



## Isolated Systolic Hypertension in Young Adults Ups CVD Risk



Researchers have found that sustained isolated systolic hypertension (ISH) in young and middle-aged adults increased their risk of dying from cardiovascular causes later in life. ISH is defined as systolic blood pressure greater than or equal to 140 mm Hg when diastolic blood pressure is less than 90 mm Hg.

Their analysis based on outcomes from 18- to 49-year-olds in the Chicago Heart Association Detection Project in Industry Study revealed that men and women with ISH had a much higher risk of dying from coronary heart disease or CV disease during a 31-year follow-up compared with their peers with normal-optimal blood pressure. Women had an especially high risk, the researchers noted. The findings are published in the *Journal of the American College of Cardiology*.

"This is clearly the best evidence to date to suggest that clinicians should be screening for [ISH in young and middle-aged adults] and pay careful attention to it," senior author Dr. Donald M. Lloyd-Jones of Northwestern University (Chicago, IL).

ISH is the most common form of hypertension in people 50 and older; it is less common in younger adults, Dr. Lloyd-Jones said. Whether ISH in young people is "pseudo," "spurious," or "benign white-coat" hypertension is unclear, largely because previous studies were done in small populations.

Dr. Lloyd-Jones and colleagues reviewed data from 15,868 men and 11,213 women who did not have CHD and were not taking antihypertensives when they were enrolled in 1967 to 1973. The participants had a mean age of 34, and 85 percent were non-Hispanic white.

Based on a single supine blood-pressure measurement, the participants were stratified into five blood-pressure categories: optimal-normal (<130/<85 mm Hg); high-normal (130–139/85–89 mm Hg); ISH (>140/<90 mm Hg), isolated diastolic hypertension (<140/>90 mm Hg), and systolic and diastolic hypertension (>140/>90 mm Hg). The researchers reported these key findings:

- 25 percent of the men and 13 percent had ISH. Those with ISH were more likely to smoke and have less education, higher body-mass index, and higher cholesterol compared with their peers with optimal-normal blood pressure.
- During a 31-year average follow-up period, there were 1,728 deaths from CVD, 1,168 deaths from CHD, and 223 deaths from stroke.
- Men with ISH were 23 percent more likely to die from CVD than men with optimal-normal blood pressure, and women with ISH were 55 percent more likely to die from CVD than women in the reference group,

after adjustment for several confounders.

- Men and especially women with ISH had a higher risk of dying from CHD than their peers in the reference group.
- Having ISH was not linked to an increased risk of dying from stroke.

"I think this study is going to raise awareness that we can't just say 'Well, this person is young; we've got time to think about this blood pressure later.' I think we should certainly get more aggressive with [recommending] lifestyle [changes] and have careful consideration of medications if this is a sustained finding," said Dr. Lloyd-Jones.

However, the study was observational and not designed to determine what type of treatment is appropriate for these patients. The research team calls for "clinical trials and studies seeking better ways (such as central BP monitoring or biomarkers) to identify younger and middle-aged adults with ISH who are at especially greater risk for developing CVD events."

### **Early Hypertension Management Needed**

In an accompanying editorial, Dr. Michael A. Weber of State University of New York (Brooklyn, NY) writes, "ISH in younger people has largely been unrecognized, so this report resolves an important uncertainty."

Based on current clinical hypertension guidelines, elevated systolic or diastolic blood pressure or both should clearly be considered abnormal in young adults and lead to therapy, he notes.

Despite relatively low rates of cardiovascular events in young people, "the growing prevalence of hypertension, along with obesity, lipid disorders, and diabetes, in young people has become a major public-health issue," according to Dr. Weber. "Early management of hypertension in young adults might beneficially alter its natural history and reduce the incidence of cardiovascular events in later life."

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