

World-first high blood pressure treatment trialled in Melbourne

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A world-first breakthrough to treat high blood pressure has been successfully trialled in Melbourne.

The clinical trial showed significant improvement in [blood pressure](#) of participants who were given a new catheter-based treatment where blood pressure lowering medication had failed.

Director of Monash University's Centre of Cardiovascular Research and Education in Therapeutics, Professor Henry Krum led the research collaboration between Monash, the Baker Heart and Diabetes Institute, and St Vincent's Hospital to develop the new surgical technique that disrupts nerves around the kidneys to dramatically reduce [high blood pressure](#).

The technique could benefit those at high risk of [heart attack](#) or stroke from [high blood pressure](#) that resists conventional drug treatments.

Professor Krum presented these data in a late breaking clinical trial session at The American College of Cardiology's 58th Annual Scientific Session earlier this week and was lead author on a simultaneous publication in The *Lancet*.

The results are set to revolutionise high blood pressure treatment in patients around the world.

Professor Henry Krum said the treatment would benefit those five to

twenty per cent of patients with high blood pressure who do not respond to medication.

"Patients who underwent the procedure had a significant reduction in their blood pressure levels and we were able therefore to reduce their risk of severe stroke or heart attack," Professor Krum said.

A total of 50 patients were recruited from Australia and overseas for the trial conducted by a team of researchers, which included Professor Henry Krum, from Monash University, Professor Markus Schlaich and Professor Murray Esler from Baker IDI and Professor Rob Whitbourn from St Vincent's Hospital, Melbourne.

Professor Krum said the trial results were the most significant in the treatment of high blood pressure since the introduction of the drugs that are in use today.

"We showed an excellent safety profile of this brief, catheter-based therapy. No long-term adverse events resulted from the procedure. Therapeutic renal denervation led to a large and persistent decrease in blood pressure, which was achieved in patients resistant to multiple existing hypertensive drug types. Moreover, reduction of blood pressure was evident as early as 1 month, was further reduced at 3 months, and persisted through subsequent assessments," Professor Krum said.

The procedure is carried out under local anaesthetic and uses radio energy frequency, delivered to the targeted nerve area via catheter. As a result the nerves are silenced in the renal artery, which supplies blood to the kidneys.

Researchers had long-believed that this region was a key regulator of blood pressure, but until these trial results the theory had not been successfully trialled.

"The catheter allowed us to target a very specific area to deliver the right amount of frequency to the nerves without damaging the surrounding areas," Professor Krum said.

Source: Monash University

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