



**NHS**

**Royal Berkshire**  
NHS Foundation Trust

# Understanding your pain relief medication

Pain Management Unit (PMU)

Royal Berkshire NHS Foundation Trust

Patient details

Name: \_\_\_\_\_

D.O.B: \_\_\_\_\_

Weight: \_\_\_\_\_ kg

Allergies: \_\_\_\_\_

Current pain regime:

Medication	Dose	Start date

Name of pain specialist: \_\_\_\_\_

**Contents**

Page

1. Introduction .....	2
2. Paracetamol .....	3
3. NSAIDs .....	4
4. Opiates .....	6
5. Anti-depressants.....	9
6. Anti-epileptics .....	11
7. Muscle relaxants.....	13
8. Other.....	15

Information relevant to you and your specific treatment and other useful information will be included in the flap on the inside back page.

## Introduction

Chronic pain is defined as any pain that lasts beyond 3-6 months. It is a complex phenomenon with many factors that can affect how much pain is felt. Treatment may therefore be with many drugs, each of which target one aspect of the pain pathway. This also means that often smaller doses of a few drugs are used which may cause fewer side effects but give more benefit. It is important to mention that your pain relief regime is tailor made for you and may be different to that of others with the same condition. That is to say not all pain medications are suitable for everyone.

The appropriate prescription of painkillers plays an important role in the management of persistent pain. More importantly, understanding these prescriptions, how these drugs work and how to take your painkillers is key to making them work. Chronic pain can be difficult to treat, but painkillers or other pain control methods if used correctly can successfully control it for a large majority of people.

We understand that pain can greatly affect your quality of life. Chronic pain can make it hard for you to do everyday things such as bathing, shopping, cooking, sleeping and eating. We hope that by better understanding your pain relief medication, you can begin to feel more in control of your management plan. Our aim is to provide you with the relevant information about your medication as a reference point.

However, please remember to talk to your doctor or nurse about any concerns or side effects so they can help you manage them, give you advice and reassure you. Tell your doctor about any other medicines you are taking, including vitamins, herbal supplements and over the counter remedies as some drugs can react together. Please also mention any anti-sickness medicines, blood thinning drugs or antibiotics that you may be on.

***Please ensure that you always bring an up to date list of your medicines that you take for your pain whenever you come to the pain clinic.***

# Paracetamol

## Main uses

- 1) Relief of mild to moderate pain.
- 2) Reduce fever.

## How it acts

Paracetamol is thought to target chemicals known as prostaglandins, made in the body in response to stress or illness. There are different ways these chemicals can lead to sensation of pain in the body and paracetamol is thought to target one of these pathways. Therefore, it can be taken safely with other painkillers targeting different pathways.

## Familiar brands

Panadol, Disprol and Calpol in the UK are well known brand names available over the counter but many supermarkets and high street chemists sell comparable paracetamol products under their own brand name. If in doubt ask your local pharmacist.

Paracetamol may be contained in other medicines such as Anadin and cold remedies like Lemsip.

## Dose / how it is administered

Paracetamol is commonly available in 500mg tablets / capsules. It is also available as syrup / suppository / injection.

The dose for teenagers and adults weighing over 50kg is 500mg -1g every 4 to 6 hours. Maximum daily dose is 4g. This dose applies to tablets as well as the other methods of administration mentioned above.

## Side effects

Side effects are rare (less than 1 in 100 people). They include:

- Skin rash
- Overdose of paracetamol can cause liver damage.
- Blood disorders (low platelets or white cell counts)

## Special considerations

- Do not take with other products containing paracetamol
- Use with caution if you suffer from **liver problems** or have had problems with **alcohol**.

## Non-steroidal anti-inflammatory drugs (NSAIDs) (Aspirin, Ibuprofen, Diclofenac, Naproxen, Mefanamic Acid, Celecoxib)

### Main uses

- 1) Relief of mild to moderate pain.
- 2) Reduce fever.
- 3) Pain associated with inflammation i.e. musculoskeletal pain due to anti-inflammatory properties.

### How it acts

NSAID's block an enzyme called cyclo-oxgensase (COX), which produces chemicals that cause inflammation and pain. Because their action is different to opiates and paracetamol they can be used alone or in conjunction with other pain medicines – if you are unsure about using pain medicines together, ask your doctor, pharmacist or pain nurse. They are a large group of drugs so if one doesn't work, another can be tried. A newer class of NSAID's described as 'coxibs' (eg Celecoxib), are more selective in that they are less irritant to the stomach.

### Dose / how it is administered

Take all NSAIDS with food or milk to avoid stomach irritation.

#### Aspirin (brand names include Caprin, found in Anadin):

As a tablet by mouth 300mg to 900mg every 4–6 hours when necessary (maximum 4grams daily).

As suppository – 450mg to 900mg every 4 hours (maximum 3.6grams daily).

#### Ibuprofen (brand names including Brufen and Nurofen):

Generally, they are either 200mg or 400mg tablets but there are higher doses also available. By mouth 200mg to 400mg every 6 to 8 hours. Maximum 2.4grams per day.

#### Naproxen (brand names include Naprosyn, Arthrofen):

Usually come in 250mg tablets.

By mouth initial dose of 500mg (2 standard tablets), then 250mg (1 tablet) every 6–8 hours as required. Maximum dose 1.25grams per day (after the first day).

#### Diclofenac (brand names include Voltarol):

Can come in 25, 75 and 100 mg dose in tablets/capsules/ suppositories/ injection

Dose via any method of administration is 75mg to 150mg in 2-3 divided doses. Maximum 150mg per day.

Mefanamic Acid (brand names include Ponstan):

Available in 250mg or 500mg tablets/capsules and 50mg/5ml suspension (liquid).

By mouth 500mg 3 times a day.

Celecoxib (brand names include Celebrex):

Available in 100mg or 200mg capsules.

By mouth initially 200mg daily in 1-2 divided doses. Can take up to a maximum 400mg daily in divided doses.

Side effects of NSAIDs

Common (more than 10 in every 100 people):

- Heartburn - can be avoided by taking NSAID with food
- Stomach ache

Occasional (between 1-10 in every 100 people):

- Blood in your stools – stop taking NSAID and tell your doctor as soon as possible
- Worsening of asthma
- Feeling or being sick

Rare (less than 1 in 100 people and with *long term use*):

- A stomach ulcer – if you have black and tarry stools or vomit blood, stop taking the medicine and tell your doctor.
- Swelling of your ankles and legs due to fluid build up.
- An allergic reaction – causing a skin rash, swelling of the tongue and lips and difficulty in breathing.
- Kidney changes that are unlikely to cause symptoms – the kidneys usually go back to normal when you stop taking ibuprofen, but your doctor can check how well your kidneys are working with regular blood tests.
- Itchy skin rash or worsening of existing skin conditions.
- Worsening of bowel conditions such as colitis or Crohn's disease.

Special considerations

- Care should be taken when given to patients with abnormal kidney function i.e. elderly.
- NSAIDs can interfere with blood clotting pathways, which may increase bleeding and impair normal healing. Therefore, care should be taken in patients taking anticoagulants such as warfarin, post operative patients and those with coagulation disorders.
- Coxibs and diclofenac should be avoided in people with ischaemic heart disease, cerebrovascular disease, peripheral arterial disease and heart failure.

## Opiates

(Codeine, Dihydrocodeine, Tramadol, Tapentadol, Morphine, Fentanyl, Oxycodone, Buprenorphine)

### Main uses

- 1) Relief of mild to moderate to severe pain.
- 2) Provide analgesia in terminal care.
- 3) Treatment of diarrhoea or excessive ileostomy output.
- 4) Codeine has some use in cough suppression medicine.

### How it acts

Opiates are strong, painkilling group of drugs that are similar to endorphins that the body makes in response to pain. Opioid drugs were originally made from opium poppies and can now be man made in the laboratory. There are different types of opioids and they are available in different forms. Sometimes they are classified into weak and strong. Types of weak opioids include Codeine and Dihydrocodeine (DF118). Strong opioids include Morphine, Fentanyl, Oxycodone, Diamorphine, Buprenorphine and Tramadol

### Dose / how it is administered

#### Weak opioids

Codeine Phosphate (commonly included in preparations containing paracetamol such as Co-Codamol, Codipar, Kapake, Solpadol, Zapain)

Available as 15mg or 30mg tablets or a syrup of 5mg/ml.

By mouth and intramuscular injection, dose is 30-60mg every 4-6 hours. Maximum 240mg daily.

Dihydrocodeine / DF118 (brand names include DHC continus and DF118 forte)

Also included in preparations containing paracetamol such as Co-dydramol, Remedeine).

Available as 30mg or 60mg tablets, a syrup of 2mg/ml.

By mouth dose is 30mg every 4-6 hours. Maximum 240mg daily.

By intramuscular injection up to 50mg every 4-6 hours as necessary.

#### Strong opioids

Only available through prescription. Your dose of opiate will be specific to you and depends on the amount you need to control your pain. Your doctor will advise you on specific amount and when to take it.

Tramadol (Brand names include Zamadol, Zydol, Larapam, Mabron, Marol, Tramquel SR)

Available as 50, 100, 150, 200, 300 and 400mg tablet and 50mg/ml solution for injection.

Dose by mouth / intravascular / intramuscular for an adult is 50-100mg every 4-6 hours. Maximum 400mg daily.

### Tapentadol (Brand Name Palexia IR and Palexia SR)

Available as 50 and 100mg Tablets. Dose by mouth is starting at 50mg once daily to a maximum of 200mg twice a day. This is a new synthetic drug with better side effects profile as compared to Oxycodone.

### Morphine

Can be taken in the following ways:

- Tablet (brands include long acting: *Morphemic SR, MXL, Zomorph, MST* and short-acting: *Sevredol*). Tablets come in several doses from 5mg to 200mg. They are in different colours to help differentiate doses. Short acting tablets last for 2-4 hours per dose. Long acting (slow release) types last from 12-24 hours per dose and so are taken once or twice daily. If taken twice daily, it is important to space tablets out and take regularly. Slow release tablets can take up to 48 hours to give you a steady dose.
- Liquid (brand names include *Oramorph, MST Continus suspension*) available as syrup or as a powder that you dissolve in water.
- Suppository
- Absorbed through the lining of the back passage (rectum). Push suppository in about 2cm and wash hands afterwards.

### Fentanyl

Can be taken in the following ways:

- Patch (brand names include *Durogesic DTrans, Tilofyl*). Stick a fentanyl patch onto an area of dry, clean, smooth, non-inflamed skin, free from oils and lotions to get best effects. The drug is then absorbed through skin into your body over a period of time.
- Patches take a while to reach correct dose so you may need another type of painkiller when you use your first patch. They are usually changed every 3 days and put on a different area of skin to avoid irritation. When you remove the patch it can take 24 hours for effects to wear off.
- Lolly or lozenge (brand name – *Actiq*). Suck the lozenge and move it around mouth for 15 minutes so that it is in contact with mouth lining. Useful for fast pain relief and to relieve pain felt between doses of other painkillers (known as breakthrough pain), will start working in 5 minutes. You must not chew or swallow the lozenge.

Oxycodone (brand names include *Oxynorm, OxyContin, Longtec, Shortec*). Available as fast acting (immediate release) and more slow acting (controlled release) tablets of varying strengths and solution for injection.

Dose for adult initially by mouth is 5mg every 4-6 hours for immediate release (*Oxynorm*) and increased by your doctor depending on effect. For controlled release preparations (*OxyContin*) dose start from 10mg every 12 hours.

Buprenorphine. Available in following forms:

- Tablets (brand names include Temgesic). Put the tablet under your tongue and it dissolves giving fast pain relief that last up to 8 hours. May be used for breakthrough pain whilst on other painkillers. Dose for an adult up to 200-400micrograms every 6-8 hours.
- Patch (brand names include BuTrans. Butec). Available in various strengths but same patch can stay on for up to 7 days in some brands. Stick buprenorphine patch as explained with fentanyl patch. Mechanism of action is similar however when you remove this patch it can take up to one day for effects to wear off.

### Side effects of opioids

Common (more than 10 in every 100 people):

- Constipation
- Feeling or being sick
- Drowsiness may be a problem at first or when dose is increased but usually wears off after a few days

Occasional (between 1-10 in every 100 people):

- Dizziness / vertigo
- A dry mouth
- Mood changes
- Confusion
- Narrowing of your pupils in your eyes
- Reduced sex drive (libido)
- Skin reaction – after patch removal for example.
- Dependency – opioids can cause dependence. This is a physiological phenomenon that is seen. It is different from addiction which is very rare. Please discuss this with your pain specialist if you have any concerns.

Rare (less than 1 in 100 people):

- Difficulty passing urine
- Change in heart rhythm or speed
- A drop in blood pressure
- Slowed breathing

### Special considerations

- Drowsiness may affect skilled task so things such as driving when starting opioids should be avoided. ***It is your responsibility to inform DVLA and your car insurer that you are on strong opioids.*** This may affect your premiums but will not prevent you from driving.

## Antidepressants (Amitriptyline, Nortriptyline, Venlafaxine, Duloxetine)

### Main uses in PMU

- 1) Moderate pain relief – nerve (neuropathic) pain in particular.
- 2) Aid sleep disturbance often associated with chronic pain.

### How it acts

Although not specifically intended to treat chronic pain, antidepressants are prescribed in the pain clinic for their specific pain relieving rather than mood altering effects.

Antidepressants are particularly useful in nerve pain due to various conditions and it generally works in the spinal cord and brain by blocking pain signals. Their effect is not immediate. You may feel some relief from an antidepressant after a week or so, but maximum relief may take several weeks.

### Dose / how it is administered

By mouth as tablets:

- Amitriptyline (brand names include *Triptafen*). Initially 10–25 mg, increasing to 75 mg, best taken at night 2 hours before bed, around 7-8pm.
- Nortriptyline (brand names include *Allegron*). Initially 10–25 mg, increasing to 75 mg at night.
- Venlafaxine (brand names include *Efexor*). Initially 37.5–75 mg at night.
- Duloxetine (brand names include *Cymbalta*). Initially 30 – 60mg at night increasing to twice a day.

Dose requirements vary widely but should generally start low dose and increase gradually until benefit is seen or side effects become limiting.

### Side effects

- Drowsiness.
- Blurred vision.
- Dry mouth – helped by taking regular sips of water, use sugar-free gum/sweets or melt ice in your mouth.
- Alteration in heart rate – slow or irregular.
- Constipation/urinary retention – although less common.

### Special considerations

- Avoid use in patients with heart problems or recent heart attack. Always discuss with your specialist regarding specific heart problems and the risk of these drugs.
- Overdosing on these medications can be fatal, please seek medical attention if you have taken more than the safe amount.
- Stopping treatment suddenly can sometimes cause problems and your doctor may want you to reduce your dose gradually especially if you have been on antidepressants for a long time.

## Anti-epileptics

(Gabapentin, Pregabalin, Carbamazepine, Sodium Valproate)

### Main uses in PMU

- 1) Management of nerve pain (neuropathic pain).
- 2) Treatment of painful conditions such as post-herpetic neuralgia, diabetic neuropathy, trigeminal neuralgia.

### How it acts

Anti-epileptics, traditionally known for treating seizures, have become invaluable in pain management and work in a number of different ways, all of which result in a reduction in pain intensity and response to triggering stimuli. They work by blocking signals that cause stimulation of nerves therefore preventing hyperexcitability of nerves in the brain and spinal cord, which are often the cause of persisting pain.

Using different antiepileptic drugs in combination with other classes of pain medication, particularly antidepressants provides good pain control.

### Dose / how it is administered

- Gabapentin (brand name includes *Neurontin*). Comes as 600 or 800mg tablets / 100, 300 or 400mg capsules. Dose should follow increasing regimes as follows:
  - Day 1: 300 mg once daily;
  - Day 2: 300 mg twice daily;
  - Day 3: 300 mg 3 times daily, increasing up to a maximum of 1200mg three times daily.
- Pregabalin (brand names include *Lyrica*). Available as range of 25-300mg per capsule and 20mg/ml syrup.  
Dose can start at 75 mg twice daily, increasing to 150 mg twice daily then 300 mg twice daily if necessary (maximum 600mg/day).
- Carbamazepine (brand names include *Tegretol, Carbagen*). Comes as 100, 200, 400mg tablet, 125 or 250mg suppository and as a white syrup of 20mg/ml.
- Dose from 100–400 mg twice daily in any form mentioned above. Maximum of 1.6g daily in divided doses if necessary.
- Sodium valproate. Available as 100, 200 or 500mg tablet and syrup of 40mg/ml.  
Dose can start as 200mg twice daily, increasing to 1g twice daily if necessary.

## Side effects

Each anti-epileptic may have slightly different side effects and can be dose-related.

### Common (more than 10 in every 100 people):

- Dizziness
- Drowsiness
- Fatigue
- Nausea / vomiting
- Tremor
- Rash
- Weight gain

Most of these side effects lessen with time.

### Occasional (between 1-10 in every 100 people)

- Mild skin rash
- Blood abnormalities (can occur in elderly in first few months of treatment)
- Swollen feet

### Rare (less than 1 in 100 people)

- Stevens-Johnson syndrome / toxic epidermal necrolysis (severe skin condition)
- Low level of certain cells (white cells/ platelets) in the blood.

## Special considerations

- Your doctor can advise you how best to reduce dose gradually with view of stopping.
- Your doctor may want to take blood tests to monitor your health while taking anti-epileptics. There is a risk of liver or kidney damage or decrease in the amount of platelets (blood component required for clotting) with prolonged use.
- Some anti-epileptics (sodium valproate) should be avoided if you have liver failure.
- Anti-epileptics can interact with other medications you are taking so be sure to provide your doctor up to date list of your regular medications (including herbal / over the counter).

## Muscle relaxants

(Baclofen, Diazepam, Methocarbamol)

### Main uses

- 1) Ease discomfort of muscle tension.
- 2) Short term treatment of pain and muscle spasm caused by injuries.

### How it acts

Baclofen, diazepam, and methocarbamol act on the brain and spinal cord and the pathways that are specifically responsible for muscle contractions. This results in pain relief, a reduction in muscle spasm and enhanced mobility of the affected muscle area. It works best when combined with gentle physical exercise, rest and other painkillers that work to tackle pain via a different pathway.

### Dose / how it is administered

- Baclofen (brand names include *Lioresal Lyflex*). Comes in tablets of 10mg or syrup of 5mg/5ml. Dose for adults by mouth starting at 5mg 3 times daily and can increase to 10mg 3 times daily. Maximum of 100mg/day in divided doses.
- Diazepam. Can be taken as:
  - Tablets (brand names include *Rimapam, Tensium*). Come in 2mg, 5mg or 10mg tablets. Dose for adults should start low at 2mg 3 times daily and can be increased if necessary to 15-30mg daily in divided doses.
  - Oral solution (Brand names include *Dialar*). Comes in syrup of 2mg/5ml for those with difficulty swallowing tablets. However, dose remains same as above, starting at 2mg (5ml) 3 times daily and increasing if necessary.
  - Suppository (brand names include *Diazepam Rectubes*). Comes in purpose built tube with solution to administer via rectum. Dose is weight dependent and is 0.5mg/Kg repeated after 12 hours if necessary.
- Methocarbamol (brand names include *Robaxin*). Comes in tablets of 750mg. Dose for adults is 1.5g (2 tablets) 4 times daily; may be reduced to 750mg (1 tablet) 3 times daily.

### Side effects of muscle relaxants

#### Common (more than 10 in every 100 people)

- Feeling sick
- Drowsiness / feeling sleepy or tired
- Vision changes such as double or blurred vision
- Methocarbamol may cause harmless reversible colour changes in urine.

These problems usually go as the body adjusts to the drug.

Occasional (between 1-10 in every 100 people)

- Confusion
- Dry mouth
- Stomach cramps or heartburn/ indigestion
- Change in bowel habit – constipation or diarrhoea
- Skin reaction –flushed face, can resemble hives on skin with rash and swelling

Rare (less than 1 in 100 people)

- Difficulty in breathing / tightness in chest
- Change in heart rhythm or speed
- Mood changes
- Unusual thoughts or dreams

Special considerations

- These medicines can cause drowsiness. Do not drive or operate machinery if you feel drowsy when taking these medicines.
- Effects of alcohol become enhanced so avoid drinking alcohol with these medicines.
- Baclofen should not be given to people who have a stomach ulcer.
- ***These medicines, especially Baclofen should not be stopped suddenly.*** The dose should be **LOWERED SLOWLY** over a few weeks and then stopped.

## Other (Lidocaine, Mexiletine, Capsaicin)

### Main uses in PMU

- 1) Treatment of nerve pain syndromes (e.g. diabetic neuropathy) and complex regional pain syndrome.
- 2) For postoperative pain relief.

### How they act

Mexilitine is the oral version of lidocaine. Both drugs were originally approved to treat irregular heartbeats, but some studies show they can be effective in the relief of chronic nerve pain. They act by reducing pain signals from the peripheral nerves to the spinal cord and brain. Over time the sensation of pain is diminished.

Capsaicin is a substance found in red-hot chilli peppers. It is thought to work by decreasing the amount of pain transmitting chemical from the nerve cells in the area where you are experiencing your pain. Through absorption it is transported all the way to the spinal cord and decreases the amount of pain transmitting chemical that is sent on to the brain. It takes some time for the drug to move to the spinal cord – therefore we recommend that you continue with treatment for at least 6 weeks before deciding to give up, if you are not having any benefit.

### Dose / how it is administered

Patients unable to take pain relief medication orally or with focal area of pain may benefit from following:

- Lidocaine
  - Plasters (*Versatis*): 5% is available as a 10×14cm patch with polyethylene backing to place over affected area. As with all medication applied via patch, place over non-irritated, dry, smooth area of skin. Dose is one per day for up to 12 hours followed by a 12 hour break.
- Capsaicin
  - Cream of 2 strength - 0.025% (*Zacin*) and 0.075% (*Axsain*). Apply small amounts to affected area 3 – 4 times daily, not more often than every 4 hours. Remember to wash hands after application.
  - Patch of 8% (*Qutenza*). Apply to non-irritated, clean, dry skin. Avoid anywhere near face / scalp. Length of treatment and monitoring to be decided by your pain specialist. This can only be administered in a clinical setting.

For those comfortable with oral medication may benefit from:

- Mexiletine (*Mexiti*)
  - Capsules of 150. 200 or 250mg, dose can start at 200mg three times daily however monitoring and adjustments of dose may be specific to you and carried out by your pain specialist.

## Side effects

### Lidocaine & Mexiletine

#### Common (more than 10 in every 100 people)

- Gastrointestinal side-effects (nausea, vomiting, abdominal pain, diarrhoea) can frequently limit treatment
- Dizziness

#### Occasional (between 1-10 in every 100 people)

- Worsening of existing heart rhythm/rate problems
- Tremor
- Numbness around mouth

#### Rare (less than 1 in 100 people)

- Metallic taste
- Difficulty sleeping
- Allergic reactions

#### Rare (less than 1 in 100 people)

- Tightness in chest / wheeze/ difficulty breathing
- Redness / hives/ rash/ itching at injection site

### Capsaicin

Frequency of these side effects are unknown but have been reported in some cases:

- Burning sensation - is most common effect, this resolves eventually and improves if you use the medication regularly and using it sparingly. Putting too much cream onto the skin or taking a hot bath/shower just before/after applying Capsaicin can make burning worse.
- Irritation of the eyes, throat and respiratory tract. This may cause symptoms like watering of the eyes, worsening of asthma, coughing and sneezing. Avoid inhalation of the vapours of Capsaicin.
- Local skin irritation.

### Talk to us

If you have a comment about the service we provide – positive or negative – talk to us. Your feedback will help us to improve and develop our service. Please speak to a member of staff in the PMU. If they can't help you or you would rather talk to a senior member of staff, ask to speak to the Sister, Department Manager or Matron.

### Friends and Family Test

Whatever your experience you can give feedback by answering the Friends & Family test question – *How likely are you to recommend our service to family and friends if they needed similar care or treatment?* - by filling in a card given to you by the receptionist or clinician.

## Notes

## Further information

More information is available on the Trust website:

[www.royalberkshire.nhs.uk](http://www.royalberkshire.nhs.uk)

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