

# Anti-inflammatories (Non-steroidal)

## NON STEROIDAL ANTI-INFLAMMATORY DRUGS

(Information from the Wellington Regional Rheumatology Unit, Hutt Hospital, Lower Hutt, New Zealand)

### PATIENT INFORMATION

This is the group of drugs most widely used in the treatment of arthritis. There are many different types available. They have analgesic (pain-reducing) and anti-inflammatory effects. Because they have analgesic properties it means that they can relieve pain in a similar fashion to paracetamol. They are also effective in controlling inflammation and by doing so they reduce the amount of stiffness and pain in the joint, muscle or tendon.

### Types of Non-steroidal Anti-inflammatory Drugs

Aspirin was the first non-steroidal anti-inflammatory drug to be used. Of the non-steroidal anti-inflammatory drugs currently available the most common are indomethacin (Indocid<sup>TM</sup>), naproxen (Naprosyn<sup>TM</sup>), ibuprofen (Brufen<sup>TM</sup> or Nurofen<sup>TM</sup>), ketoprofen (Orudis<sup>TM</sup> or Oruvail<sup>TM</sup>), piroxicam (Feldene<sup>TM</sup>), tenoxicam (Tilcotil<sup>TM</sup>), tiaprofenic acid (Surgam<sup>TM</sup>), diclofenac (Voltaren<sup>TM</sup> and Cataflam<sup>TM</sup>). The way that these drugs work is probably similar, although one preparation may be more suitable for one person than another.

Many of the non-steroidal anti-inflammatory drugs now come in a slow release form where the release of the drug from the capsule or tablet is delayed. This has two advantages, the first is that the drug is absorbed not in the stomach but further down the bowel making it less likely to upset the stomach and produce indigestion or nausea. The second advantage is that the effect of the tablets last longer, for at least 12 hours, which means that they only have to be taken twice a day. They are also more effective in the early hours of the morning which is usually when people have the most pain from their arthritis, particularly rheumatoid arthritis.

There is a new group of NSAIDs now available called COX-2 inhibitors. These drugs have the advantage of a lower risk of stomach ulcers, but they are more expensive and may not be necessary for patients with low risk of stomach side effects. Examples include celecoxib (Celebrex<sup>TM</sup>) and rofecoxib (Vioxx<sup>TM</sup>).

### Clinical use

Non-steroidal anti-inflammatory drugs are used for most types of arthritis and for many other types of pain that can occur in muscles, joints and bones. They are also useful in treating injuries, particularly joint sprains. They work quickly and people often notice some benefit within a few hours of taking the tablet.

For each person some are slightly more effective than others and usually you will find that one or two are helpful whereas others may not be. There is no way of predicting what particular non-steroidal anti-inflammatory drug will be helpful for you, so it is often necessary to try several and continue with the one that is most suitable.

Initially, when the arthritis is active, you may need to take a medium to high dose of the drug to control the pain and stiffness. Once these improve you can reduce the dosage so as to take the least number of tablets to control your symptoms. The smaller the dosage you take the fewer the side effects that may occur.

In rheumatoid arthritis even though the non-steroidal anti-inflammatory drugs are useful in controlling the pain and stiffness, they probably do not affect some of the other features of the arthritis, particularly the possibility of developing erosions or cysts in the bones. If these occur you may be given drugs that can control this bone damage, for example, gold, which you will have in addition to the non-steroidal anti-inflammatory drugs.

## **SIDE EFFECTS**

The side effects common to all non-steroidal anti-inflammatory drugs are indigestion, nausea and occasionally vomiting. This occurs because they disrupt the protective barrier of the lining of the stomach and may produce ulcers, which can then lead to internal bleeding. Even though they can all produce this side effect some are more likely to do so than others. When you stop the non-steroidal anti-inflammatory drugs these symptoms will disappear because the stomach lining's mucus barrier is no longer being affected.

Occasionally they may produce a headache or fuzzy thinking, and indomethacin is the drug most likely to do this. They all may rarely produce some "ringing in the ears" (tinnitus), or a skin rash. Other uncommon side effects include liver inflammation (hepatitis), diarrhoea, cystitis, and kidney problems. Once the non-steroidal anti-inflammatory drug is stopped, these side effects usually settle quickly.

Because you have had a side effects with one non-steroidal anti-inflammatory drug it does not necessarily mean that this same side effect will occur with others.

## **PRECAUTIONS**

Because they may irritate the stomach it is important that they should always be taken with food. You should try and take them with a meal but if you cannot do so, you should take them with milk or biscuits. If you do notice anything that you think is unusual and may be related to the non-steroidal anti-inflammatory drug, you should stop it and then consult your doctor.