

Factors associated with good heart health may also protect kidneys

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Achieving the American Heart Association's definition of ideal cardiovascular health may also help prevent chronic kidney disease, according to new research in the *Journal of the American Heart Association*.

Life's Simple 7 are the ideal cardiovascular health factors/goals that include healthy blood pressure, cholesterol, blood sugar, diet, body weight, enough physical activity and not smoking.

"This study was the first to show that for people who are generally healthy, a higher number of ideal Life's Simple 7 health factors is associated with a reduced risk of new-onset [kidney disease](#)," said study author Casey M. Rebholz, Ph.D., M.P.H., M.S., assistant professor of epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland.

The study included 14,832 adults, aged 45-64. The researchers categorized the adults in each of Life's Simple 7 measures as poor, intermediate or ideal. Participants were followed for an average of 22 years for the development of [chronic kidney disease](#), a sometimes life-threatening condition where the kidneys are damaged and can't filter waste from the body.

Researchers found:

- Participants with the most Simple 7 health factors had the lowest

risk of developing chronic kidney disease.

- About a third of study participants who had no ideal health factors at the study's start developed chronic kidney disease during follow-up.
- Only 6.5 percent of participants with six or seven ideal health factors developed chronic kidney disease.
- Smoking, body mass index, physical activity, blood pressure and blood glucose were associated with chronic kidney disease risk, but diet and blood cholesterol were not.
- The higher the number of ideal health factors, the lower the risk of chronic kidney disease.
- There were 2,743 cases of chronic kidney disease during an average of 22 years of follow up.
- The number of ideal Life's Simple 7 health factors was significantly associated with chronic kidney disease even after accounting for age, sex, race, and a test to gauge kidney function, called glomerular filtration rate (GFR).
- The narrowing of arteries that underlies heart disease also damages the blood vessels in the kidneys, so that the nephrons - which filter waste out of blood - no longer get the oxygen and nutrients they need to work effectively. In addition, damaged kidneys are less able to produce a hormone needed to regulate blood pressure.

"The shared underlying processes leading to the development of cardiovascular and kidney disease suggests that Life's Simple 7 might also be effective for kidney disease prevention," Rebholz said.

Ideal levels of Life's Simple 7 were defined as: non-smoker or quit more than one year ago; having a healthy weight ([body mass index](#) less than 25); performing at least 150 minutes/week of [physical activity](#); having a healthy diet score (high in fruits and vegetables, fish, and fiber-rich whole grains; low in sodium and sugar-sweetened beverages); having a

total cholesterol less than 200 mg/dL; [blood pressure](#) of less than 120/80 mm Hg; and a fasting [blood](#) glucose of less than 100 mg/dL.

The findings have far-reaching effects, according to Rebholz.

"Attaining ideal cardiovascular health as defined by the AHA Life's Simple 7 metric may have substantial benefit for preventing the development of kidney disease. Recommending these ideal [health factors](#) may be effective as a population-wide strategy for kidney disease prevention," she said.

One limitation of the study is that researchers assessed diet using self-reported information. Further research is necessary to better understand dietary factors that are relevant for kidney health.

Provided by American Heart Association

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