



NSAIDs

Top tips for MURs

- Check that the patient understands why NSAID has been prescribed and check if still indicated
- Advise patient that side effects associated with NSAIDs are dose related so should be used for the shortest length of time and at the lowest dose necessary to control symptoms
- Advise patient that NSAIDs can increase blood pressure. Check that patient has had their blood pressure monitored within two weeks of initiation of therapy and after any dose increase
- Ensure patients are on the correct NSAID depending on their cardiovascular/gastrointestinal risk
- Check that patient has had annual renal and liver function tests (monitor more frequently in high risk patients e.g. in the elderly or patients with comorbid conditions)
- Counsel patients on signs / symptoms that need referral (**see red flags below**) and on common side effects (**see below**) and how they should be managed
- If co-prescribed proton pump inhibitor counsel patients on how it should be taken and why it is important
- Signpost patients with chronic pain to self-help leaflets and websites e.g. Arthritis care or expert patient programme
- Ensure that NSAIDs are taken in divided doses throughout the day, with or after food
- Advise patient not to take any OTC aspirin / ibuprofen or topical NSAIDs with their medication
- Advise patient that the full analgesic effect of medication will be seen within a week, but it will take up to three weeks to exhibit the antiinflammatory effect
- Pharmacological therapy should be used in combination with non-pharmacological therapy
- Advise patients on non-pharmacological interventions to manage pain e.g. weight management, physiotherapy, exercise, TENS machines and thermotherapy
- Report any relevant adverse drug reactions to the Yellow Card Scheme

What are NSAIDs used for?

NSAIDs are licensed for use in the treatment of inflammatory conditions (arthritis and other musculoskeletal disorders) and generalised pain relief (migraine, dental pain, post-operative pain, menorrhagia and gout). The aim of this guide is to target patients on long term NSAID therapy for chronic pain.

Lifestyle issues

- Counsel patient on healthy eating, exercise & weight loss (if BMI > 25kg/m²) – reduce saturated fat and salt intake, avoid salt substitutes, increase oily fish intake, complete 30 minutes of aerobic exercise three to five times a week, reduce caffeine intake to no more than 5 cups a day and recommend 5 portions of fruit and vegetables a day
- Counsel patient on reducing alcohol intake to within safe limits (up to 14 units a week, spread evenly over 3 more days, with several alcohol free days)
- Advise patients who smoke the benefits of stopping smoking and how to access pharmacy smoking cessation services or Stop Smoking Wales

How do NSAIDs work?

NSAIDs work by inhibiting the enzyme cyclo-oxygenase, which is involved in the production of inflammatory prostaglandins. This results in reduction of inflammation, reduced temperature and an analgesic effect.

Reminder about NSAIDs and cardiovascular risk:

Advice for diclofenac:

- Diclofenac is now contraindicated in patients with established ischaemic heart disease, peripheral arterial disease, cerebrovascular disease or congestive heart failure (New York Heart Association [NYHA] classification II–IV)
- Patients with these conditions should be switched to an alternative treatment at their next routine appointment
- Diclofenac treatment should only be initiated after careful consideration for patients with significant risk factors for cardiovascular events (e.g. hypertension, hyperlipidaemia, diabetes mellitus, smoking)

Advice for Etoricoxib:

- Ensure prescribing of etoricoxib is in line with MHRA advice and NICE clinical guideline on osteoarthritis

Advice for ibuprofen

- Avoid use for high dose ibuprofen ($\geq 2400\text{mg/day}$) in patients with established ischaemic heart disease, peripheral arterial disease, cerebral vascular disease, congestive heart failure (NYHA 11-1V), uncontrolled hypertension.
- Ibuprofen is contraindicated in patients with severe heart failure
- There is no increase in cardiovascular risk seen in ibuprofen at doses up to 1200mg/day compared with not taking ibuprofen



Advice for all NSAIDs:

- The decision to prescribe an NSAID should be based on an assessment of a patient's individual risk factors, including any history of cardiovascular and gastrointestinal illness. All NSAIDs should be avoided in patients with a history of vascular disease, a high risk of cardiovascular disease (CVD), or gastrointestinal (GI) risk factors
- Naproxen (1 gram daily) and low-dose ibuprofen (1.2 grams daily) are considered to have the most favourable thrombotic cardiovascular safety profiles of all non-selective NSAIDs
- Enteric coated formulations of naproxen may not provide sufficient protection against systemic effects. If a patients have GI risk factors, they should be co-prescribed a proton pump inhibitor (PPI)
- The lowest effective dose should be used for the shortest duration necessary to control symptoms. A patient's need for symptomatic relief and response to treatment should be re-evaluated periodically

Red flags that need referral

- Black stools or dark, coffee ground vomiting suggesting chronic gastrointestinal bleeding
- Symptoms of iron deficiency anaemia (suggesting chronic gastrointestinal bleeding) e.g. fatigue, weakness, dizziness, pale skin, chest pain, palpitations, shortness of breath
- Progressive unintentional weight loss or difficulty swallowing
- Persistent vomiting
- Patients who are at increased risk of GI side effects from NSAIDs should be referred for assessment on whether co-prescribing of gastroprotection is required, (e.g. patients patients ≥ 65 years, history of gastrointestinal ulcer or perforation, GI bleeding, serious comorbidity such as cardiovascular disease, hepatic or renal impairment, diabetes, hypertension or who are co-prescribed medication such as aspirin, anticoagulation, corticosteroids or SSRIs)
- Patients over 55 years old with unexplained, persistent recent onset dyspepsia
- Pregnancy & breastfeeding
- Swollen ankles or feet

What are the common side effects to look out for?

Gastro-intestinal disturbances including discomfort, nausea, diarrhoea, occasionally bleeding & ulceration	Take medication with milk, water or food as may reduce symptoms. Refer to prescriber for change of formulation, medication or addition of gastro-protection if persistent. Refer immediately to prescriber if evidence of gastrointestinal bleeding.
Rashes, angioedema, bronchospasm	Refer to prescriber – NSAID needs to be stopped.
Hepatic reactions – jaundice, abdominal pain & renal failure	Refer to prescriber – NSAID needs to be stopped.
Increased blood pressure, CV events, hyperkalaemia & fluid retention	Refer to prescriber for review of NSAID therapy.
Headache, dizziness, vertigo and insomnia	Refer to prescriber if a problem.
Reduced female fertility (long term use)	Advise patient that fertility problems are reversible on stopping treatment.

Potential drug interactions? – See BNF Appendix 1: Interactions for more details

- **Methotrexate** - there is an increased risk of methotrexate toxicity due to reduction in the excretion of methotrexate, more frequent blood monitoring may be required
- **Lithium** - there is increased risk of lithium toxicity with NSAID use. Lithium levels should be monitored closely when initiating, changing dose or discontinuing NSAID treatment. Avoid concomitant use
- **Diuretics and ciclosporin** - there is increased risk of nephrotoxicity with NSAID use (a prescription for diuretics may indicate a diagnosis of heart failure; NSAIDs can antagonise the diuretic effect and worsen symptoms of heart failure)
- **Aspirin, antidepressants and anticoagulants** - there is an increased risk of bleeding and concomitant use should be avoided, if this is not possible gastro-protection should be considered
- **ACE inhibitors and angiotensin II receptor antagonists** - there is an increased risk of renal impairment and hypotensive effect is antagonised

Where can you find more information?

- NSAIDs – BNF sub-section 10.1.1 Non-steroidal anti-inflammatory drugs
- Musculoskeletal disorders (level 1 & 2) distance learning packs that can be found on WCPPE website (<http://www.wcppe.org.uk>)
- NICE guidance on management of rheumatoid arthritis & Osteoarthritis can be found on NICE website (<http://www.nice.ork.uk>)
- Clinical Knowledge Summaries- NSAID prescribing issues (<http://www.cks.nice.org.uk>)
- MHRA - Drug Safety Update - (<http://www.gov.uk>)

