Your Donations Make a Real Difference
World First Hypertension Treatment A Success

Researchers working for the Royal Perth Hospital Medical Research Foundation and the University of Western Australia have taken a step forward in the fight against high blood pressure after the first human trials of a ground-breaking treatment produced successful results.

Professor Markus Schlaich holds the Dobney Chair in Clinical Research, which is supported by the Medical Research Foundation, and has been the lead international investigator of a global effort to effectively treat resistant hypertension at Royal Perth Hospital.

The cutting-edge procedure targets the carotid body – a tiny organ the size of a grain of rice that’s found on either side of the neck – and regulates our cardiovascular and respiratory systems.

The procedure guides a catheter through the femoral vein in the groin up to the neck and ends adjacent to the carotid body. The device then specifically targets the organ with short ultrasound energy pulses, rendering it ineffective.

Professor Schlaich said exposing a carotid body to ultrasound could permanently lower blood pressure in patients who fail to respond to a combination of various medications or lifestyle changes.

“We know that patients with uncontrollable high blood pressure will often have an overactive carotid body, so we’re looking to silence it or at least reduce its activity,” he said.

“The therapeutic ultrasound can emit waves of energy that travels through tissue and target the organ of interest.”

Cardiovascular disease is an enormous burden on the health system and society at large. More than 30 per cent of adult Australians are affected by high blood pressure and more than 8.5 million deaths each year worldwide are directly attributable to uncontrolled blood pressure.

Patient Agnes Johnson, 78, suffered from high blood pressure for 30 years and was the first person in Australia to undergo the procedure in 2018.

After the treatment, Mrs Johnson said her blood pressure dropped from 220 over 90 to a more manageable 140 over 80 mmHg.

“The medications I tried kept making me sick, so having this done was of huge benefit to me. The procedure was fine, I had no side effects and now I feel much better,” she said.

Professor Schlaich said the world first catheter based approach has been performed on 39 patients in Australia and Europe, and he hopes to have the procedure readily available around the world in around two to three years.

“There is clear evidence to demonstrate that if you manage to reduce blood pressure, you can dramatically reduce the risk of heart attacks and strokes,” he said.

“This approach won’t be used for everyone with hypertension, but it could be a great approach for those patients whose blood pressure cannot be controlled with medication or lifestyle changes.”

Remembering Ray Dobney

This world-leading, life-changing research wouldn’t be possible without the overwhelming kindness of the late Ray Dobney. Ray was a long-term patient at Royal Perth Hospital and a generous donor to the Royal Perth Hospital Medical Research Foundation. Professor Markus Schlaich’s position of Dobney Chair has been funded thanks to Mr Dobney’s big-hearted bequest.