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Researchers find unhealthy gut microbes a cause of hypertension

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Researchers have found that the microorganisms residing in the intestines (microbiota) play a role in the development of high blood pressure in rats. The study is published in *Physiological Genomics*. It was chosen as an APSselect article for February.

Scientists studied two sets of rats, one group with high blood pressure ("hypertensive") and one with normal blood pressure ("normal"). The research team removed a portion of the biological material from the large intestine of each group. All animals were then given antibiotics for 10 days to reduce their natural microbiota. After the course of antibiotics, the researchers transplanted hypertensive microbiota to normal blood pressure rats and normal microbiota to the hypertensive group.

The researchers found that the group treated with hypertensive microbiota developed elevated blood pressure. A more surprising result is that the rats treated with normal microbiota did not have a significant drop in blood pressure, although readings did decrease slightly.

This finding is "further evidence for the continued study of the microbiota in the development of hypertension in humans and supports a potential role for probiotics as treatment for hypertension," wrote the researchers. "Studies showing that supplementing the diet with probiotics (beneficial microorganisms found in the gut) can have modest effects on blood pressure, especially in hypertensive models."

More information: Sareema Adnan et al. Alterations in the gut microbiota can elicit hypertension in rats, *Physiological Genomics* (2016). DOI: 10.1152/physiolgenomics.00081.2016