Common painkillers may raise risk of heart attack by 100% – study

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[**Haroon Siddique**](https://www.theguardian.com/profile/haroonsiddique)

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Risk of myocardial infarction is greatest in first month of taking NSAIDs such as ibuprofen if dose is high, say researchers

Commonly prescribed painkillers [including ibuprofen](https://www.theguardian.com/society/2017/mar/15/ibuprofen-sale-restrictions-study-increased-cardiac-arrest-risk) increase the likelihood of having a [heart attack](https://www.theguardian.com/society/heart-attack) within the first month of taking them if consumed in high doses, a study suggests.

All five nonsteroidal anti-inflammatory drugs ([NSAIDs](https://www.theguardian.com/science/2016/sep/28/common-painkillers-linked-to-increase-risk-of-heart-failure-bmj-finds)) examined could raise the risk as early as the first week of use, an international team of researchers found.

They concluded that there was a greater than 90% probability that all the NSAIDs they studied were associated with a heightened risk of heart attack.

The overall odds of having a heart attack were about 20% to 50% greater if using NSAIDs compared with not using the drugs, although it varied for the individual drugs assessed, which also included naproxen, [diclofenac](https://www.theguardian.com/environment/2014/jun/07/european-vultures-threat-diclofenac-vets-spain-italy), celecoxib and rofecoxib.

As it was an observational study, cause and effect could not be established conclusively.

Nevertheless the authors, led by Michèle Bally of the University of Montreal Hospital Research Centre, write: “Given that the onset of risk of acute myocardial infarction [heart attack) occurred in the first week and appeared greatest in the first month of treatment with higher doses, prescribers should consider weighing the risks and benefits of NSAIDs before instituting treatment, particularly for higher doses.”

Previous studies had suggested [NSAIDs could increase the risk of heart damage](https://www.theguardian.com/society/2017/mar/15/ibuprofen-sale-restrictions-study-increased-cardiac-arrest-risk) but the authors said the timing, the effect of dose, the treatment duration and the comparative risk between different types were poorly understood.

For [the paper](http://www.bmj.com/content/357/bmj.j1909), published in the BMJ on Tuesday, the researchers analysed results on 446,763 people on healthcare databases in countries including Canada, Finland and the UK, of whom 61,460 had a heart attack.

The results suggested that the risk of heart attack associated with NSAID use was greatest with higher doses and during the first month of use. With longer treatment duration, risk did not seem to continue to increase but as the researchers did not study repeat heart attacks, they advised that it remains prudent to use NSAIDs for as short a time as possible.

They said the potential increase in risk was 75% for ibuprofen and naproxen and more than 100% for rofecoxib but that uncertainty about the extent of the increased risk was greatest for ibuprofen and naproxen.

Dr Mike Knapton, an associate medical director at the [British Heart Foundation](https://www.bhf.org.uk/?gclid=CjsKDwjw0cXIBRCxjqnE3K3sHhIkAL1LezRCSxUAD5LqBUuoewtxqmrljr5dPJAF4clZTJULmtEuGgI65vD_BwE), said the study “worryingly highlights just how quickly you become at risk of having a heart attack after starting NSAIDs”.

“Whether you are being prescribed painkillers like ibuprofen, or buying them over the counter, people must be made aware of the risk and alternative medication should be considered where appropriate,” he said.

But the lack of absolute risks of heart attack – for people using NSAIDs and those who are not – in the paper, and the fact that the researchers were unable to exclude other possible influencing factors, led some independent commentators to conclude that it was difficult to assess its significance.

Stephen Evans, a professor of pharmacoepidemiology at the London School of Hygiene and Tropical Medicine, said it was “good quality, observational research”, but added: “This study suggests that even a few days’ use is associated with an increased risk, but it may not be as clear as the authors suggest. The two main issues here are that the risks are relatively small, and for most people who are not at high risk of a heart attack, these findings have minimal implications.”

He advised that it offered “no reason to induce anxiety in most users of these drugs”.

Prof Helen Stokes-Lampard, the chair of the Royal College of GPs, said: “These drugs can be effective in providing short-term pain relief for some patients – what is important is that any decision to prescribe is based on a patient’s individual circumstances and medical history, and is regularly reviewed.”

About 190,000 people a year go to hospital due to heart attacks in the UK, according to the British Heart Foundation.