

ASN LEADING THE FIGHT AGAINST KIDNEY DISEASE

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REDUCING SALT INTAKE MAY HELP PROTECT KIDNEY PATIENTS' HEART AND KIDNEY HEALTH

Highlight

- In patients with chronic kidney disease, dietary sodium restriction reduced albuminuria (an indicator of kidney dysfunction) and blood pressure, whereas paricalcitol (a vitamin D receptor activator) in itself had no significant effect on these measures.
- The combination of paricalcitol and a low sodium diet resulted in the lowest albuminuria levels in patients.

Washington, DC (November 17, 2016) — New research indicates that reducing sodium intake may provide kidney and heart benefits for patients with chronic kidney disease (CKD). The findings appear in an upcoming issue of the *Journal of the American Society of Nephrology* (JASN).

Urinary excretion of proteins, including albumin, is a hallmark of CKD. Therapies that reduce such albuminuria can slow kidney function decline and also have beneficial effects on the heart and blood vessels. Unfortunately, currently available therapies do not eliminate albuminuria in many patients, leaving these individuals with what is known as residual albuminuria.

A team led by Martin de Borst, MD, PhD (University Medical Center Groningen, in The Netherlands) studied 2 interventions that have demonstrated potential for reducing residual albuminuria: dietary sodium restriction and a drug (paricalcitol) that activates the vitamin D receptor. In a randomized trial that included 45 patients with CKD, each intervention was added to an optimized conventional treatment regimen during four 8-week periods.

The investigators found that dietary sodium restriction led to a significant reduction of residual albuminuria and blood pressure, whereas paricalcitol had no significant effect on these measures. The combination of paricalcitol and a low sodium diet, however, resulted in the lowest albuminuria levels.

"What we found was that sodium restriction provided a relatively large beneficial effect, whereas the effect of paricalcitol was small. Thus, the impact of the combined

intervention was largely due to the protective effect of sodium restriction," said Dr. de Borst.

Most people consume twice as much sodium as the 2 grams per day recommended by the World Health Association. "In our study, patients consumed on average 4 grams of sodium per day, which is well in line with global trends in sodium consumption among CKD patients," said Dr. de Borst. "Interestingly, following our intervention aimed at reduced sodium intake, patients consumed 2.5 grams per day, which is still above the recommended level. This moderate restriction resulted in a strong reduction in albuminuria and blood pressure, indicating that even a moderate reduction in sodium intake may provide serious health benefits."

Study co-authors include Charlotte A. Keyzer, MD, PhD, G. Fenna van Breda, MD, Marc G. Vervloet, MD, PhD, Maarten A. de Jong, MD, Gozewijn D. Laverman, MD, PhD, Marc H. Hemmelder, MD, PhD, Wilbert M.T. Janssen, MD, PhD, Hiddo J. Lambers Heerspink, PhD, Arjan J. Kwakernaak, MD, PhD, Stephan J.L. Bakker, MD, PhD, Gerjan Navis, MD, PhD and Martin H. de Borst, MD, PhD for the Holland Nephrology Study (HONEST) Network.

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The article, entitled "The effect of vitamin D receptor activation and dietary sodium restriction on residual albuminuria in chronic kidney disease: the ViRTUE-CKD randomized controlled trial," will appear online at http://jasn.asnjournals.org/ on November 17, 2016; doi: 10.1681/ASN.2016040407.

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