

Reducing side-effects of painkillers

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Cardiff University researchers have increased the understanding of why some painkillers increase the risk of heart attack and stroke.

The most commonly prescribed medications for treating conditions such as arthritis are non-steroidal anti-inflammatory drugs (NSAIDs) which include, for example, ibuprofen. These drugs reduce pain, fever and inflammation but also carry a greater risk of cardiovascular side effects in some patients. However, the factors that cause such adverse effects were unknown.

Now a team in Cardiff University's School of Medicine, working with colleagues at Vanderbilt University in Tennessee, have discovered a link with levels of nitric oxide in the blood.

Blood vessels use nitric oxide to signal the surrounding smooth muscle to relax, dilating the artery and increasing blood flow. Patients with cardiovascular disease and arthritis have lower blood vessel nitric oxide levels.

Dr Valerie O'Donnell, of the School of Medicine's Department of Medical Biochemistry and Immunology at Cardiff University said: "We have found that reducing nitric oxide levels in some rodents makes them more likely to suffer cardiovascular side effects from NSAIDs, such as increased blood pressure. Although this is a small study, it will be important now to look at whether this happens in humans. It may mean that monitoring nitric oxide, or replacing it in certain individuals may help decrease the risk of side effects."

Source: Cardiff University

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