# Mode of mobility and cognitive factors associated with muscle function in adults with Spina Bifida

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**Conclusion**

106 (54%) persons were ambulatory and 90 persons (46%) were wheelchair users in daily life. Cognitive function was reduced in the whole population, and more so in those with hydrocephalus (HC). The mode of mobility varied in persons with similar muscle function.

In persons with a midlumbar SB the community ambulators had better prerequisites to walk with a lower BMI, lower prevalence of HC and scoliosis, compared to the others.

**Introduction**

Spina Bifida (SB) is a complex congenital spinal cord injury, often associated with physical and cognitive impairments. Seventy-five per-cents of children born with Spina Bifida (SB) are expected to live into adulthood, meaning that the adults will need more attention in the future. Mode of mobility differs between ambulation and wheelchair use.

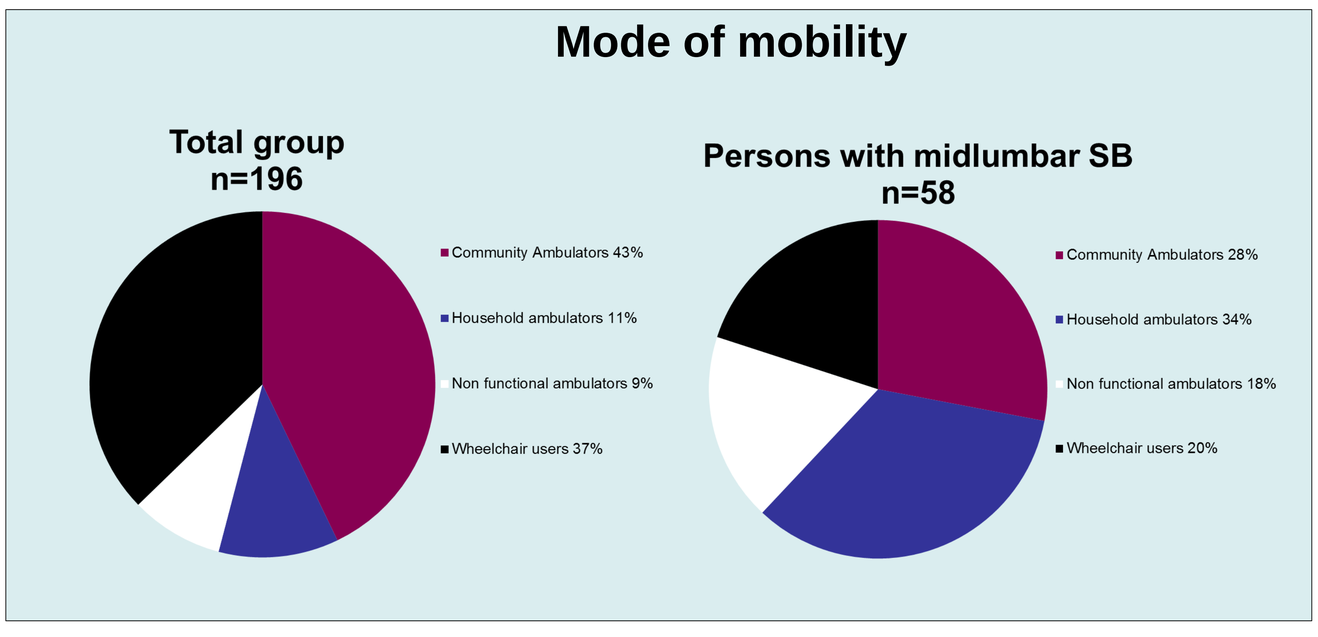
**Aim**

To describe mode of mobility and cognitive function in relation to muscle function in adults with SB.

**Methods**

A total cohort  of individuals > 18 years with SB (n=219) registered at a regional outpatient clinic were offered participation; 196 persons (18-73 years,104 women) were included.

Mode of mobility was categorized according to Hoffer together with assessment of muscle- and cognitive function. Descriptive and inferential statistics with Cochran-Armitage test of trend was used.




**Results**

The group as a whole performed 1 SD below the general population in the cognitive tests, with a significant difference ($p<0.001$) with and without HC.

There was a linear association between lower level of muscular function and a higher proportion of participants with HC ($p < 0.000$), contractures in the legs ($p<0.000$) and presence of scoliosis ($p=0.000$).

Persons with low and midlumbar SB (L4-5 and L3), have different modes of mobility even though they have the same level of muscle function.

In persons with a midlumbar (L3) SB the community ambulators had better prerequisites to walk with a lower BMI, lower prevalence of HC, and scoliosis.

The household ambulators with a midlumbar (L3) SB were significantly younger than the community ambulators, the non-functional ambulators and the wheelchair users.

**Further studies**

We aim to study how cognitive function affects ambulation in daily life.

Praktikertjänst REHAB STATION

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