

n-3 PUFA may reduce markers of kidney disease in T2DM

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In patients with type 2 diabetes and evidence of kidney injury, supplementation with n-3 long-chain polyunsaturated fatty acids does not reduce urine albumin excretion but is associated with a reduction in certain markers of kidney injury, according to research published online Dec. 28 in *Diabetes Care*.

(HealthDay)—In patients with type 2 diabetes and evidence of kidney injury, supplementation with n-3 long-chain polyunsaturated fatty acids (PUFA) does not reduce urine albumin excretion but is associated with a reduction in certain markers of kidney injury, according to research published online Dec. 28 in *Diabetes Care*.

To examine the effect of n-3 PUFA supplementation on urine albumin excretion and markers of kidney injury, Edgar R. Miller III, M.D., Ph.D., of the Johns Hopkins School of Medicine in Baltimore, and colleagues conducted a randomized, placebo-controlled, two-period crossover trial involving 29 participants with type 2 diabetes and evidence of kidney disease who were given 4 g/day of n-3 PUFA



supplements for six weeks.

The researchers found that n-3 PUFA supplementation resulted in nonsignificant reductions in urine albumin excretion compared with placebo, and correlated with significant reductions in urine neutrophil gelatinase-associated lipocalin (NGAL) excretion. There was no significant effect for n-3 PUFA on serum markers of kidney function or estimated glomerular filtration rate. In the subgroup of participants taking medications that block the renin-angiotensin-aldosterone system, significant decreases were observed in 24-hour urinary albumin excretion, NGAL, liver fatty acid-binding protein, and *N*-acetyl β-Dglucosaminidase.

"n-3 PUFA failed to reduce the primary outcome of urine albumin excretion," the authors write. "However, there was a consistent trend of benefit for all urine biomarkers and a significant reduction in NGAL."

Lovaza (n-3 PUFA) and placebo used in the study were provided by GlaxoSmithKline.

More information: Abstract

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