

Combination therapy best combats heart disease

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Credit: AI-generated image ([disclaimer](#))

Using combination drugs or 'polypills', may hold the key to reducing heart disease in Western Australia.

This is the finding of Curtin University researchers who took part in the global Heart Outcomes Prevention Evaluation-3, or 'HOPE-3' study,

which involved more than 12,000 participants in 21 countries.

The study targeted people at a moderate risk of cardiovascular disease, and investigated what impact a combination of inexpensive drugs might have on reducing the risk of heart attack and stroke.

"More than a decade ago, researchers from the UK put forward a proposal that if we had a combination pill, which included cholesterol lowering and blood pressure lowering medications, that a significant improvement may result," says Curtin University's Professor Christopher Reid.

"They estimated around an 80 per cent reduction in heart attacks and strokes. Over the last decade there's been a number of studies that have looked at this concept of a polypill or a combined approach to cardiovascular prevention.

"We provided study participants with anti-hypertensives alone to lower blood pressure, statins alone to lower cholesterol, a combination of the two, and lastly placebos which provided no treatment at all," Prof Reid says.

"Most importantly, we saw a near 40 per cent reduction in heart attacks and strokes in the groups that were receiving combinations, lipid lowering and cholesterol lowering therapies."

"It's really painting a picture that combination therapy may well be one of the best ways in which we can reduce the burden of cardiovascular disease."

Researchers found that anti-hypertensives alone were effective for lowering blood pressure among participants with significantly elevated blood pressures. But those with normal blood pressures, anti-

hypertensives had no major impact on heart attacks and strokes.

With cholesterol lowering therapy, overall the test group showed a 25 to 30 per cent reduction in heart attack and stroke rate after the five-year follow-up period.

"What the Hope-3 study did in quite a clever design was randomise participants to receive either blood pressure lowering or lipid lowering or the combination treatments in comparison to placebo treatments in each of those three study groups," Prof Reid says.

He says people at moderate-risk could still fall victim to [heart attack](#) and stroke, and says further research is needed into the effectiveness of 'polypills'.

"Hope-3 is a very important part of piecing together the puzzle, and clearly our results demonstrate that in a moderate risk group, the combination of lipid lowering and [blood pressure](#) lowering is very effective in reducing heart attacks and strokes."

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