

Although treatment by means of medication has yielded promising results during the last decade, symptomatic treatment remains the mainstay of treatment for the majority of people with MS. Rehabilitation therefore has gained an important place in the management of clinical symptoms of multiple sclerosis (Kraft 1999).

The goal of treatment in MS is preventing disease progression and maximising functional status. Consequently, rehabilitation is a critical component of comprehensive treatment, and exercise and functional training are the cornerstone of a rehabilitation programme. The benefits of rehabilitation have been assessed in several studies.

Inpatient rehabilitation

In a study with 20 people with MS, Feigenson et al (1981) found that an active, intensive inpatient rehabilitation programme produced statistically significant improvements in balance, self-care activities, bladder control, bed mobility, wheelchair transfers, ambulatory transfers, homemaking, and ability to perform real-life activities, and transfers. During a 1-year follow-up period after the intensive rehabilitation, the amount of help required to maintain the patients at home decreased substantially. The average cost for inpatient rehabilitation and subsequent home care for the first year was less than or equivalent to the cost of nursing home placement. Subsequent savings would be expected if patients maintained gains after the first year. The authors concluded that inpatient rehabilitation with follow-up home care may actually be less expensive than any other current health care alternative.

Greenspun (1987) investigated the outcome of rehabilitation in people with severe MS. Over a four-year period, 28 patients received care comprising 33 patient admissions to an inpatient rehabilitation centre. Data were gathered on admission, at discharge, and at 3 months post-discharge. On admission, 18 % ambulated independently, by discharge 76 % could do so. Fifteen cases changed from dependent to independent status in stair climbing by discharge. In general, individuals who stayed at the rehabilitation centre longer were initially more dependent and made greater relative gains.

Kidd et al. (1995) assessed the benefits of intensive rehabilitation in 79 patients with MS. Following an average stay of 15 days, 51 patients showed improvement on the Barthel Index, with the greatest changes occurring in the moderately and severely disabled patients. The Environmental Status Score likewise improved in 23 patients; it worsened in 13 and was unchanged in 16 patients. The degree of neurologic impairment remained unchanged.

Fuller et al (1996) investigated the effect of physiotherapy in 45 persons with MS. The treatment programme consisted of 38 minutes of exercising during a period of 2 weeks. Improvements were noted for mobility in general. However, no significant changes were found for disability (10 m walking test, Barthel Index) or handicap (Environmental Status Scale).

Freeman et al (1997) studied the impact of inpatient rehabilitation in people with progressive multiple sclerosis. Sixty-six people were assessed at 0 and 6 weeks with measures of impairment (EDSS and Functional systems), disability (FIM), and handicap (London Handicap Scale). At the end of the 6 weeks, the level of impairment had remained the same, but those who had participated in the period of inpatient rehabilitation (N = 32) for a period of 25 days on average, significantly improved their level of disability and handicap compared with those in the wait-list control group.

In a second study, Freeman et al (1999) investigated the duration and pattern of carry-over of benefits gained after a period of multidisciplinary inpatient rehabilitation. Fifty consecutive patients with progressive MS undergoing inpatient rehabilitation were followed for 12 months after discharge. Assessments were undertaken on admission, at discharge, and subsequently at 3-month intervals for 1 year with a battery of measures addressing neurological status, disability, handicap, quality of life, and emotional well-being. Although neurological status declined (EDSS scores), improvements were maintained in disability and handicap for 6 months, emotional well-being for 7 months, and health-related quality of life (physical component) for 10 months. On the basis of this study, the authors concluded that there are carry-over benefits from inpatient rehabilitation, but these effects decline over time, reinforcing the need for continuity of care between the inpatient setting and the community.

Solari et al (1999) also performed a controlled trial to determine the effect of inpatient rehabilitation in people with MS. Fifty subjects were included in the study, 27 participated to an exercise programme, 23 were put on a waiting list. The exercise programme consisted of sessions of 45 minutes, 2 times a day, for a period of 3 weeks.

Significant changes between the experimental group and the control group were found for the FIM motor score. This effect was maintained for 9 weeks in 44 % of the patients. No significant effects were found at impairment level (EDSS) or quality of life (SF-36).