

## Analgesics Fact Sheet

**Group 1:** Traditional pain medications (called analgesics).

These can be tried for usual acute pain or nociceptive pain, inflammatory pain and some of these might help neuropathic pain.

### Paracetamol

While paracetamol is one of the oldest forms of analgesics, current research indicates that on its own, paracetamol is ineffective in the treatment of low back pain and provides minimal short-term benefit for people with hip or knee osteoarthritis.<sup>1</sup> Therefore, it is important to discuss with your doctor how best to use paracetamol for your pain condition. Your doctor may suggest to combine paracetamol with another class of medicines, such as non steroidal, as these can work better together, requiring lower doses and fewer side effects<sup>2</sup>.

Paracetamol is available from pharmacies as tablets, liquid mixtures, or suppositories. Often paracetamol is the sole chemical, but it is also used in combination e.g. cold and flu tablets.

- Paracetamol is **non-addictive**.
- Paracetamol works on the day you take the tablets (within 30-60 minutes).
- Panadol Slow Release: Panadol Osteo™ is one example and is an 8-hourly Slow Release 665mg tablet that is cost effective (~\$10 for 96 tablets). Try 2 in the morning and 2 in the evening, and can take 2 in the afternoon if needed. It is a maximum of 6/day.
- Four people out of 100 using daily paracetamol for 12 months can get gastritis or stomach ulcers.
- Regular Paracetamol at 4gm/day can cause liver damage.
- Do not take with other tablets that have Paracetamol e.g. Panadol™, Panadeine Forte™, Codalgin Forte™

If paracetamol isn't helpful, please stop taking it and see your doctor.

### Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)

- These include Aspirin, Willowbark, Diclofenac (Voltaren™), Naproxen (Naprosyn™), Indomethacin (Indocid™); Ibuprofen (Nurofen™), Meloxicam (Mobic™), Celecoxib (Celebrex™)
- The NSAIDs are more likely to help acute pain nociceptive and Inflammatory pain and are non-addictive<sup>2</sup>
- Available as tablets, some as suppositories, and a few as gels or ointments. Doctors and Pharmacists can provide further advice
- They "work" on the day you take them (within 30-60 minutes). If they aren't that helpful please stop them and if needed see your doctor
- They can cause stomach ulcers if taken regularly, so they need to be taken with food

- Tablets that protect the stomach reduces this risk and should be taken if NSAIDs are used on a regular basis e.g. Losec™, Somac™, Nexium™, Ranitidine (Zantac™).
- NSAIDs all increase the chance of bleeding, except Celecoxib (Celebrex™).
- NSAIDs can worsen asthma, interfere with kidney function, and increase the risk of heart attacks and strokes
- Not recommended for people who have kidney problems, past history of bleeding stomach ulcer, asthma induced by NSAIDs, bleeding disorders or allergies to NSAIDs

## Tramadol

These include Tramal™, Zydol™, Tramahexal™, Durotram™

Tramadol can help acute nociceptive pain, inflammatory pain, and neuropathic pain<sup>2</sup>. Tramadol it works at 3 different “receptors” (Tramadol has weak Opioid with additional Nor-Adrenaline and Serotonergic actions), and has mixed opioid and anti-neuropathic pain relieving properties.

- Practically non-addictive (only 1 person in 100,000 can become addicted to them)
- Strongly recommend a slow introduction to Tramadol as this is less likely to cause side-effects
- In the first ‘wash-in’ week start with 50mg (Immediate Release (IR) or Slow Release (SR) – however in Australia Authority Scripts are available for the SR (120 of the 50mg SR tablets with 5 repeats) which makes it much cheaper
- Start at night time for three days, then 50mg twice a day for three days, and then increase to 50mg three times a day for three days
- If needed, that is, if you still have significant pain and no side-effects, then in the second week, change to the 2 x 50mg SR or one of the 100mg Slow Release (SR) tablet at night for three days, then, if needed, increase to 100mg SR in the morning and night
- In Australia, an authority script (for one month’s supply, with 5 repeats) can be organised by your GP for the Slow Release (SR) tablets for either the 12 hourly slow release or the 24 hourly extended release (Durotram). This means you can get a months supply for the price of one script
- Tramadol works on the day you take them, and the pain modification effect improves after you have taken them regularly for a few days
- 1 person in 5 needs a higher dose (up to 200mg twice a day) as their body doesn’t activate Tramadol in their liver as easily as most people
- Tramadol can be effective for nerve pain (1 in 4 patients). It is less constipating, less addictive and unlikely to slow down breathing compared to an opioid like Morphine
- Tramadol can interact with antidepressants to cause serotonergic syndrome (hot, sweaty, muscle twitches), blackouts and seizures. It is vital

to discuss these side effects with your doctor if they occur. Usually dose reduction or ceasing tramadol is needed

- Not recommended for people with epilepsy.
- People on antidepressants need to check with their doctors.
- Tramadol is not recommended if you are taking Mono-amine Oxidase Inhibitors 'MAOIs'.
- Caution and monitoring is recommended if you are taking antidepressants that are Selective Serotonin Reuptake Inhibitors 'SSRIs', or Serotonin Noradrenaline Reuptake Inhibitors 'SNRIs'.
- Usually dose reduction or ceasing the tramadol is needed
- Not recommended for people with epilepsy or people on antidepressant 'MAOIs', and monitoring if taking antidepressant that are 'SSRIs'.

### **Combinations**

There are a multitude of pain medications that have several different medications in the one tablet. These should be discussed with your pharmacist or doctor.

#### **Panadeine (paracetamol 500mg and codeine 8mg)**

- Usual dose is two tablets. They last about 4 hours.
- The amount of codeine isn't usually enough to add much more relief than taking the Panadol by itself, but can constipate people.

#### **Panadeine Forte (paracetamol 500mg and codeine 30mg)**

- Usual dose is two tablets. They last about 4 hours.
- The amount of codeine is usually less effective than Tramadol.
- Tends to constipate people.

There are individual exceptions. Why does codeine work for some people and not others? After codeine is swallowed and enters the blood stream, it needs to get converted in the liver to morphine before it has any effect on pain. However, 10-20% of people (i.e. 1 or 2 people out of 10) don't have the fully functioning system in the liver to do this conversion.

This is the same system that needs to convert Tramadol into its active chemical, so the people that codeine doesn't work for are often the same people that need a higher dose of Tramadol (i.e. up to 200mg twice a day compared to 50-100mg twice a day for most other people). Codeine, once converted to morphine, helps one person out of 3 or 4 reduce their pain by half (50%). That means that 2 or 3 people out of 4 don't get any more relief than taking a sugar tablet or placebo!

**Paracetamol with Tramadol (Zaldiar TM) is a newer combination tablet.**

These two tablets work better together i.e. they are synergistic; requiring low doses and fewer side effects.

**Why does codeine work for some people and not others?**

Codeine is a weak pain modifier, but can actually increase your sensitivity to pain (hyperalgesia)<sup>3</sup>. It is recommended, that codeine is not used on a regular basis.

Codeine-related deaths are increasing in Australia as the consumption of codeine-based products increases<sup>3</sup>. For every two opioid-related deaths in 2009, there was one codeine-related death, and most of these (83.7%) were the outcome of toxicity due to combined drug use<sup>3</sup>.

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Rapid metabolisers: some people break the codeine down into morphine quickly (rapid metabolisers). Unfortunately this has caused some people harm. Harm includes deaths in children, especially infants<sup>3</sup>. Codeine is therefore not recommended.

## References

1. Machado GC, Maher CG, Ferreira PH, et al. Efficacy and safety of paracetamol for spinal pain and osteoarthritis: systematic review and meta-analysis of randomised placebo controlled trials. *Bmj* 2015; 350: h1225.
2. Schug SA, Goddard C. Recent advances in the pharmacological management of acute and chronic pain. *Ann Palliat Med* 2014; 3(4): 263-75.
3. Roxburgh A, Hall WD, Burns L, et al. Trends and characteristics of accidental and intentional codeine overdose deaths in Australia. *The Medical journal of Australia* 2015; 203(7): 299.