

Resource

## NSAIDs explained

NSAID stands for 'Non-Steroidal Anti-Inflammatory Drug', commonly referred to as 'anti-inflammatories'. They help to reduce the inflammation associated with RA and can also help to relieve pain.

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- Anti-inflammatories work in two ways: to relieve pain; and to reduce inflammation (swelling, redness, heat and pain)
- To reduce pain, the effect from the prescribed NSAID dose taken with or after food may be felt after the first dose. It can take a week to achieve complete pain relief

- To reduce inflammation (the swelling in the joints), a regular dose must be taken (with or after food) thereby keeping a constant level of the drug in the bloodstream, and the full benefit in reducing swelling may take up to three weeks
- Occasionally, NSAIDs may take longer than three weeks to be fully effective in controlling the swelling, redness, heat and pain. If necessary, an alternative NSAID may be required for improved control of symptoms
- NSAIDs should only be used for the shortest possible time

## Which drug is prescribed?

There is very little difference between the NSAIDs and the way they work, but individuals can have considerable differences in the way they respond to them.

- Ibuprofen combines the benefits of pain relief, reduction of inflammation and lowering of fever. It has fewer side effects than other NSAIDs, but its anti-inflammatory properties are weaker
- Naproxen is an effective NSAID which is well tolerated
- Dexibuprofen recently reintroduced into the UK. Studies show they appear to be faster, acting with statistically significant reduced adverse events/side effects, including cardiovascular disease.
- Diclofenac is similar to Naproxen
- Indomethacin is a little more effective than naproxen but has a high incidence of side effects that include headache, dizziness, and gastrointestinal disturbance
- Piroxicam is as effective as naproxen but works for longer so that one dose daily is effective. It has more gastrointestinal side effects and can cause frequent skin reactions
- Meloxicam may be prescribed for long term treatment of RA and is a once-daily medicine

## Prescribing precautions

- Prescribing doctors will be aware of the precautions they need to take in their choice of NSAID
- It is vitally important that patients inform the doctor of all the information needed to prescribe safely. This includes information about any other diagnosed medical conditions and medicines currently prescribed (particularly heart or kidney disease, asthma or blood disorders)
- NSAIDs must only be taken with or after food because of the irritant effect they can have on the stomach
- The dose range for each NSAID is specific to the individual drug, and therefore the dose of one cannot be compared to another
- Cox 2s (cyclo-oxygenase-2) inhibitors are used very occasionally, usually when standard NSAIDs are not appropriate. They are prescribed with the knowledge that they can have an impact on the cardiovascular system
- Antibiotics containing trimethoprim are avoided when NSAIDs are being taken
- When NSAIDs are given as well as methotrexate, the dose of methotrexate should be carefully monitored. This is rarely a clinical problem
- Conventional NSAIDs, including diclofenac and ibuprofen (but probably not naproxen), have also been associated with a slightly increased risk of heart attack, particularly when high doses

are used. Large-scale studies of two widely used COX-2 drugs, celecoxib and etoricoxib, have not shown an increased risk of heart attack as compared with conventional NSAIDs, and they are used widely. Studies of a more recently reintroduced NSAID, dexibuprofen, indicate less or no impact on cardiovascular health.

## Most commonly reported side effects

As with any medication, NSAIDs have a number of possible side effects, although it is important to remember that these are only potential side effects. They may not occur at all.

The potential side effects listed below cover all the NSAIDs in the previous section. Ibuprofen, naproxen and diclofenac have the least side effects, with the risk of side effects increasing in the subsequent 3 NSAIDs.

- Gastrointestinal disturbances include discomfort, nausea, diarrhoea, and occasionally bleeding and ulceration. During longer-term use, stomach protection will be prescribed such as omeprazole or lansoprazole
- Hypersensitivity reactions such as rash, bronchospasm (mimicking asthma), angioedema (swelling of lips, tongue, around the eyes)
- Headache, dizziness, nervousness, hearing disturbances such as tinnitus (ringing in the ears), sensitivity to sunlight and blood in the urine
- NSAIDs have the potential to worsen asthma, but this will be checked by your specialist or GP
- There are other rare but potentially serious side effects, and these are listed in the specific patient information leaflet in the packaging
- In people with any kind of existing heart disease, caution would be taken in the prescribing of an NSAID