

# Treatment initiation with thiazide diuretics increases hyponatremia risk, researchers find

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The excess risk for hyponatremia is increased with treatment initiation with thiazide diuretics, according to a study published online Dec. 19 in the *Annals of Internal Medicine*.

Niklas Worm Andersson, M.D., from Statens Serum Institut in Copenhagen, Denmark, and colleagues estimated the increase in the cumulative incidence of hyponatremia using thiazide diuretics versus nonthiazide antihypertensive drugs in routine clinical practice in a [cohort study](#) using target trial emulation.

Two target trials were emulated among persons aged 40 years and older with no recent prescription for any hypertensive [drug](#) and no previous hyponatremia.

The first target trial emulation compared new use of bendroflumethiazide (BFZ) with a calcium-channel blocker (CCB; 37,786 versus 44,963 patients) and the second compared new use of hydrochlorothiazide plus a renin-angiotensin system inhibitor (HCTZ–RASi) with a RASi alone (11,943 versus 85,784 patients).

The researchers found that the two-year cumulative incidences of hyponatremia were 2.83 and 3.51 percent for BFZ and HCTZ-RASi, respectively. The risk differences were 1.35 and 1.38 percent between BFZ and CCB and between HCTZ-RASi and RASi, respectively; higher risk differences were seen with older age and higher comorbidity burden. The corresponding hazard ratios for hyponatremia were 3.56 and 4.25 during the first 30 days after [treatment](#) initiation and 1.26 and 1.29 after one year.

"These findings suggest that hyponatremia is a common adverse drug reaction to thiazide treatment and highlight the continued need for clinical awareness as well as monitoring of this adverse drug reaction," the authors write.

**More information:** Niklas Worm Andersson et al, Cumulative Incidence of Thiazide-Induced Hyponatremia, *Annals of Internal Medicine* (2023). [DOI: 10.7326/M23-1989](https://doi.org/10.7326/M23-1989)

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