

Dietary cocoa flavanols improve blood vessel function in patients with kidney dysfunction

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Consuming a beverage containing cocoa flavanols improves blood vessel function in patients with kidney failure, according to a study appearing in an upcoming issue of the *Clinical Journal of the American Society of Nephrology (CJASN)*. The findings suggest that the plant-derived compounds may benefit the cardiovascular health of patients with poor kidney function.

Individuals with failing kidneys are at increased risk of developing heart problems, and they're more likely to die from cardiovascular causes than from any other cause. Lifestyle and dietary modifications to maintain vascular health or reduce disease risk might help protect patients' heart health, but there are currently limited diet-based therapeutic approaches to counteract cardiovascular disease in patients with [kidney failure](#).

Tienush Rassaf, MD (University Hospital Essen, Germany) and his colleagues tested the potential of [cocoa flavanols](#), a subgroup of plant-derived polyphenols that are present in cocoa and have been shown to have beneficial effects on blood vessel function in individuals with normal kidney function.

The team randomized 57 dialysis patients to ingest either a test beverage rich in cocoa flavanols (900 mg per day) or a control beverage that was free of cocoa flavanols but matched the nutrient content of the test beverage in all other aspects. After 30 days, the investigators found that cocoa flavanol ingestion was well-tolerated by patients and it improved blood vessel function and reduced diastolic blood pressure. No effects were observed in the group that consumed the control beverage.

"Impressively, the degree of reversion of vessel dysfunction was comparable to the effects observed through administering statins or making

dietary and lifestyle changes," said Dr. Rassaf. "Whether this approach also leads to a reduction in mortality is not clear and has to be investigated."

In an accompanying editorial, Carmine Zoccali, MD and Francesca Mallamaci, MD (CNR-IFC, in Italy) noted that "the burden of [cardiovascular disease in dialysis patients](#) is so devastating that a promising intervention like cocoa flavanols deserves full attention by the nephrology community." They added that if the findings are confirmed in additional studies, they may represent a turning point in patient care.

More information: The article, entitled "Vasculoprotective effects of dietary cocoa flavanols in hemodialysis patients: a double-blind, randomized, placebocontrolled trial," will appear online on December 17, 2015. [DOI: 10.2215/CJN.05560515](#)

The editorial, entitled "Cocoa flavanols: a magic potion for protecting the endothelium in kidney failure?" will appear online on December 17, 2015. [DOI: 10.2215/CJN.12141115](#)

Provided by American Society of Nephrology

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