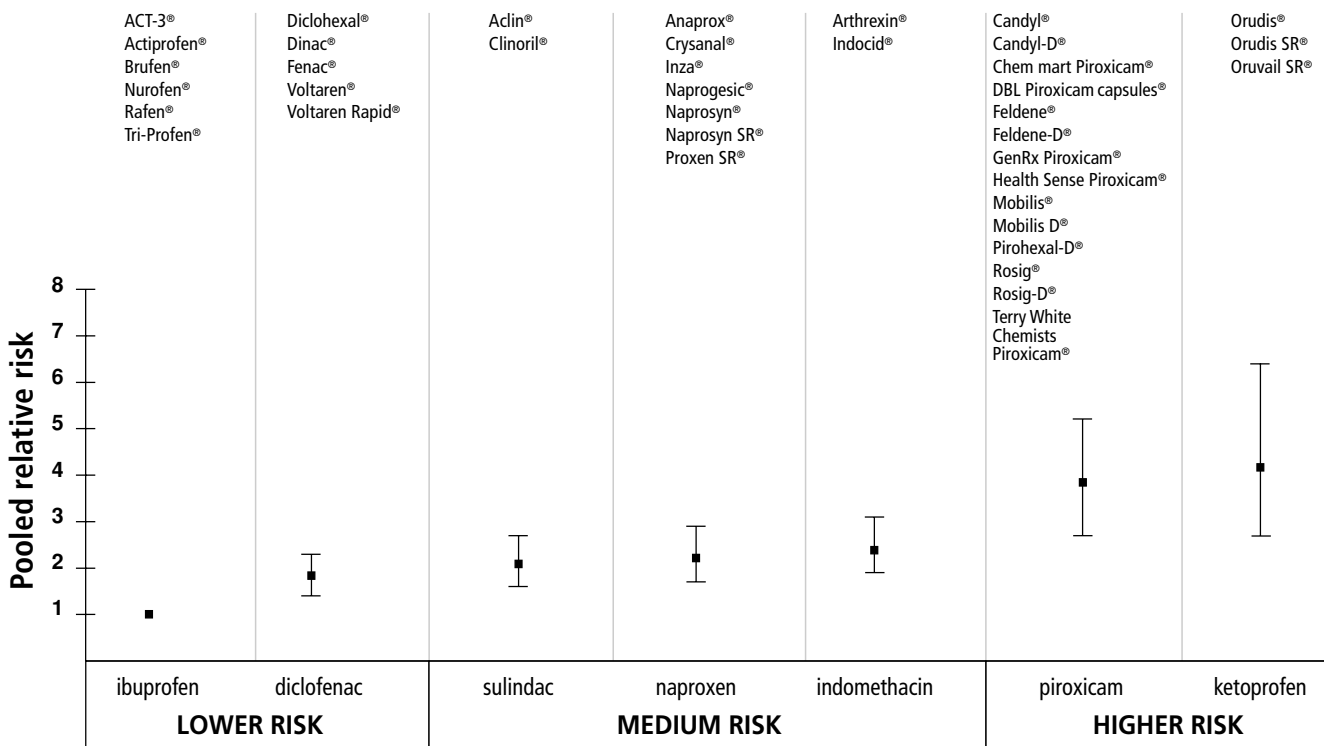


NSAIDs: minimising the risk

- Paracetamol is considered the drug of choice for managing pain in headache, osteoarthritis, strains and sprains.
- There is little difference in anti-inflammatory activity between NSAIDs. Choice of NSAID should be made on relative gastrointestinal toxicity, duration of action, patient response and tolerance.
- For chronic conditions such as osteoarthritis, doctors may add an intermittent NSAID to regular paracetamol so that the dose of NSAID can be minimised.
- A systematic review of the literature showed that some shorter-acting agents have a lower risk of serious upper gastrointestinal complications (such as ulcer haemorrhage), which are infrequent but serious adverse effects of NSAIDs! It is suggested that doctors prescribe higher risk agents only where low risk agents are ineffective or inappropriate.
- Ibuprofen in doses of 1600mg per day or less shows a lower degree of gastrointestinal toxicity than other NSAIDs.
- The graph below shows the pooled relative risk of serious upper gastrointestinal complications from exposure to individual NSAIDs compared with exposure to ibuprofen, eg the risk of serious upper gastrointestinal complications from ketoprofen is 4.2 times that of ibuprofen (in doses up to 1600mg/day).

Comparison by meta-analysis¹ of the pooled relative risk of serious upper gastrointestinal complications from exposure to individual NSAIDs compared with exposure to ibuprofen.



Graph shows pooled relative risk and 95% confidence intervals. This meta-analysis includes only retrospective studies of clinical records which should be representative of clinical practice.

Note: The relative risk for ibuprofen increases at higher doses, ie over 1600mg per day, and may be no safer than medium risk agents. Some of the differences between drugs may be due to dose and benefit may be lost once dose increased.

Risk not established: diflunisal - (Dolobid®) - insufficient no. of studies; tenoxicam - (Tilcotil®), tiaprofenic acid - (Surgam®) - no comparative data.

1. Henry D, Lim LL-Y, Garcia Rodriguez LA, Perez Gutthann S, Carson JL, Griffin M et al. Variability in risk of gastrointestinal complications with individual nonsteroidal anti-inflammatory drugs: results of a collaborative meta-analysis. *BMJ* 1996;312:1563-6.

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Suggested protocol for patient requests for OTC NSAIDs

1. Introduction

How do you find this product?

Ask this question to assess whether the product has been used previously, the patient's satisfaction and to establish dialogue.

2. Assess the patient's current medication and health status

Ask these questions to assess the patient with a view to recommending alternative therapies, providing information or referral.

Do you suffer from any other disease/medical conditions?

NSAIDs should be used with caution in patients at high risk of adverse effects:

- **elderly:** increased risk of gastrointestinal ulceration and renal impairment
- **in previous peptic ulcer disease:** increased risk of gastrointestinal ulceration
- **history of renal impairment:** increased risk of NSAID induced renal impairment, may cause acute renal failure
- **in cardiac failure:** fluid retention may result from reduced renal function induced by NSAIDs
- **in hypertension:** blood pressure control may deteriorate
- **some asthmatics:** risk of bronchospasm may be increased
- **in pregnancy:** category C - avoid use, especially in third trimester
- **surgery:** NSAIDs contraindicated immediately before and after some surgery
- **bleeding disorders:** NSAIDs may be contraindicated.

Are you taking any other medicines?

Drug interactions may occur with:

- **ACE inhibitors:** reduced antihypertensive effect, increased risk of renal impairment and hyperkalaemia - avoid combination in renal impairment
- **corticosteroids:** increased risk of peptic ulceration
- **cyclosporin:** reduced renal function may increase risk of nephrotoxicity
- **diuretics:** may reduce diuretic effect — monitor blood pressure
- **lithium:** reduced lithium clearance may increase risk of lithium toxicity
- **methotrexate:** avoid combination with antineoplastic doses — monitor for increased risk of methotrexate toxicity
- **potassium supplements and potassium sparing diuretics:** may increase serum potassium, especially in elderly or in renal impairment
- **warfarin:** avoid combination - increased risk of bleeding — monitor for gastrointestinal bleeding, excessive bruising.

3. Clinical assessment of patient's needs

What are the symptoms and how long have they been present?

NSAIDs are useful in the symptomatic treatment of conditions where prostaglandin production/inflammation is prominent. Over-the-counter NSAIDs are indicated only for acute symptom relief not chronic therapy.

Consider simple analgesia/non drug measures first line in:

- headache
- osteoarthritis
- strains and sprains
- tendonitis, tennis elbow, etc.

NSAIDs offer an advantage in:

- dysmenorrhoea
- metastatic bone pain
- inflammatory arthropathies such as rheumatoid arthritis
- acute gout.

What action has already been taken?

For example, is this person taking other analgesia, has paracetamol been tried?

4. Provide advice and/or optimal treatment

Assess appropriateness of request

- Is referral to a medical practitioner indicated? For example, where pain is severe, prolonged or in children or pregnancy, or where there are contraindicated concurrent therapies or illnesses; provide referral note if indicated. Should non-drug measures be used? For example, rest for sprains and strains.
- Is a simple analgesic indicated rather than an NSAID? For example, paracetamol is first line for headache, tendonitis (see above).

If appropriate, select treatment and provide advice

- Choose the most appropriate NSAID, eg ibuprofen has a lower risk of serious gastrointestinal complications (see overleaf), however naproxen sodium may provide more immediate relief for dysmenorrhoea in some patients.
- Inform the patient about correct use and dosing and signs of adverse effects, eg dark stools, swollen ankles, heartburn, worsening asthma. Note: taking NSAIDs with food or a full glass of water does not prevent gastrointestinal ulceration but may reduce dyspepsia.