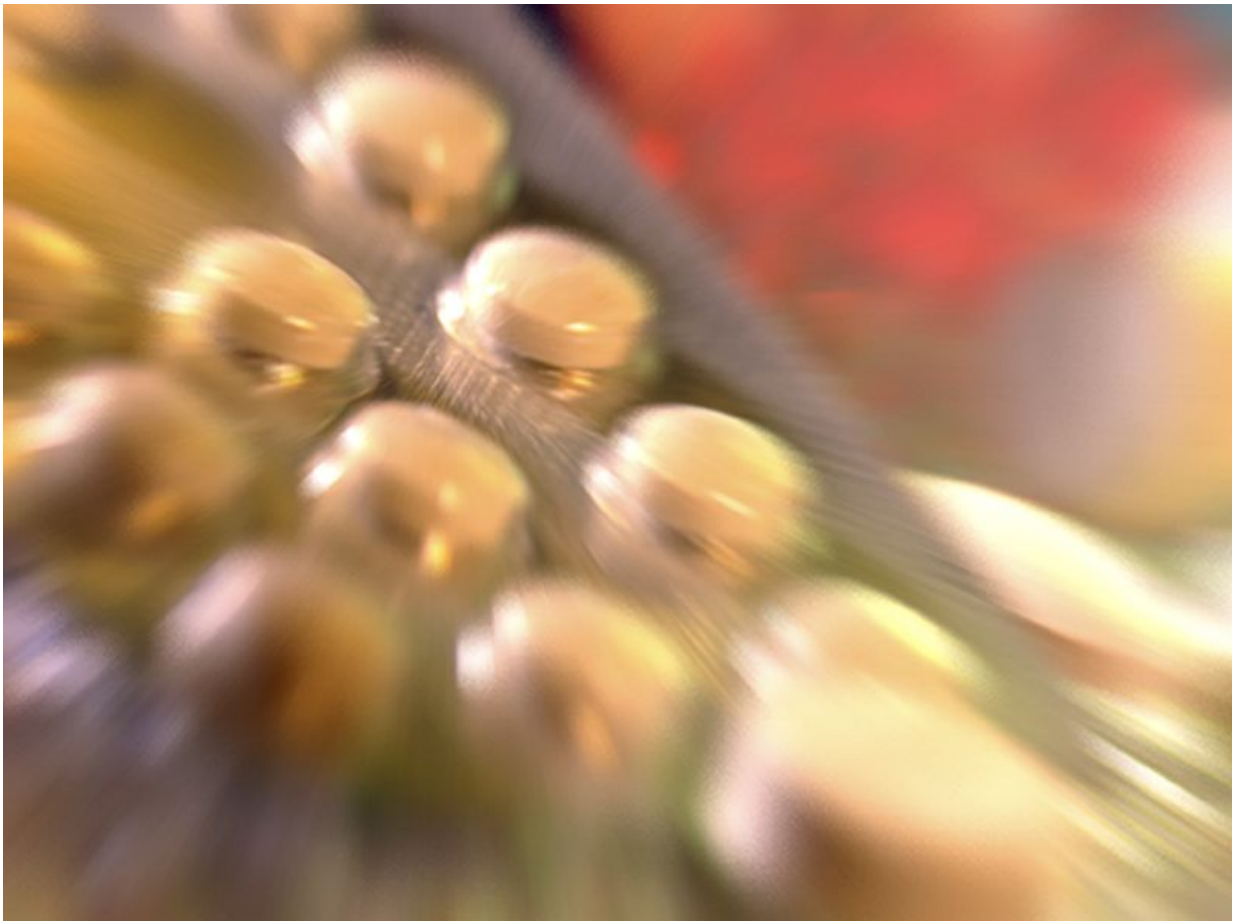


# Sitagliptin stimulates distal tubular natriuresis in T2DM

June 9 2017

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(HealthDay)—For patients with type 2 diabetes, the dipeptidyl

peptidase-4 (DPP-4) inhibitor sitagliptin stimulates distal tubular natriuresis, according to a study published online May 26 in *Diabetes Care*.

Julie A. Lovshin, Ph.D., from the University of Toronto, and colleagues studied 32 patients with type 2 diabetes to examine whether and how [sitagliptin](#) modulates fractional sodium [excretion](#) and renal and systemic hemodynamic function in a randomized, placebo-controlled trial. Measurements of renal tubular function and renal and systemic hemodynamics were obtained at baseline, hourly after sitagliptin or placebo dose, and at one month. During clamped euglycemia, fractional excretion of sodium and lithium and renal hemodynamic function were measured. Noninvasive [cardiac output](#) monitoring was used to measure systemic hemodynamics, and [plasma](#) levels of intact versus cleaved plasma stromal cell-derived factor (SDF)-1 $\alpha$  were quantified.

The researchers found that after one month of treatment, there was no change in fractional lithium excretion with sitagliptin, but there was a significant increase in total fractional sodium excretion compared with placebo. There was a robust increase in intact plasma SDF-1 $\alpha$ <sup>1-67</sup> and decreased truncated plasma SDF-1 $\alpha$ <sup>3-67</sup>. Sitagliptin did not adversely affect renal hemodynamic [function](#), systemic blood pressure, cardiac output, stroke volume, or total peripheral resistance.

"DPP-4 inhibition promotes a distal tubular natriuresis in conjunction with increased levels of intact SDF-1 $\alpha$ <sup>1-67</sup>," the authors write.

Several authors disclosed financial ties to pharmaceutical companies, including Merck Sharpe & Dohme, which funded the study and the supply of sitagliptin and placebo.

**More information:** [Abstract/Full Text \(subscription or payment may be required\)](#)

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