

## Higher manganese intake may be tied to lower type 2 diabetes risk

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(HealthDay)—Higher intake of manganese is associated with a lower type 2 diabetes risk among postmenopausal women, independent of known risk factors, according to a study published online April 15 in *Diabetes Care*.

Jung Ho Gong, from Brown University in Providence, Rhode Island, and colleagues evaluated the association between manganese intake and the risk for type 2 diabetes in 84,285 postmenopausal women without a history of diabetes participating in the national Women's Health Initiative Observational Study (WHI-OS). Results were validated in the 62,338 women who participated in the WHI-Clinical Trial (WHI-CT).

The researchers found that compared with the lowest quintile of energy-adjusted dietary manganese, WHI-OS participants in the highest quintile had a lower risk for type 2 diabetes (hazard ratio, 0.70). These findings were confirmed in the WHI-CT (hazard ratio, 0.79). In a nested case-control study of 3,749 women in the WHI-OS with information on biomarkers of inflammation and endothelial dysfunction, higher energy-adjusted dietary manganese was associated with lower circulating levels of inflammatory biomarkers that significantly mediated the association between dietary manganese and type 2 diabetes risk. Of type 2 diabetes risk due to manganese, 19 percent of risk was mediated through interleukin 6 and 12 percent through high-sensitivity C-reactive protein.

"Consumption of food groups rich in manganese could potentially be targets for intervention against type 2 [diabetes risk](#) in [postmenopausal women](#)," the authors write.

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

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