

## A surgical treatment for high blood pressure

According to the Center for Disease Control and Prevention, 70 million Americans are diagnosed with high blood pressure, also referred to as hypertension in the medical field. The majority of these individuals are not experiencing any symptoms when they are initially diagnosed with high blood pressure. Over the course of a lifetime, however, high blood pressure can cause a variety of problems throughout the body including kidney damage, increased risk of stroke and heart attack, and heart failure. For this reason it is important that individuals diagnosed with hypertension keep their blood pressure under control to reduce the risk of these complications later in life.

There are many options to help individuals diagnosed with hypertension to keep their blood pressure under control. These include maintaining a low sodium (salt) diet, lifestyle alterations such as an increase in exercise, and a large variety of medications. Despite the number and variety of management options, there are still individuals who are unable to keep their blood pressure under control. This case study discusses a patient that tried an array of blood pressure medications, as well as a change in diet and lifestyle yet continued to experience blood pressures at dangerous levels. While blood pressure in a normal individual should be 120/80 mmHg or lower, this patient continually recorded blood pressures up to 220/110 mmHg.

After this patient had exhausted all other options she was sent to a urologist to discuss a surgical treatment involving the removal of the nerves that travel to the kidney, which is called a laparoscopic renal denervation. While there are likely many factors that lead to the development of high blood pressure in an individual, an increase in the activity of the nerves controlling the kidneys is thought to play an important role in causing hypertension. Cutting off the nerve supply to the kidneys, therefore, should theoretically help to decrease elevated blood pressure by reducing the activity of the nerves controlling the kidney. While this surgical approach has not yet been used frequently, there have been a few case studies completed involving a small number of patients that experienced success after undergoing the procedure. The patient in this case study experienced a drastic reduction in blood pressure to near normal levels after undergoing surgery without the need for any blood pressure medications. Thus, in this individual case, the surgery was successful in normalizing the patient's blood pressure and preventing further damage caused by hypertension.

***Rebecca Gerber***

*Indiana University School of Medicine, Department of Urology*

### Publication

[Laparoscopic Renal Denervation for Uncontrolled Hypertension Due to Medication Intolerance: A Case Report.](#)

Gerber RC, Bahler CD, Kraus MA, Sundaram CP

*Am J Kidney Dis. 2016 Jul*