

## AS33-01 - NATURAL LITHIUM IN DRINKING WATER AND SUICIDE MORTALITY

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**Background:** There is evidence that natural levels of lithium in drinking water may have a protective effect on suicide mortality.

**Aims:** To evaluate the association between local lithium levels in drinking water and suicide mortality in Austria.

**Method:** A nationwide sample of lithium measurements was examined for association with suicide rates across Austrian districts. Multivariate regression models were adjusted for socioeconomic factors. Sensitivity analyses and weighted least squares regression were used to challenge the robustness of the results.

**Results:** The overall suicide rate as well as the suicide mortality ratio were inversely associated with lithium levels in drinking water and remained significant after sensitivity analyses and adjustment for socioeconomic factors.

**Conclusions:** In replicating and extending previous results, this study provides strong evidence that geographic regions with higher natural lithium concentrations in drinking water are associated with lower suicide mortality rates.