

Anti-inflammatory drugs, non-steroidal anti-inflammatory drugs (NSAIDs) and selective COX2 inhibitors (COXIBs) reduce the formation of prostaglandins, which are major chemical mediators of inflammation and play an important part in normal body function.

Aspirin, as well as being a mild anti-inflammatory agent reduces pain and blood clotting activity.



Points to consider before commencing NSAIDs or COXIBs

- ① **Do you really need an anti-inflammatory?**
Simple pain relief with paracetamol, rest and physiotherapy can often be used instead of anti-inflammatory drugs.
- ② **Are you in a high-risk group for side effects?**
Check ulcer risk factors. If you are in a high-risk group you may be better off taking a COXIB or adding an acid-lowering drug if NSAIDs are required.
- ③ **Do you have high blood pressure, diabetes, heart or kidney disease?**
If so, you are at increased risk of side effects from NSAIDs and COXIBs and close monitoring will be required when you start treatment with these drugs.
- ④ **Check that you are not on more than one NSAID.**

NSAIDs are now available over the counter in low dose preparations (eg, *Nurofen*). It is not uncommon to find patients on two or more NSAID preparations (eg, one preparation for arthritis, another for dysmenorrhoea and a third for migraine). The use of multiple NSAIDs carries a significant increased risk of complications.

Beware the combinations of drugs such as:

NSAIDs, COXIBs and Aspirin
NSAIDs / COXIBs and Anti-Thrombotic drugs
NSAIDs and COXIBs together

For more information on this or other related topics contact **The Gut Foundation**

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BECAUSE YOU DON'T NEED A PAIN IN THE GUT



understanding
aspirin
NSAIDs and
COXIBs

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Disorders where anti-inflammatories are useful

Aspirin, NSAIDs and COXIBs are extremely effective in the management of inflammatory arthritis, musculoskeletal injuries and other muscle disorders.

They are also valuable in some non-inflammatory conditions including migraine, dysmenorrhoea, shingles and or reducing pain following surgery. Aspirin is useful in preventing strokes and heart attacks in at-risk patients.



Side effects of anti-inflammatories

Unfortunately, the benefits of NSAIDs, COXIBs and aspirin come at a price. Statistics show that in Canada NSAIDs cause more deaths than motor vehicle accidents. In the United Kingdom it has been estimated that over 2000 people die annually from the complications of NSAIDs.

The main complications of NSAIDs and aspirin have been bleeding from stomach and duodenal ulcers. COXIBs halve the risk of ulcer formation compared with NSAIDs and aspirin. Both NSAIDs and COXIBs can have unwanted effects on the bowel, lungs, kidneys and heart.



Risk factors for NSAID ulcer development

- Previous peptic ulcer disease
- High dose NSAIDs
- Multiple NSAIDs
- *Helicobacter pylori* infection
- Concomitant cortisone-based medications (eg *Prednisone* or *Prednisolone*)
- Age over 65 years

If you have any of these definite risk factors for NSAID ulcer development you should discuss with your doctor whether you should take ulcer preventative agents such as an acid lowering drug (*Somac*, *Losec*, *Nexium*, *Zoton*, *Pariet* or *Misoprostol*).

Alternatively COXIBs can be used because of their lower risk of ulcer development.

Other intestinal effects of NSAIDs

NSAIDs can cause oesophageal ulcers if not taken with adequate amounts of water. Inflammation or ulceration of the small bowel or the colon can also occur. Inflammation of the liver and activation of inflammatory bowel diseases such as ulcerative colitis are rare complications.

Bleeding

Low dose aspirin and NSAIDs interfere with blood clotting. The combination of aspirin with NSAIDs and the combination of NSAIDs with anticoagulants (eg *Warfarin*) and anti-thrombotic agents (eg *Plavix*) significantly increase the risk of major continuing bleeding when ulcers occur. *Aspirin*, *Plavix* and *Warfarin* also increase the risk of bleeding with COXIB induced ulcers. NSAIDs applied to the skin (sprays and gels) do not appear to cause ulcers or increase the risk of bleeding.

Cardiovascular and kidney affects

NSAIDs can raise blood pressure, particularly in persons with hypertension, They can also antagonise the anti-hypertensive effects of ACE inhibitors, angiotensin receptor blockers, beta blockers and thiazide diuretics and worsen heart failure. If you have any of these conditions and treatment with NSAIDs is proposed then it is important that blood pressure and heart function are monitored carefully, particularly in the first few weeks after starting the drug.

Kidney effects of anti-inflammatory drugs are most likely to occur in persons with kidney disease or diabetes. If you suffer from these diseases and you are commencing treatment with NSAIDs or COXIBs then careful monitoring by your doctor will be necessary.