

## Publication

### Determinants of handbike use in persons with spinal cord injury: results of a community survey in Switzerland

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**Author(s)** Arnet, Ursina; Hinrichs, Timo; Lay, Veronika; Bertschy, Sue; Frei, Heinz; Brinkhof, Martin W. G.

**Author(s) at UniBasel** [Hinrichs, Timo](#) ;

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To examine the prevalence and determinants of handbike use in persons living with spinal cord injury in Switzerland.; A population-based cross-sectional survey in Switzerland.; The crude prevalence of handbike use among the 1549 participants was 22.6%, varying between 25.3% in men and 17.7% in women. Prevalence was higher in complete than in incomplete spinal cord injury (SCI) (41.5% versus 11.9% in paraplegia, 25.6% versus 11.1% in tetraplegia). Multivariable analysis of handbike use confirmed differences with lesion characteristics and gender and showed a decline with age, lowest rates in the low-income group, variation with language, but no association with level of education or cause of spinal cord injury. In total, 45.8% of users reported to engage in handcycling at least once a week. Frequent contextual reasons for refraining from handcycling were: no interest (26%); inability due to disability (20%); unfamiliarity with the handbike (19%) and financial constraints (14%).; Conditional on the major determinants that include demographic factors and lesion characteristics, main barriers involve contextual factors that can principally be overcome. Our findings thus suggest scope for promoting handcycling as a means towards a healthy and more physically active lifestyle in persons living with SCI.; Handcycling is an effective means of improving health and quality of life of persons with a spinal cord injury. Persons with the following traits are most likely to use the handbike: persons younger than 62 years, with a complete paraplegia, who are German-speaking (vs. French/Italian) and having a middle or high net income. Indicated reasons for not using a handbike varied by SCI characteristics and included disinterest, inability related to the level of impairment, unfamiliarity and financial costs. Barriers that involve the above mentioned contextual factors can principally be overcome by targeted policy or information campaigns.

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