<br>50 mg suppository | Drowsiness, hypotension, extrapyramidal |
| Butorphanol 1 mg nasal spray | Nausea, dysphoria, addiction |
| Demerol 50-100 mg IM | Drowsiness, nausea, addiction |
| Dexamethasone 12-20 mg IV | Usual steroid effects if given too frequently. |

## Migraine Prophylactic Drugs

| Medication | | Limiting Side Effects |
|---|---|---|
| **Beta Blockers** | | |
| Atenolol | 50-150 mg/d | Fatigue, bradycardia, hypotension, depression, impotence, poor sleep, bronchospasm |
| Metoprolol | 100-200 mg/d | |
| Nadolol | 20-160 mg/d | |
| Propranolol | 40-240 mg/d | |
| **Calcium Channel Blockers** | | |
| Flunarazine | 5-10 mg/d | Nausea, edema, headache, extrapyramidial [both] fatigue, weight gain, depression [flunarizine] bradycardia, hypotension, constipation [verapamil] |
| Verapamil SR | 240-720 mg/d | |
| **Serotonin Antagonists** | | |
| Methysergide [Sansert] | 4-8 mg/d | Retroperitoneal, pulmonary, or pericardial fibrosis<br>Weight gain, fatigue |
| Pizotyline [Sandomigran] | 3-6 mg/d | Weight gain, fatigue |

| Medication | | Limiting Side Effects |
|---|---|---|
| **Tricyclic Antidepressants**<br>Amitriptyline<br>Nortiptyline | <br>10-150 mg/d<br>10-150 mg/d | Dry mouth, constipation, urinary retention, drowsiness, cardiovascular effects |
| **Anti-Epileptics**<br>Valproic acid<br>Divalproex<br>Sodium valproate | <br><br>500-1500 mg/d | Nausea, tremor, weight gain, alopecia, liver enzymes |
| NSAID<br>Naproxen | <br>550 mg bid<br>no longer than 1 week/month | GI upset, ulceration, renal dysfunction |
| Relaxation & Biofeedback | | No side effects, except cost. It was shown to be equally effective as propranolol in meta-analysis |

## Neuropathic Pain

In neuropathic pain, one must understand:

a) underlying pathophysiologic mechanisms,
b) natural course of disorder under treatment and
c) the limiting medical contraindications.

### Suggested Management

- First line pharmacotherapy may include adjuvant (neuropathic) medications, for example tricyclic antidepressants and anticonvulsants.
- Concomitant symptoms of depressions, anxiety, insomnia etc. may require separate management.
- Opioids may be used in selected patients but not as the first line of therapy.
- Neuropathic pain usually requires multi-drug therapy. Institute such therapy sequentially, not concomitantly.
- Use each drug in adequate doses, for sufficient time to reach therapeutic effect versus side effect and with appropriate speed of titration. Some drugs produce graded effect (increasing response until it levels off) like tricyclics, anticonvulsants or opioids, while others may work abruptly in a narrow therapeutic window (e.g. Gabapentin).
- Beware of:
  - Drug-drug interactions, side effects and desired target (therapeutic) effects.
  - Central nervous system (CNS) side effects (particularly in elderly patients who may live alone and may be at risk of falls, or in those operating machinery or given other CNS acting drugs)
  - Organ side effects (e.g. Liver function tests for anticonvulsants, arrhythmias, glaucoma and prostate hypertrophy for tricyclics, route of drug excretion in patients with liver and kidney problems etc)
  - Patients' own beliefs and expectations, and
  - Finances (for drugs not covered by Ontario Drug Formulary etc).

## Interventions for the Treatment of Neuropathic Pain

| Condition | Anticonvulsants | Antidepressants | Oral Drugs with Local Anaesthetic Type Properties | Opioids | Topical (Capsaicin) | Intravenous Regional Sympathetic Blocks (IRSB) |
|---|---|---|---|---|---|---|
| **Trigeminal Neuralgia**<br><br>**Level of Evidence** | Recommended<br>**Yes**<br><br>**Level I** | No controlled trials | Recommended<br>**Yes**<br><br>**Level II** | **Level V** | No controlled trials | Not applicable |
| **Diabetic Neuropathy**<br><br>**Level of Evidence** | Recommended<br>**Yes**<br><br>**Level I** | Recommended<br>**Yes**<br><br>**Level I** | Recommended<br>**Yes**<br><br>**Level II** | See general comments on Opioids | Recommended<br>**Yes**<br><br>**Level II** | No controlled trials |
| **Post-Herpetic Neuralgia**<br><br>**Level of Evidence** | Recommended<br>**Yes**<br><br>**Level II** | Recommended<br>**Yes**<br><br>**Level II** | Recommended<br>**Yes**<br><br>**Level II** | Recommended<br>**Yes**<br><br>**Level II** | Recommended<br>**Maybe**<br><br>**Level II** | No controlled trials |
| **Post-Stroke Pain**<br><br>**Level of Evidence** | Recommended<br>**Yes**<br><br>**Level II** | Recommended<br>**Yes**<br><br>**Level II** | No controlled trials | No controlled trials | No controlled trials | No controlled trials |
| ***Other***<br><br>**Peripheral Nerve Injury**<br><br>**Level of Evidence** | No controlled trials | No controlled trials | Recommended<br>**Yes**<br><br>**Level II** | No controlled trials | No controlled trials | No controlled trials |
| **Spinal Cord Injury**<br><br>**Level of Evidence** | No controlled trials | No controlled trials | Recommended<br>**No**<br><br>**Level II** | No controlled trials | No controlled trials | Not applicable |
| **Post Mastectomy**<br><br>**Level of Evidence** | No controlled trials | No controlled trials | No controlled trials | No controlled trials | Recommended<br>**Maybe**<br><br>**Level II** | Not applicable |
| **Reflex Sympathetic Dystrophy**<br><br>**Level of Evidence** | No controlled trials | No controlled trials | No controlled trials | No controlled trials | No controlled trials | Recommended<br>**No**<br><br>**Level III** |

# Chronic Musculoskèletal Pain

## Suggested Management

- Multimodal therapy (multidisciplinary rehabilitation) is effective and recommended for chronic pain, for both subjective outcomes as well as objective function outcomes (e.g. Return to work). In more difficult cases, more intensive rehabilitation programs hold an advantage over less intensive programs. Rehabilitation programs based in or co-ordinated with the workplace offer advantages with respect to the outcome of return to work.

- Cognitive behavioural and behavioural therapies are effective and are recommended for chronic pain, for the subjective outcomes of psychological distress and suffering pain. There may be benefit in biofeedback and relaxation, but the evidence is less strong for these modalities.

- Education is recommended as a component of a comprehensive rehabilitation program. Although patient education plays an essential role in therapist-patient interaction, and often results in subjective improvement, and is a standard part of most multimodal therapies, by itself education has not been demonstrated to be an effective treatment for chronic neck and back pain.

- There is contradictory evidence for efficacy of TENS or acupuncture. It might worthwhile in an individual case if consistent benefits are clearly and repeatedly documented.

- There is some evidence for the efficacy of manual therapy or manipulation, particularly for chronic low back pain. Efficacy for neck pain can be demonstrated when manual therapy is used in the context of a more comprehensive treatment. Manual therapy or manipulation may be worthwhile in an individual case consistent benefits are clearly and repeatedly documented, and if there are no contraindications.

- Passive physical therapy modalities are not recommended in chronic pain. Active exercise is recommended as part of a comprehensive rehabilitation program.

- There is evidence for efficacy of NSAID in acute musculoskeletal pain. There is equivocal evidence that NSAID may be beneficial in chronic musculoskeletal pain. NSAID may be worthwhile in an individual case if consistent benefits are clearly and repeatedly documented, and if there are no contraindications.

- There is evidence for efficacy of tricyclic antidepressants in depression, in chronic headache, or chronic neuralgia, but evidence for efficacy in chronic soft tissue pain is contradictory, and there is equivocal evidence for efficacy in chronic low back or neck pain.

- There is Level II evidence for a modes level of short term efficacy of cortisone injection for lateral epicondylitis and there is Level II evidence for lack of efficacy for chronic shoulder disorders.

- Cortisone injection may be worthwhile in an individual case if consistent benefits are clearly documented.

- The evidence for injection therapy into painful soft tissues (such as trigger points) for chronic neck and back pain or myofascial pain, is contradictory. It may be worthwhile in some cases if benefits are clearly and repeatedly documented.

When musculoskeletal pain persists for three months or more, especially in the case of psychological distress and functional impairment, and when persistent pain is unresponsive to apparently appropriate therapy, a co-ordinated and more intensive multidisciplinary approach is needed, which should include the following:

- the patient's active participation
- practical goals for change and focus on the problem areas
- patient education including review of goals and progress
- promotion of function and return to work
- psychosocial intervention where appropriate
- closely co-ordinated approach by the treating physician or clinicians.

Even when pain relief as a goal eludes the patient and the physician, patients are usually comforted by an empathic attitude, time to listen, and the offer of emotional support. Function can usually be improved through modification of methods or use of the following:

- aids
- modification of tasks
- changes of pace and rest periods
- active exercise for strengthening and increasing range.

Occasionally referral may be necessary to a specialized multimodal rehabilitation program. In this case, the involvement of, and the continued supportive stance of the primary physician is an important ingredient in the patient's progress.

## Medication for Chronic Musculoskeletal Pain

| Area of Concerns | NSAID or Antipyretics | Anticonvulsants | Antidepressants | Opioids | Topical (NSAIDs or capsaicin) |
|---|---|---|---|---|---|
| Chronic Low Back Pain<br><br>Level of Evidence | Effective acute back pain in first week<br><br>Contradictory for CLBP<br><br>Level III | No systematic reviews found | Not effective<br><br>Not recommended<br><br>Level III | Sustained release opioid effective<br><br>May be attempted<br><br>Level II | No systematic reviews found |
| CLBP with sciatica<br><br>Level of Evidence | No systematic reviews found | No systematic reviews found | No systematic reviews found | Sustained release opioid<br><br>May be attempted<br><br>Level II | No systematic reviews found |
| Neck with/without limb pain<br><br>Level of Evidence | No systematic reviews found | No systematic reviews found | No systematic reviews found | Sustained release opioid effective<br><br>May be attempted<br><br>Level II | No systematic reviews found |
| Chronic Generalized Soft Tissue Musculoskeletal Pain<br><br>Level of Evidence | Not effective<br><br>Level III | No studies | Contradictory<br><br>Level III | No studies | No studies |

## Physical Therapy for Chronic Musculoskeletal Pain

| Area of concern | Passive Modalities | Bed Rest | Corsets and orthotics | Manipulation | Exercise |
|---|---|---|---|---|---|
| **Chronic Low Back Pain**<br><br>**Level of Evidence** | Inconclusive<br><br>Not recommended<br><br>**Level III** | Ineffective<br><br>Not recommended<br><br>**Level III** | Inconclusive<br><br>**Level IV** | Contradictory<br><br>**Level III** | Contradictory<br><br>Active exercise recommended<br><br>**Level III** |
| **CLBP with sciatica**<br><br>**Level of Evidence** | Ineffective<br><br>Not recommended<br><br>**Level III** | Effective for acute<br><br>Doubtful otherwise<br><br>**Level III** | In conclusive<br><br>**Level IV** | No systematic reviews but manipulation is contraindicated in presence of herniated disk | No systematic reviews |
| **Chronic Neck with/ without limb pain**<br><br>**Level of Evidence** | Inconclusive<br><br>Not recommended<br><br>**Level III** | Not recommended<br><br>**Level II** | Not applicable | Contradictory<br><br>**Level III** | Effective<br><br>Active exercise recommended<br><br>**Level III** |
| **Headache from MSK Pain**<br><br>**Level of Evidence** | No systematic reviews | No systematic reviews | Not applicable | Contradictory<br><br>**Level III** | No systematic reviews |
| **Generalized Soft Tissue Pain**<br><br>**Level of Evidence** | Inconclusive<br><br>**Level IV** | No studies | Not applicable | Inconclusive<br><br>**Level IV** | Effective<br><br>Active exercise recommended<br><br>**Level III** |

***Note:*** *For TENS and Acupuncture there is Level III contradictory evidence for efficacy in a variety of musculoskeletal syndromes.*

## Behavioural/Psychological Management for Chronic Musculoskeletal Pain

| Area of Concern | Operant | Cognitive-Behavioural | Relaxation | Biofeedback | Education/ Back School | Multimodal |
|---|---|---|---|---|---|---|
| Chronic Low Back Pain | Effective<br>Recommended | Effective (on subjective measures)<br>Recommended | Probably effective<br>Recommended | Inconclusive | Inconsistent Short-term Effective (on subjective measures)<br>Recommended if part of multimodal program | Effective<br>Recommended |
| Level of Evidence | **Level III** | **Level III** | **Level III** | **Level III** | **Level III** | **Level III** |
| Neck with/without limb pain | No systematic review | No systematic reviews | No systematic reviews | No systematic reviews | Not effective<br>Recommended if part of multimodal program | No systematic reviews<br>Recommended on basis of efficacy with other chronic pain syndromes |
| Level of Evidence | | | | | **Level III** | |
| Generalized Soft tissue pain | Effective<br>Recommended | Effective<br>Recommended | Effective<br>Recommended | Inconclusive | Not effective | No systematic reviews |
| Level of Evidence | **Level III** | **Level III** | **Level III** | **Level III** | **Level III** | |
| Pain with psychological factors | Effective<br>Recommended | Effective<br>Recommended | Effective<br>Recommended | Effective<br>Recommended | Effective<br>Recommended if part of multimodal program | Effective<br>Recommended |
| Level of Evidence | **Level V** | **Level V** | **Level V** | **Level V** | **Level V** | **Level V** |

## Injection Therapies for Chronic Non-Malignant Pain (Based Partly on RCTs)

| Condition | Local Infiltration |
|---|---|
| Chronic Low Back Pain | Inconsistent and equivocal<br>Possible short term benefit |
| Level of Evidence | Level III |
| Chronic Low Back Pain with sciatica | No systematic reviews |
| Neck with/without limb pain | Inconsistent and equivocal<br>Possible short term benefit |
| Level of Evidence | Level III |
| Chronic Headache | No systematic reviews |
| Neuralgia (post-herpetic or diabetic) | No systematic reviews |
| Soft tissue pain | Inconsistent and equivocal<br>Possible short term benefit |
| Level of Evidence | Level III |

There is only one adequately designed study. The study by Carette et al. (1991) found that at six months, but not a one and three months, patients who had the cortisone injection into facet joints fared better than those with saline injection to facet joints, on pain and function measures. Other studies do not support facet injection as a specific treatment for chronic back pain (Marks et al., 1992; Lilius et al., 1989). The evidence was contradictory with regard to efficacy of injected cortisone vs other drugs.

**Conclusion:** The efficacy of facet injection for chronic back pain has equivocal evidence, Level II

**Recommendation:** Spinal facet injections for chronic neck and back and myofascial pain is not strongly recommended.

Although a widespread clinical practice, the evidence for efficacy for injection of anaesthetic, saline, sterile water, or cortisone into painful soft tissues, epidural spaces, or facet joints is at best inconsistent and contradictory, and based on poor quality studies, usually on Level III evidence. This does not mean that patients should not receive a trial of injection therapy, but if patients show lack of clear progress using injection therapy, there is no evidence that would support continuation of the injection treatment.

# Opioid Use in Chronic Non-Malignant Pain

## Suggested Management

Follow **"general principles of sound medical practice"** by attempting to establish a clear diagnosis, associated medical and psychosocial conditions and even if diagnosis is elusive, attempt to identify probable pain mechanisms;

Follow **"common sense"** (caution should apply to patients for whom organic diagnosis is unknown or when pain is due primarily to psychological factors). Caution does not mean "contraindication";

**History of dependence on opioids** or other drugs, type and dose of opioid use and psychiatric co-morbidity are risk factors for the development of dependence on prescribed opioids. The following may minimize the risk of dependence:

- use of long acting opioids
- small amounts prescribed for short periods only
- use of treatment contract may minimize risk of dependence.

**Adequate trial** of non-opioid analgesics and adjuvant analgesics should be carried out first without success. This is debatable in some cases;

The **WHO ladder may not be appropriate** in clear cases of Neuropathic Pain since Level I evidence exists for anticonvulsants and antidepressants in different neuropathic syndromes;

If combination acetaminophen and opioid is used (Percocet, Tylenol with codeine and other generics), do not administer **more than 12 tablets** because of the risk of acetaminophen toxicity;

Avoid **meperidine** (Demerol), a short-acting opioid which may lead to accumulation of the toxic metabolite normeperidine. **Anileridine** (Leritine) is chemically related to meperidine with the same caveat. These two opioids are not recommended in CNMP;

There is level II evidence that **chronic musculoskeletal pain and neuropathic pain** are responsive to opioids;

Keep **proper records** (documentation of diagnosis, pain levels/scales, side effects, change in function);

**One physician** only should prescribe opioids and the patient should be aware of the rule.

## Specific Recommendations based on Level V Evidence

If trial of non-opioids is ineffective, try **fixed opioid-non opioid analgesic combinations** such as acetaminophen , caffeine, codeine. If above is ineffective, try **opioid syrup** (10 mg q4h and titrate upwards once or twice per week by increments of 25-50%);

Initial **analgesic effect** should begin at relatively low doses (if not, anticipate opioid unresponsiveness). Increasing doses should be accompanied by increasing analgesic effect;

**Megadoses of morphine** (hundreds or thousands of mgs) may indicate: non absorption leading to lack of efficacy, non opioid responsive pain mechanisms, and drug diversion;

If short-acting morphine proves useful and there are no features suggesting abuse, switch to **sustained release opioid preparations**. Sustained release opioid preparations may be more expensive and not afforded by some patients, but may have a clinical advantage if breakthrough pain or opioid side effects become a problem;

Doses of oral morphine or equivalent **above 300 mg daily** are unusual, though not necessarily contraindicated;

**Parenteral dosing of opioids to treat chronic non-malignant pain should be strongly discouraged** unless there are extenuating medical circumstances and oral or transdermal routes of administration are not available for medical reasons;

**Verbal or written contract** should stipulate NO unsanctioned dose excalation, selling of opioids, injecting of opioids, double-doctoring, obtaining opioids off the street or hoarding of opioids, and clearly define consequences of violation;

**Assess patient** every 9 weeks or more frequently if there are specific reasons, and **document at each visit** analgesic efficacy, adverse pharmacologic effects, physical and psychological function and occurrence of drug abuse related behaviour;

Include a few extra doses of oral opioids for **flare ups** of pain. Use **breakthrough** doses sparingly;

Goal of opioid therapy is NOT pain elimination but achievement of **tolerable pain and/or improvement of function**;

Focusing on opioids without incorporating psychosocial and behavioural approaches may reinforce pain-related behaviours and undermine a rehabilitative program targeting functional restoration.

## Role of Opioid Analgesics in the Treatment of Chronic Non-Malignant Pain

| | Nociceptive Pain | Neuropathic Pain | Visceral Pain | Chronic Pain with Psychological Factors | Headache |
|---|---|---|---|---|---|
| **Examples of Type of Pain** | Severe Degenerative changes (multi-level or joint) | Diabetic neuropathy, causalgia, central pain (stroke, spinal cord injury) | Chronic pancreatitis Crohn's | Somatoform pain disorder, depression, conversion disorder | Tension, migraine |
| **First Line Medications** | WHO analgesic ladder; Acetaminophen NSAIDs | Tricyclic antidepressants, Anticonvulsants e.g. carbamazepine Membrane stabilizers e.g. lidocaine | Smooth muscle relaxants, Antacids, $H_2$ blockers | Anxiolytics or anti-depressants in presence of clinically significant anxiety or depression | **Prophylactic Treatment** - Beta blockers, calcium channel blockers, serotonin receptor antagonists, tricyclic anti-depressants, anti-epileptics<br><br>**Acute Treatment** - NSAIDs, DHE, sumatriptan, ketorolac, chlorpromazine, dexamethasone |
| **Effectiveness of opioids in therapy** | Often of value | Limited but definite value in selected cases | May be of value | Limited value | Tension: Rarely indicated. Migraine: Limited value |
| **Caveats** | Document significant organic pathology before long-term prescribing | Opioids less effective in neuropathic pain. Higher doses may be required but dosing limited by side effects. | | | Use combination meds (e.g. Tylenol #3) intermittently for short periods. May cause rebound headache. |

Before prescribing opioids, physicians need to define and prioritize targets for treatment, bearing in mind that most chronic pain syndromes have a mix of mechanisms, and psychiatric co-morbidity is common. For example, in a depressed patient with diabetic neuropathy, treatment should be targeted towards depression, insomnia, and neuropathic pain. Tricyclic antidepressants would be the treatment of choice, because they are effective for all three targets.

# General Recommendations for Management of Chronic Non-Malignant Pain

## General Recommendations for Management of Chronic Non-Malignant Pain

The general recommendations for the management of chronic non-malignant pain are outlined as follows:

- Establish a diagnosis and rule out serious causes of pain.
- Assess degree of distress and functional disability caused by pain (inquire about activities altered by pain such as work, home, leisure, ADL). Obtain pain ratings at the outset, and then at regular intervals to monitor progress. A suggestion is a follows:

**My present pain is:**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| (No pain) | (mild) | (discomforting) | (distressing) | (horrible) | (excruciating) |

**My worst pain today was:**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| (No pain) | (mild) | (discomforting) | (distressing) | (horrible) | (excruciating) |

**My least pain today was:**

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| (No pain) | (mild) | (discomforting) | (distressing) | (horrible) | (excruciating)_ |

- Identify aggravating and relieving factors.
- Conduct a mental status examination to rule out depression, anxiety and other conditions that might contribute to pain.
- Take alcohol and drug history. In particular, inquire about alcohol, benzodiazepines, prescription opioids, over-the-counter drugs containing opioids like Tylenol #1 and 222s, barbiturates like Fiorinal, and illicit drugs such as cannabis and cocaine.
- Inquire about psychosocial history
- Obtain records from previous physicians in order to avoid delays and duplicate investigations

- Conduct a detailed physical examination and pay attention to behaviours and findings under confrontation (direct examination) and under distraction (indirect examination). Document consistency of findings and behaviours and record pain behaviours.

- Request a pain consultation from qualified physicians if you feel you need it.

# Do's and Don't's of Prescribing Narcotics for Chronic Non-Malignant Pain

## Do's of Prescribing Narcotics for Chronic Non-Malignant Pain

**DO:**

- Screen for current and past alcohol and drug problems.
- If in doubt, get a consultation from a specialist, colleague, or peer.
- Try first-line non-opioid medications and adjuvant treatments first.
- Focus on improving function, not complete pain relief.
- Implement a treatment contract with your patient, specifying:
  - one prescriber
  - amount to be dispensed
  - no early refills
  - consequences for breaking the contract.
- Titrate opioids carefully, looking for analgesic effectiveness, functional status, and adverse effects.
- Switch to long-acting opioid.
- Use breakthrough doses sparingly.
- Keep a narcotic prescription flow sheet on the patient's chart.
- Reassess the patient at appropriate intervals - we suggest at least every six to nine weeks.
- Make your prescriptions tamper proof - blue ink, legible, quantities in numerals as well as script and keep a carbon copy.

**Use care and monitoring especially when:**

- prescribing short acting opioids
- a prescription for opioids earlier than the expected or agreed time
- prescribing injectable opioids for home use ( in exceptional circumstances in which other routes are unavailable and contraindicated).
- prescribing two or more different opioids at the same time
- prescribing two or more drugs with abuse potential, e.g., opioids and benzodiazepines.

## Don't' s of Prescribing Narcotics for Chronic Non-Malignant Pain

**DON'T**

- Prescribe large quantities of short acting opioids
- Continue to prescribe opioids when there is evidence of non-compliance, escalation, misrepresentation, or fraud, e.g. double-doctoring or forgery.
- Feel compelled to prescribe opioid or any drug if it is against your honest judgement or if you feel uncomfortable prescribing the drug.

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# Information for Patients - Opioid (Narcotic) Analgesics for Non-Cancer Pain

**FOR:**

**FROM:** Dr.

**DATE:**

## Making Pain Tolerable

The main reason for using an opioid (narcotic) analgesic for chronic non-cancer pain is to make the pain tolerable - not to eliminate it. This treatment is usually only considered after more standard treatments such as anti-inflammatory drugs have failed. If you are agreeable, your physician will prescribe an opioid analgesic for you in gradually increasing doses to minimize side effects. It is extremely important that you follow the directions exactly. Your physician will be the only one prescribing this medication to you. If you increase the dose without your physician's permission, give the medication to another person or obtain this medication from another physician without the consent of your primary physician, the physician may stop prescribing the opioid analgesic for you.

Pain medication is only part of your chronic pain treatment program. Equally important is a gradual exercise program that will increase your activity level despite ongoing pain. You and your physician should agree on specific ongoing treatment goals.

## What is My Risk of Addiction?

There is increasing scientific evidence that strong painkillers can relieve some pain in selected patients without causing addiction. It is important to be careful, however, when defining what "addiction" is. Addiction, or psychological dependence, is a pattern of drug use in which the patient craves a drug for its ability to produce a "high" rather than for its pain-relieving properties. This can lead to the selling and injection of drugs and attempts to obtain drugs from multiple physicians - activities generally referred to as "drug abuse". Studies have shown that if a person has no past history of drug abuse and the pain is physical in origin, the risk of addiction is extremely low. If you are placed on an opioid analgesic for a period of weeks, however, and then are suddenly taken off the medication, it is possible to experience a short withdrawal reaction. Although this can be prevented by withdrawing the drug slowly, it does not mean that you have developed a craving for the drug or developed a drug addiction.

## What are the Side Effects?

Although opioid analgesics can produce side effects (drowsiness, confusion, nausea, constipation), these can be minimized by slowly increasing the dose of the drug and by using anti-nausea drugs and bowel stimulants. Pain medication as prescribed will not depress your respiration or prevent you from breathing normally.

## Remember Your Follow-up

If you seem to benefit from the pain medications, your physician will see you about every 4 to 6 weeks for the first few months and about every two to three months thereafter. During each visit, you and your physician will assess pain relief, any side effects from the pain medication and your ability to meet your established activity goals.

## Other Instructions:

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# Sample Treatment Contract

## Treatment Contract

I understand that I am receiving opioid medication from Dr. to treat my pain condition. I agree to the following conditions under which this medication is prescribed:

- I will not seek opioid medications from another physician. Only Dr. will prescribe opioid for me.
- I will not take opioid medications in larger amounts or more frequently than is prescribed by Dr._____.
- I will not give or sell my medication to anyone else, including family members; nor will I accept any opioid medication from anyone else.
- I will not use over-the-counter opioid medications such as 222's and Tylenol #1.
- I understand that if my prescription runs out early for any reason (for example, if I lose the medication or take more than prescribed), Dr. will not prescribe extra medications for me; I will have to wait until the next prescription is due.
- I understand that if I break these conditions, Dr. may choose to cease writing opioid prescriptions for me.

**Patient' s Signature:** _____

**Physician's Signature:** _____

**Date:** _____

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# Sample Pain Scale



## Sample Pain Scale

Please circle the number which best describes where you pain level is right now:

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| No pain | | | | | | | | | | Worst possible pain |

## Sample Pain Diary

Write down you pain level in the diary at the same hour every day.

| Day | Morning | Afternoon | Evening | If You Get Up at Night |
|---|---|---|---|---|
| | | | | |
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# Sample Narcotic Flow Sheet

## Sample Narcotic Flow Sheet

**Patient Name:**

**Chart Number:**

**Prescribing Physician:**

| Date | Medication | Dose | Direction | Number Dispensed | Comments |
|---|---|---|---|---|---|
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# The Role of Methadone in the Management of Chronic Non-Malignant Pain: Specific Considerations

## Overview

Although the literature on methadone for non-malignant pain is scanty and based on case studies, the increasing use of methadone for this purpose requires recommendations to guide practice. There is extensive literature on the use of methadone as a potent analgesic agent for cancer pain and therefore recommendations for the use of methadone in the management of chronic non-malignant pain must be extrapolated from the cancer pain literature.

Methadone is a synthetic opioid analgesic with excellent oral bioavailability, a side effect profile similar to other opioid analgesics and a duration of action of at least eight hours with repetitive dosing. These qualities make it an attractive drug for outpatient pain management. Methadone also has an opioid receptor profile different from that of morphine and has N-methyl-D-aspartate (NMDA) antagonist activity that may confer advantages over morphine. However, experience in the use of methadone for cancer pain has revealed that methadone is far more potent as an analgesic agent than has been suggested by equianalgesic tables derived from single dose studies. With repetitive dosing, methadone is approximately ten times more potent than indicated in these standard tables. The main reason for this is probably the long elimination half-life of methadone (24-36 hours) which allows for much higher drug levels to be reached than could be predicted from single dose studies. This has obvious clinical implications since methadone takes 5-7 days to reach steady state at any particular dose. Therefore, the use of methadone as an analgesic agent requires the same pain assessment skills as for any other opioid drug, but even greater scrutiny in patient monitoring of analgesic and side effects.

## Methadone use in the Management of Chronic Non-Malignant Pain

In Canada, methadone is available at low cost as an elixir which is usually made up at a concentration of 1 mg/ml. In opioid-naive patients or patients taking codeine preparations, methadone 2.5 mg q8h is safe and usually well-tolerated. For patients already on a major opioid analgesic like oxycodone or morphine, a reasonable starting dose of methadone is 5 mg q8h with dose increments of 5 mg q8h every 5-7 days. A general rule is to provide careful dose titration until adequate pain relief is achieved or side effects limit further dose escalation. However, one should look for a graded analgesic response to incremental dosing. The absence of a graded analgesic response may mean that the patient is not

opioid-responsive. Patients should be seen weekly during the titration phase and every month or two during the maintenance phase.

For patients being switched from relatively large doses of an opioid analgesic ( > 200 mg oral morphine or morphine equivalents daily), the table below should be used to calculate equianalgesic doses. For patients taking more than 500 mg oral morphine or morphine equivalents daily, the conversion to methadone should be staged with a third of the anticipated methadone dose being introduced every five days so that the entire conversion takes fifteen days. The dose of the previous opioid is decreased by a third every five days in inverse fashion.

## Equianalgesic Doses of Common Opioid Analgesics Relative to Oral Methadone with Repetitive Dosing

| Drug | Per Os (PO) | Intramuscular/Subcutaneous |
|---|---|---|
| Methadone | 2 mg | |
| Morphine | 30 mg | 10 mg |
| Hydromorphone | 8 mg | 2 mg |
| Oxycodone | 15 mg | |

Patients and co-habitants should be warned about potential side effects (especially drowsiness and respiratory depression) and the possibility that side effects can continue to evolve for five to seven days after each dose adjustment. The spouse or significant other should be available at least twice daily to monitor for toxicity. Since drowsiness commonly precedes respiratory depression, they should be instructed to call the prescribing physician if drowsiness develops to obtain advice about further dosing. This obviously requires physician availability 24 hours a day during the titration phase. Elderly patients (over the age of 65), patients with severe lung disease and patients who cannot be adequately monitored at home should be considered for inpatient initiation of methadone treatment.

***Note:*** *The CPSO involvement in the opioid dependence program mentioned is unrelated to the use of Methadone for analgesic purposes. If a physician wishes to obtain a permit to prescribe Methadone for analgesic purposes, he or she needs to apply to the* ***Office of Controlled Substances in Ottawa (613) 946-5139***