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### Genes and Drugs Team up to Lower Blood Pressure

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Patients with high blood pressure respond very differently to antihypertensive medication, making treatment selection tricky for physicians. But new research published in the online open access journal, BMC Medical Genetics, pinpoints a number of gene-drug interactions that could allow medication to be tailored to individual patients based on their genetics.

The US research team studied siblings with hypertension by examining blood pressure readings and details of their drug regimens. Using these data, the authors found a new set of single nucleotide polymorphisms (SNPs) on the adducin 2 (ADD2) gene that may influence the regulation of blood pressure among people with hypertension.

Three SNPs were associated with differential blood pressure responses in beta-blocker users versus diuretic users while two other SNPs were associated with differential responses in reninangiotensin- aldosterone system (RAAS) inhibitor users versus diuretic users. The findings also provide initial evidence that the effects of genetic variation on blood pressure in people with untreated hypertension may be very different compared with those taking medication. Although the authors looked at individual SNPs, it is also likely that SNPs interact.

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