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## **Silicon-rich mineral water may help lower aluminium levels in MS patients: Population study**



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Silicon-rich mineral water has been shown to facilitate the removal of aluminium from the body via urination.

**Drinking silicon-rich mineral water can help remove excess aluminium from multiple sclerosis patients, according to a study backed by a Malaysian company.**

The paper focused on patients with secondary progressive multiple sclerosis (SPMS), a chronic autoimmune condition for which there are limited therapeutic options, due to its unknown origin.

Patients have been shown to have unusually high levels of aluminium in their urine, supporting a previously found link between MS and human exposure to aluminium and suggesting a high body burden of aluminium in SPMS sufferers.

At the same time, silicon-rich mineral water has been shown to facilitate the removal of aluminium from the body via urination.

Based on this, researchers at the UK's Keele University and Austria's Medical University of Innsbruck sought to test the efficacy of silicon-rich mineral water in SPMS patients.

### **Silicon versus sclerosis**

They conducted a study on 15 SPMS patients (seven male, eight female) aged 52 to 73.

The study included a 12-week baseline period followed by a 12-week treatment period, during which each participant consumed up to 1.5 litres of silicon-rich mineral water daily.

The researchers subsequently observed that regular consumption of silicon-rich mineral water significantly increased 14 of the 15 patients' urinary excretion of aluminium, when compared with the baseline period.

The researchers also observed that the female participants excreted *"significantly more aluminium"* during the baseline period than the male participants, which they said *"suggested a higher body burden of aluminium in females"*.

They added that since the incidence of MS was higher in females, it was possible that their higher body burden of aluminium predisposed them to the disease.

### **Limited evidence for the long term**

While drinking silicon-rich mineral water for 12 consecutive weeks did cause more aluminium to be removed from the SPMS patients via urination, the researchers said this *"provided limited evidence"* that this could help them reduce their body burden of aluminium in the long run.

Regarding the gender difference, they wrote: *"Metabolomic profiling may in the future reveal further gender differences in MS, some of which may also shed some light on how aluminium is handled by the body in MS."*

They concluded: *"If human exposure to aluminium has a role to play in the aetiology of MS, then regular drinking of a silicon-rich mineral water may act as a simple, non-invasive therapy for the removal of aluminium."*

The paper was part-funded by Malaysian mineral water firm Spritzer.

Source: *EBioMedicine*

<https://doi.org/10.1016/j.ebiom.2017.10.028>

*"Urinary Excretion of Aluminium and Silicon in Secondary Progressive Multiple Sclerosis"*

Authors: Krista Jones, *et al.*