



PATIENT INFORMATION ON NON-STEROIDAL ANTI- INFLAMMATORY DRUGS (NSAIDs)

(Examples of brand names: Nurofen, Brufen, Mobic, Celebrex,
Naprosyn, Orudis, Arcoxia, Voltaren)

This information sheet has been produced by the Australian Rheumatology Association to help you understand the medicine that has been prescribed for you. It includes important information about:

- **how you should take your medicine**
- **the possible side effects**
- **what tests you may need to have to detect unwanted effects**
- **other precautions you should take while you are taking these medicines.**

Please read it carefully and discuss it with your rheumatologist.

Important things to remember

- While taking NSAID you should see your doctor regularly to make sure the treatment is working and to minimise any possible side effects.
- If you develop severe stomach pains, pass blood or black stools, or vomit blood, stop taking the medicine immediately. You should see your doctor as soon as possible or go to the nearest emergency department.

For more information about ARTHRITIS see Arthritis Australia's website:
www.arthritisaustralia.com.au

What are NSAIDs?

Non-steroidal anti-inflammatory drugs, or NSAIDs, are common medicines used to treat the symptoms of arthritis. The name means they reduce pain and stiffness due to

inflammation of the joints, without using steroids. You can find out about steroids from the separate ARA information sheet on corticosteroids.

There are many different NSAIDs. Some can be bought over the counter (OTC) e.g. ibuprofen (Nurofen). Others such as ketoprofen (Orudis) are only available with a prescription. The brand name of your NSAID will have the generic name next to it on the packet or bottle. See the table at the end of this information sheet for further examples.

How do they work?

NSAIDs stop cells making prostaglandins. Prostaglandins are chemicals released by injured cells. They cause inflammation and swelling and they sensitise nerve endings, which can lead to pain. If you make less prostaglandin, you have less inflammation and less pain. By stopping cells making prostaglandins, NSAIDs relieve the symptoms of arthritis. They do not stop the inflammation occurring in the future or prevent the disease progressing to joint damage.

There are two broad groups of NSAIDs: nonselective and selective. Selective NSAIDs are also called cox 2 inhibitors or coxibs. Selective NSAIDs are less likely than non-selective NSAIDs to cause stomach irritation or stomach ulcers.

What benefit can you expect from your treatment?

NSAIDs provide relief from pain and stiffness. They work quickly, usually within a few hours. The maximum benefit can take 2 to 4 weeks or sometimes longer. You may need to try two or

three different NSAIDs to find one that suits you best. You **must** only take one type of NSAID at a time.

How are NSAIDs taken?

NSAIDs are usually taken by mouth in tablet or capsule form. They are also available as liquids, injections, creams, sprays and suppositories.

Side effects may occur with any method of administration, even when NSAIDs are applied to the skin (see *Side effects*).

When should they be taken?

NSAIDs can be taken when needed to treat short term symptoms. They can also be taken regularly to manage persistent pain and stiffness.

While NSAIDs may be more effective if taken regularly, the possible side effects are less if they are only taken when needed, for example before exercise.

How often you take a NSAID also depends on the one you are prescribed. Ask your doctor or pharmacist if you are uncertain about how often to take your medicine.

Tablets and capsules should be taken with food to reduce possible side effects.

What is the dosage?

NSAIDs come in different strengths. Treatment usually starts with a low dose.

Your doctor will adjust the dose depending on the type of NSAID, the condition for which it is being used and whether or not your symptoms are relieved.

To minimise side effects, the lowest dose that controls symptoms is usually recommended.

Always follow the instructions provided in the packaging unless otherwise directed by your doctor.

Can other medicines be taken with NSAIDs?

To minimise side effects, sometimes a medicine to protect the stomach may be given (see page 3).

NSAIDs may be used with other arthritis medicines including:

- DMARDs (antirheumatic drugs) such as methotrexate

- simple pain medicines such as paracetamol.

Corticosteroids are not generally used with NSAIDs as the risk of side effects such as stomach irritation or ulcers are increased. There are separate information sheets for the medicines mentioned above.

You should not take more than one NSAID at the same time, including those bought without a prescription (except for low dose aspirin).

How long is the treatment continued?

Due to potential adverse effects with long term treatment, NSAIDs should be used at the minimum effective dose for the shortest possible time. NSAIDs should not be continued indefinitely without regular review by your doctor.

Are there any side effects?

You might experience side effects with your treatment. Tell your doctor if you are concerned about possible side effects. A reduction in dose or change to another NSAID may decrease the side effects so that you can continue to take the treatment.

Alternatively, your doctor may recommend a different pain relieving medicine with fewer potential side effects, such as paracetamol. This may allow you take the NSAID less often or stop it altogether.

Most common possible side effects:

- The most common side effects are *gastrointestinal* and may include nausea (feeling sick), vomiting, diarrhoea, constipation, heartburn and stomach pain or cramps.
- Other common side effects of NSAIDs include dizziness, lightheadedness, tiredness, headache, ringing in the ears (tinnitus) and increased blood pressure (see *Precautions*).
- NSAIDs can make *heart failure or kidney failure* worse. Fluid retention can lead to weight gain or swelling of ankles or legs. Kidney failure is more likely if you are also taking fluid tablets and certain blood pressure tablets (see *Precautions*).
- *Stomach or duodenal ulcers:* If you develop severe stomach pains, pass blood or black stools, or vomit blood, stop taking the

medicine immediately. You should see your doctor as soon as possible or go to the nearest emergency department.

The risk of ulcers is higher if:

- you are older than 65 years
- you have had a previous stomach or duodenal ulcer
- you are also taking warfarin, corticosteroid tablets or low-dose aspirin (used by many people to help prevent a heart attack or stroke).

Your doctor may advise that you take an anti-ulcer medicine to help reduce the risk of getting a stomach or duodenal ulcer.

- *Bleeding* more easily than usual is often noticed.
- *Allergy* to NSAIDs can occur resulting in skin rashes or itchiness
- *Shortness of breath* may occur in some people with asthma (see *Precautions*)

There are also a number of other uncommon side effects. Read the leaflet that comes with the medicine, which lists all the precautions and possible side effects.

Cardiovascular (CV) risk

The benefits of NSAIDs outweigh the known risks for most people. However there is a small but significant increased risk of CV adverse effects (such as heart attack, angina or stroke) with both selective and nonselective NSAIDs. The risk is lower with smaller doses of NSAIDs used for shorter periods of time. The risk is higher in those with other CV risk factors such as a previous CV event (e.g. a heart attack), smoking, obesity, high cholesterol or diabetes. Due to these potential adverse effects, any NSAID should be used in the *minimum effective dose* and for the *shortest possible time*.

If you have any questions or concerns about the risks of CV events, discuss the benefits and risks with your rheumatologist.

What precautions are necessary?

Blood pressure

- Because NSAIDs can affect your blood pressure it is a good idea to have your blood pressure monitored monthly for the first two months. This is more important if you already have high blood pressure or you are on treatment for high blood pressure.

Asthma

- *Shortness of breath* may occur in some people with asthma. Seek medical help if your asthma suddenly becomes worse after taking NSAIDs.

Blood tests

- It is usually advised to check a blood count and kidney function before starting NSAIDs long-term. Twice yearly checks are advised if you have no other risk factors. Your kidney function may need to be monitored more frequently if you have other risk factors for reduced kidney function, such as being over 65 years old and taking blood pressure medicines or fluid tablets.

Use with other medicines

- NSAIDs can interact with other medicines. You should tell your doctor (including your general practitioner, rheumatologist and other health professionals) about all medicines you are taking, including herbal and naturopathic medicines. This includes over the counter (OTC) medicines as some contain NSAIDs.
- Despite the possible increased risk of ulcer, low doses of aspirin used to prevent heart attack and stroke can be used with NSAIDs.
- Methotrexate for rheumatoid arthritis or other arthritis treatment can be taken safely with NSAIDs as long as your kidney function is normal.
- If you are taking anticoagulants such as warfarin you should tell your doctor as combination with NSAIDs can increase the risk of bleeding.

Use with alcohol

- NSAIDs can increase the risk of a stomach or duodenal ulcer. Heavy alcohol use (more than 4 standard drinks in one session)

should be avoided while taking these medicines.

Use in pregnancy and breastfeeding

- NSAIDs are not recommended during pregnancy unless specifically advised by your doctor. If you are planning a family or you become pregnant you should discuss this with your doctor as soon as possible.
- Some studies suggest that if NSAIDs are taken around the time of conception there may be an increased risk of miscarriage.
- If NSAIDs are taken in later stages of pregnancy they may have an effect on the

blood vessels near the baby's heart. Paracetamol does not have these effects.

- NSAIDs can be excreted into breast milk but most are safe while breastfeeding. Check with your doctor before taking NSAIDs while breastfeeding.

How to store NSAIDs

- Store NSAIDs in a cool, dry place, away from direct heat and light.
- Keep all medicines out of reach of children.

Non-selective NSAIDs (cox-1 and cox-2 inhibitors)	
Generic/drug name	Brand names
Diclofenac	Clonac, Diclohexal, Fenac, Imflac, Viclofen, Voltaren, Voltaren Rapid, APO-diclofenac
Ibuprofen	Advil, Brufen, Bugesic, Chemists' Own, Dimotapp, Gold Cross, Herron Blue, iProfen, Nurofen, Panafen, ProVen, Rafen, Tri-Profen
Indomethacin	Arthrexin, Indocid
Ketoprofen	Orudis, Oruvail
Ketorolac	Ketoral, Toradol
Mefenamic acid	Ponstan
Naproxen	Aleve, Anaprox, Chemists' Own, Crysanal, Eazydayz, Inza, Naprosyn, Naprofem, Naprogesic, Proxen
Piroxicam	Feldene, Feldene-D, Mobilis, Mobilis D,
Sulindac	Aclin
Selective NSAIDs (cox-2 inhibitors)	
Celecoxib	Celebrex
Etoricoxib	Arcoxia
Meloxicam	Meloxibell, Mobic, Movalis, Moxicam
Paracoxib	Dynastat

Note: This may not be a comprehensive list – ask your pharmacist or doctor for more information.

Questions?

If you have any questions or concerns write them down and discuss them with your doctor.

Your doctor's contact details:

When taking NSAIDs should see your doctor regularly to make sure the treatment is working and to minimise any potential side effects.

How to help us help you

Sign up to the ARAD project now!

The Australian Rheumatology Association collects information on how well these drugs work and how often they cause problems.

The best way to get this information is from you!
Contact us in any of the following ways:

Email: ARAD@monash.edu
Telephone: Sydney 02 9463 1889; or Melbourne 03 9508 3424
Fax: 1-800-022-730

Visit our website: www.ARAD.org.au

The information in this sheet has been obtained from various sources and has been reviewed by the Australian Rheumatology Association. It is intended as an educational aid and does not cover all possible uses, actions, precautions, side effects, or interactions of the medicines mentioned. This information is not intended as medical advice for individual problems nor for making an individual assessment of the risks and benefits of taking a particular medicine. It can be reproduced in its entirety but cannot be altered without permission from the ARA. The NHMRC publication: *How to present the evidence for consumers: preparation of consumer publications* (2000) was used as a guide in developing this publication.