

Multi-drug pills help people stick to heart disease prevention regimens

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People are much more likely to take preventive medicines if they're combined in one pill, an international study has found. The findings are published today in the *Journal of the American Medical Association*.

Taking aspirin, cholesterol-lowering and blood pressure-lowering drugs long-term more than halves heart attack and [stroke recurrence](#). However, only about 50 per cent of people with cardiovascular disease in high-income countries take all recommended [preventive medications](#). In low- and middle-income countries, only five to 20 per cent do. This leaves tens of millions of people undertreated.

In the first study to test the impact of a fixed-dose [combination pill](#) - called a [polypill](#) - in people with cardiovascular disease, 2,004 participants in the UK, Ireland, the Netherlands and India were randomly assigned either the polypill, or their normal combination of medicines.

After an average of 15 months' follow-up, the proportion of participants in the polypill group who were taking medications regularly was a third higher than in the group receiving usual care. The polypill group also had [lower blood pressure](#) and cholesterol measurements.

Lead author, Professor Simon Thom, from the National Heart and Lung Institute at Imperial College London, said: "The reality is that large numbers of people who have already suffered heart attacks or strokes either don't receive these medications or get out of the habit of taking them. The findings of this study suggest that providing them in a single

pill is a helpful preventive step."

Professor Thom said the new findings dispelled several myths about the polypill. "Despite the use of older medications and fixed doses, the polypill group had improved blood pressure and [cholesterol levels](#) simply because they took recommended medications more regularly. Also there were no differences in diet or exercise patterns." He also noted that the trial participants were almost universally eager to adopt the polypill if it were made available.

Co-author Professor Anthony Rodgers of The George Institute for Global Health and The University of Sydney, said: "These results show that polypills are a viable strategy for heart attack and stroke survivors. This is most relevant to the large number of high-risk individuals globally who currently don't take recommended medications long-term.

"While the World Health Organisation and many others have noted the potential benefits and cost savings of such an approach for over a decade, this is the first trial to show these benefits directly."

Most of the patients in the study had already had a heart attack or stroke; the rest were at high risk on the basis of risk factors such as [blood pressure](#), cholesterol and smoking.

The polypills used in the study were developed by Dr Reddy's Ltd, Hyderabad. The late Dr Anji Reddy gave the green light to the development, seeing an opportunity to provide an affordable, convenient treatment package to patients in India and elsewhere.

More information: S Thom et al. 'Effects of a fixed-dose combination on medication adherence and risk factors in patients with or at risk of CVD. The UMPIRE randomized clinical trial.' *JAMA* 2013.

Provided by Imperial College London

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