

Arsenic metabolism linked to development of type 1 diabetes

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(HealthDay)—Arsenic metabolism seems to be associated with type 1

diabetes in young people, with a potential interaction by folate levels, according to a study published online Nov. 11 in *Diabetes Care*.

Maria Grau-Pérez, M.D., from the Johns Hopkins Bloomberg School of Public Health in Baltimore, and colleagues examined the correlation of [arsenic](#) with type 1 and 2 diabetes. Data were assessed for 688 participants aged younger than 22 years (429 with type 1 diabetes, 85 with type 2 diabetes, and 174 controls).

The researchers found that the sum of arsenic species was not linked to type 1 or type 2 diabetes. After rescaling to compare a difference in levels corresponding to the interquartile range of the relative proportions of the arsenic species over their sum for [inorganic arsenic](#), monomethylated arsenic, and dimethylated arsenic, the odds ratios were 0.68 (95 percent confidence interval [CI], 0.50 to 0.91), 1.33 (95 percent CI, 1.02 to 1.74), and 1.28 (95 percent CI, 1.01 to 1.63), respectively, for type 1 diabetes, and 0.82 (95 percent CI, 0.48 to 1.39), 1.09 (95 percent CI, 0.65 to 1.82), and 1.17 (95 percent CI, 0.77 to 1.77), respectively, for type 2 diabetes. For patients with plasma [folate levels](#) above and below the median, the odds ratios of type 1 diabetes by percentage monomethylated arsenic were 1.80 (95 percent CI, 1.25 to 2.58) and 0.98 (95 percent CI, 0.70 to 1.38), respectively.

"These data support further research on the role of arsenic metabolism in type 1 [diabetes](#), including the interplay with one-carbon metabolism biomarkers," the authors write.

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