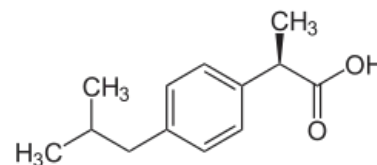


Ibuprofen

Iso-butyl-propanoic-phenolic acid, Ibuprofen, is a nonsteroidal anti-inflammatory drug (NSAID).

It is frequently used as an analgesic for relief of symptoms of headaches, toothaches, muscle pain, fever and postoperative pain. Especially if there is an inflammation present or risk of. This makes it effective as a treatment for pains derived from e.g. arthritis.



Compared to aspirin, ibuprofen has a milder and shorter-lived antiplatelet effect. It has also been shown that it can have a vasodilator effect, dilating mainly coronary arteries but also others can be effected.

Mechanism of Action

Ibuprofen works by inhibiting the enzyme cyclooxygenase (COX) which converts arachidonic acid to prostaglandin H₂. If there is no inhibition, the prostaglandin is further converted by other enzymes to other substances which are mediators of pain, inflammation and fever. There exist 2 isoforms of COX, since ibuprofen is a non-selective inhibitor it inhibits both COX-1 and COX-2. COX-2 is the responsible enzyme that gives Ibuprofen its beneficial effects, thus anti-inflammatory and analgesic. The unwanted effects on e.g. platelet aggregation and the GIT is caused by inhibition of COX-1.

Dosage

The maximum dose of ibuprofen is 800mg per dose or 3200mg a day, but it depends on the body mass. However, the recommended dose is 1200mg per day. The effect lasts approximately four to eight hours. Due to its stability, ibuprofen can be found also in gel format, making skin absorption possible.

Adverse Effects

Ibuprofen can have many different adverse effects, and can include abdominal pain, nausea, vomit, sleepiness, dizziness or headaches. Rarely (within recommended doses), there can be more severe symptoms like gastrointestinal ulceration or bleeding, convulsions, heart failure, renal impairment or bronchospasms.

There is a huge risk of gastric ulcers in long-term abuse, and appears commonly in the elderly.

There has not been shown a clear constant relationship between dose and severity of effects. However if severe side effect symptoms appear and is early diagnosed, it is suggested to use activated carbon which absorbs the drug in the stomach.

Links

Related articles

- analgesics

References

Bibliography

- FINKEL, CLARK, CUBEDDU, HARVEY, CHAMPE,, et al. *Lippincott's Illustrated Reviews: Pharmacology*. 4. edition. 2009. ISBN 978-1605472003.