

"Simple" methods prevent heart attacks and stroke

A worldwide study has proven that three simple drug regimens are the most effective in preventing heart attacks and stroke.

The research team from the Population Health Research Institute (PHRI) of McMaster University and Hamilton Health Sciences in Ontario, Canada studied more than 12,000 patients from 21 countries, including South Africa, to evaluate drugs that can prevent cardiovascular disease (CVD). These diseases lead to 18 million deaths and about 50 million heart attacks and strokes globally every year.



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Significant global impact

“These are incredibly important findings with potential for significant global impact,” says Dr Salim Yusuf, principal investigator. “If just 10% of the world’s population at intermediate risk of CVD are impacted, we’re talking about 20-30 million people who could be helped by these drugs.”

The three methods examined included two established forms of therapy, namely statins, a group of cholesterol-lowering drugs, and anti-hypertensives, a class of drugs used to treat high blood pressure. The third protocol involved a combination of statins and anti-hypertensives.

Results

Under the name of HOPE-3, or Heart Outcomes Prevention Evaluation-3, the three studies involved 228 centres looking at the effects of the three treatments in people at intermediate risk of, but without, clinical heart disease.

- Statins proved to significantly and safely reduce CVD events by 25% in patients at intermediate risk without CVD.
- Although anti-hypertensives did not reduce major CVD events overall in the population studied, they do reduce such events in the group of people with hypertension, but not in those without hypertension.

- When combined, statins and anti-hypertensives reduced CVD events by 30%—with a 40% benefit in those with hypertension, suggesting that patients with hypertension should not only lower their blood pressure but also consider taking a statin.

Trail puts debate to rest

In South Africa the study was led by Professor Karen Sliwa, director of UCT's Hatter Institute of Cardiovascular Research.

"The Hope-3 trail is highly important for South Africa as there has recently been a substantial public debate about the long-term safety of statin treatment – this debate can now be put to rest as patients received treatment with statins over a period of up to 10 years.

"Stroke places a major burden of disease in South Africa. Primary prevention using a statin could have a major impact as the agents have recently come off patent and are now more affordable," says Prof. Sliwa.

Simplified primary prevention

The HOPE-3 research reports were led by Dr Yusuf and Dr Eva Lonn, both professors of medicine of McMaster's Michael G. De Groote School of Medicine, and Jackie Bosch, an associate professor of the university's School of Rehabilitation Science.

"The HOPE-3 trial brings clarity in the management of blood pressure and cholesterol, two of the most common cardiovascular risk factors. Primary prevention can be greatly simplified and made available to most intermediate-risk people worldwide," says Lonn.

Statins remarkably safe

Bosch adds: "Treatment with a statin was remarkably safe and beneficial in our study, regardless of cholesterol or blood pressure levels, age, gender or ethnicity. We are incredibly encouraged by the study's results."

HOPE-3's findings will have a major influence on primary care in developed nations, where statins and anti-hypertensives are inexpensive, Dr Yusuf adds. While still relatively inexpensive in developing nations, the drugs are less affordable in relation to income. Still, Yusuf says the study's results hold promise everywhere as the price of these drugs start to come down.