

# Nitrate in beetroot juice lowers blood pressure

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The nitrate content of beetroot juice is the underlying cause of its blood pressure lowering benefits, research from Queen Mary University of London reveals today.

The study, published online in the American Heart Association journal *Hypertension*, found that blood pressure was lowered within 24 hours in people who took [nitrate](#) tablets, and people who drank beetroot juice.

The research will be welcome news to people with [high blood pressure](#) who might now be able to use a new 'natural' approach to reduce their risk of [cardiovascular disease](#) (including stroke and heart attacks) - the world's biggest killer.

Study author Amrita Ahluwalia, Professor of Vascular Biology at Queen Mary's William Harvey Research Institute, said the investigation was able to demonstrate that the nitrate found in beetroot juice was the cause of its beneficial effects upon cardiovascular health by increasing the levels of the gas nitric oxide in the circulation

Professor Ahluwalia said. "We gave inorganic nitrate capsules or beetroot juice to healthy volunteers and compared their blood pressure responses and the biochemical changes occurring in the circulation.

"We showed that beetroot and nitrate capsules are equally effective in lowering blood pressure indicating that it is the nitrate content of beetroot juice that underlies its potential to reduce blood pressure. We

also found that only a small amount of juice is needed - just 250ml - to have this effect, and that the higher the blood pressure at the start of the study the greater the decrease caused by the nitrate.

"Our previous study two years ago found that drinking beetroot juice lowered blood pressure; now we know how it works."

The results of the study could pave the way for a natural approach to lowering [blood pressure](#) that ultimately may help reduce the currently massive burden of cardiovascular disease on the NHS.

**More information:** Inorganic Nitrate Supplementation Lowers Blood Pressure in Humans, Kapil et al. is published online in the AHA journal Hypertension on Monday 28 June 2010

Provided by Queen Mary, University of London

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