

# Triple mix of blood pressure drugs and painkillers linked to kidney problems

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Patients who take a triple combination of blood pressure drugs and common painkillers are at an increased risk of serious kidney problems, especially at the start of treatment, finds a study published in *BMJ* today.

Although the absolute risk for individuals is low, it is still something doctors and patients should be aware of, say the researchers.

Acute [kidney injury](#) (also known as [kidney failure](#)) is a major public health concern. It occurs in more than 20% of hospital inpatients and is associated with around half of all potentially [preventable deaths](#) in hospital. It is often triggered by adverse reactions to drugs, but little is known about the safety of different [drug combinations](#).

So a team of researchers from the Jewish General Hospital and McGill University in Montreal, Canada, set out to assess whether certain combinations of drugs to [lower blood pressure](#) (antihypertensive drugs) and non-steroidal anti-inflammatory drugs (NSAIDs) are linked to an increased risk of kidney injury.

These drugs are commonly prescribed together, particularly in elderly people with several long term conditions.

Using the world's largest computerised database of primary care records (CPRD), they identified 487,372 people who received antihypertensive drugs between 1997 and 2008. Drugs included angiotensin converting enzyme (ACE) inhibitors, angiotensin receptor blockers (ARBs) and

diuretics, with NSAIDs.

Patients were tracked for nearly six years, during which time 2,215 were diagnosed with acute kidney injury that prompted admission to hospital or dialysis (7 in 10,000 person years).

The results show that patients taking a double therapy combination of either a diuretic or an [ACE inhibitors](#) or ARB with an NSAID were at no increased risk of kidney injury. However, a triple therapy combination of a diuretic with an ACE inhibitor or ARB and an NSAID was associated with a 31% higher rate of kidney injury, particularly elevated in the first 30 days of treatment during which it was 82% higher.

These results remained consistent after adjusting for confounding factors and controlling for other potential sources of bias.

The authors conclude that, "although [antihypertensive drugs](#) have cardiovascular benefits, vigilance may be warranted when they are used concurrently with NSAIDs." They add: "In particular, major attention should be paid early in the course of treatment, and a more appropriate choice among the available anti-inflammatory or analgesic drugs could therefore be applied in clinical practice."

In an accompanying editorial, researchers at the London School of Hygiene and Tropical Medicine say this study "is an important step in the right direction" but "probably underestimates the true burden of drug associated acute kidney injury."

They suggest that clinicians advise patients of the risks and be vigilant for drug associated acute kidney injury, and say "the jury is still out on whether double drug combinations are indeed safe."

**More information:** Concurrent use of diuretics, angiotensin

converting enzyme inhibitors, and angiotensin receptor blockers with non-steroidal anti-inflammatory drugs and risk of acute kidney injury: nested case-control study, *BMJ*, 2013.

Editorial: Safety of co-prescribing NSAIDs with multiple antihypertensive agents, *BMJ*, 2013.

Provided by British Medical Journal

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