

High blood pressure at any age, no matter how long you have it, may speed cognitive decline

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High blood pressure appears to accelerate a decline in cognitive performance in middle-aged and older adults, according to new research published today in *Hypertension*.

Nearly half of American adults have [high blood pressure](#) or hypertension. Having high blood pressure is a risk factor for cognitive decline, which includes such things as memory, verbal fluency, attention and concentration. Blood pressure of 120 mmHg—129 mmHg systolic (the top number in a reading) or higher is considered elevated. Systolic pressure above 130 mmHg, or diastolic pressure (the bottom number) of 80 mmHg or higher is considered hypertension.

"We initially anticipated that the negative effects of hypertension on cognitive function would be more critical when hypertension started at a younger age, however, our results show similar accelerated [cognitive performance](#) decline whether hypertension started in middle age or at older ages," said study author Sandhi M. Barreto, M.D., M.Sc., Ph.D., professor of medicine at the

Universidade Federal de Minas Gerais in Belo Horizonte, Brazil. "We also found that effectively treating high blood pressure at any age in adulthood could reduce or prevent this acceleration. Collectively, the findings suggest hypertension needs to be prevented, diagnosed and effectively treated in adults of any age to preserve cognitive function."

Barreto and colleagues analyzed findings from an existing study that included blood pressure and cognitive health information for more than 7,000 adults in Brazil, whose average age was about 59 years old at the study's start. The study participants were followed for an average of nearly 4 years; testing included analysis of memory, verbal fluency and executive function, which includes attention, concentration and other factors associated with thinking and reasoning.

Their analysis found:

- Systolic blood pressure between 121 and 139 mmHg or diastolic blood pressure between 81 and 89 mmHg with no antihypertensive medication use was associated with accelerated cognitive performance decline among middle-aged and older individuals.
- The speed of decline in cognition happened regardless of hypertension duration, meaning high blood pressure for any length of time, even a [short duration](#), might impact a person's speed of cognitive decline.
- Adults with uncontrolled hypertension tended to experience notably faster declines in memory and global cognitive function than adults who had controlled hypertension.

"In addition to other proven benefits of blood

pressure control, our results highlight the importance of diagnosing and controlling hypertension in patients of any age to prevent or slow down cognitive decline," Barreto said. "Our results also reinforce the need to maintain lower [blood pressure](#) levels throughout life, since even prehypertension levels were associated with [cognitive decline](#)."

According to Barreto, some of the study's limitations are the relatively short follow-up period and that the participants self-reported the hypertension diagnosis at baseline.

"Although the participants of our study are adults from Brazil, we believe that our findings are applicable to other regions. Previous studies have shown that similar unhealthy behaviors and [risk factors](#), including [hypertension](#), are common in the development of cardiovascular diseases in different populations across the globe," Barreto said.

More information: *Hypertension* (2020). [DOI: 10.1161/HYPERTENSIONAHA.120.16080](#)

Provided by American Heart Association

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