Reduced exposure to sun and ultraviolet radiation (UVR) are known risk factors for adult-onset multiple sclerosis (MS). However, the role of sun and UVR exposure in pediatric-onset MS is not clear.

**Duration of Sun Exposure and Risk of Multiple Sclerosis in Children**

**Study question**

Is sun and UVR exposure associated with the risk of developing MS in children?

**Analysis of association with MS risk**

- **Time spent outdoors per day during the most recent summer**
- **Sun protection use**
- **Ambient summer UVR dose**

**Multivariable conditional logistic regression**

**Adjusted odds ratio**

- **Children with MS** (median disease duration: 7.3 months)
  - 332 children
- **Children without MS**
  - 534 children

**Duration of Sun Exposure and Reduced Odds of Pediatric MS**

- **<30 minutes (Reference)**
- **30–60 minutes**
  - Adjusted odds ratio: 0.48
  - (95% CI = 0.23–0.99, p = 0.05)
  - 52% lower odds
- **1–2 hours**
  - Adjusted odds ratio: 0.19
  - (95% CI = 0.09–0.4, p < 0.001)
  - 81% lower odds

**Higher ambient summer UVR dose was also associated with reduced odds of pediatric MS**

- Adjusted odds ratio: 0.76 per kilo Joules per m²
  - (95% CI 0.62–0.94, p = 0.01)

**There is an inverse association between sun and UVR exposure and the odds of developing pediatric MS**

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