

## Soluble Acetaminophen May Increase Risk of CVD



Doctors warn that people should avoid taking dissolving, fizzy paracetamol that contains salt, following findings from a large study that shows a link with a significantly increased risk of heart attacks, stroke, heart failure and death. The study of nearly 300,000 patients is published in the *European Heart Journal*.

Sodium is often used to help drugs such as paracetamol (also known as acetaminophen) dissolve and disintegrate in water. However, effervescent and soluble formulations of 0.5 g tablets of paracetamol can contain 0.44 and 0.39 g of sodium respectively. If a person took the maximum daily dose of two 0.5 g tablets every six hours, they would consume 3.5 and 3.1 g of sodium respectively – a dose that exceeds the total daily intake of 2 g a day recommended by the World Health Organization. Other formulations exist that contain an extremely small amount of sodium or none at all.

Too much salt in diets is known to be a major public health problem and is associated with an increased risk of cardiovascular disease (CVD) and death among patients with high blood pressure.

Researchers, led by Professor Chao Zeng from Xiangya Hospital, Central South University, Changsha, China, analysed data from the UK's Health Improvement Network. They looked at 4,532 patients with high blood pressure who had been prescribed sodium-containing paracetamol and compared them with 146,866 patients with high blood pressure who had been prescribed paracetamol without sodium. They also compared 5,351 patients without high blood pressure who were prescribed sodium-containing paracetamol with 141,948 patients without high blood pressure prescribed non-sodium-containing paracetamol. The patients were aged 60-90 years and the researchers followed them up for a year.

The researchers found the risk of heart attack, stroke or heart failure after one year for patients with high blood pressure taking sodium-containing paracetamol was 5.6% (122 cases of CVD), while it was 4.6% (3051 CVD cases) among those taking non-sodium-containing paracetamol. The risk of death was also higher; the one-year risk was 7.6% (404 deaths) and 6.1% (5,510 deaths), respectively.

There was a similar increased risk among patients without high blood pressure. Among those taking sodium-containing paracetamol, the one-year CVD risk was 4.4% (105 cases of CVD) and 3.7% (2079 cases of CVD) among those taking non-sodium-containing paracetamol. The risk of dying was 7.3% (517 deaths) and 5.9% (5,190 deaths), respectively.

Prof. Zeng said: "We also found that the risk of cardiovascular disease and death increased as the duration of sodium-containing paracetamol intake increased. The risk of cardiovascular disease increased by a quarter for patients with high blood pressure who had one prescription of sodium-containing paracetamol, and it increased by nearly a half for patients who had five or more prescriptions of sodium-containing paracetamol. We saw similar increases in people without high blood pressure. The risk of death also increased with increasing doses of sodium-containing paracetamol in both patients with and without high blood pressure."

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