

ortheses: custom made shoes with springs, moulded rigid ankle-foot orthesis, elastic tractor "Liberté®". The mean follow-up is presently less than 6 months. **Results.**— 12 patients (15 feet) were included: 7 had fibular nerve deficiency, 2 had Charcot-Marie-Tooth disease and two had moderately spastic hemiplegia. Our first results show positive assessment by the patients. The qualities they emphasize are stability and range of motion.

#### Further reading

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### Mobility and multiple sclerosis: Evaluation of prescription and use of the manual wheelchair in France

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**Keywords:** Multiple sclerosis; Mobility; Quality of life; Manual wheelchair

**Introduction.**— For multiple sclerosis (MS) patients, wheelchair is bad news which, unfortunately for patients and caregivers, means treatment has failed. For them, the wheelchair's main objective, mobility, is lost.

**Objective.**— Our objective was to develop a national inventory on prescription and use of manual wheelchairs in MS and to establish a tool for therapeutic patient education.

**Method.**— Patients (EDSS 5–7.5) were included from the database EDMUS of composed of 8 MS networks. 1940 questionnaires were sent to MS patients. The semi-structured questionnaire related to different stages of acquisition of their manual wheelchair, its daily use as perceived by the patient and caregiver, and skills. Descriptive and exploratory analyses of the 538 questionnaires received were completed.

**Results.**— 368 patients with MS were evaluated (mean age: 53.8 years, mean duration of illness: 18.3 years). The first person to mention using a wheelchair was the patient (37%) followed by the neurologist (30.7%). The prescription was written by the general practitioner (44.6%). 72% of applications were for outdoor use with 51.6% for fatigue. 48.1% of patients had tried their manual wheelchair including 31.1% with trials outside. Only 20.6% had learned how to use it.

**Discussion.**— Studies on manual wheelchairs in MS are rare, while the loss of mobility is one of the characteristics of this disease. The quality of life of people with MS is influenced by their capacity move about. The manual wheelchair requires a complex combination of skills to achieve this goal.

**Conclusion.**— Our study pinpoints deficiencies in knowledge about manual wheelchairs in MS. These results show the need to establish a specific therapeutic education program for patients.

#### Further reading

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### Changing rules for prosthetics and orthotics prescriptions

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**Keywords:** Major appliances; Prescription

The French public health authorities issued a Decree on 24 March 2010 which discontinued the medical structures which offered free consultations for advice on determining and controlling the choice of orthopedic appliances. The purpose of this work is to present the current rules for the prescription of large appliances (ortho-prosthetic devices and orthopedic shoes).

Initial prescriptions must be written by specialists in physical and rehabilitation medicine (PRM) or specialists in rheumatology or orthopedic surgery.

It is recalled that prescriptions for certain devices were already reserved for PRM physicians: first prescription of the Harmony system, first prescription and change to energy-store foot prostheses, all requests for knee C leg or Hybrid. Other conditions are also discussed, for instance details for prescribing SIDO seat-braces with mobile backs (PRM, pediatricians, orthopedic surgeons) or therapeutic shoes for the diabetic foot (PRM physician, diabetologist. . .). Strict application of the 2010 Decree will allow more diabetologists or pediatricians to prescribe an initial device. Prescriptions for spinal devices by neurosurgeons also raise certain difficulties.

We also discuss the impact of the new rules on expenditure control by the financing institutions and issues related to transportation management.

These changes reinforce the PRM physician's role in the fitting process.

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## Posters

### Version française

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### Effets du port d'une orthèse releveur de pied dynamique sur les paramètres biomécaniques de la marche des patients hémiparétiques

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**Mots clés :** Hémiplégie ; Marche ; Biomécanique ; Appareillage

**Objectif.**— Après un AVC, certains patients hémiparétiques présentent un équin spastique, responsable de troubles de la marche. Des orthèses releveurs de pied passifs ou dynamiques (ORPP ou ORPD) sont prescrites pour améliorer la dorsiflexion de cheville en phase oscillante. Cependant, peu d'études se sont focalisées sur les effets biomécaniques des ORPD. L'objectif de cette étude était d'évaluer l'effet d'une ORPD sur les paramètres biomécaniques de la marche des patients hémiparétiques présentant un équin spastique modéré.

**Méthode.**— Sept patients hémiparétiques ont effectué deux analyses de la marche avec et sans ORPD (Liberté®), à vitesse de marche préférentielle. Ce dispositif permet une mobilité articulaire de la cheville dans le plan sagittal, grâce à une bande élastique liant le pied à la jambe. Les paramètres spatiotemporels du cycle de marche et la cinématique de la hanche, du genou et de la cheville ont été mesurés avec un système d'analyse du mouvement (100 Hz, Motion Analysis®). Les paramètres cinétiques ont été enregistrés en utilisant deux plates-formes de force (1000 Hz, AMTI®).

**Résultats.**— Les paramètres spatiotemporels de la marche ont été améliorés avec l'ORPD du côté parétique : vitesse (+40 %), enjambée et longueur de pas (+22 % et +19 %) et cadence (+17 %). Avec l'ORPD, l'attaque du pas s'est faite en légère dorsiflexion de cheville ( $-9 \pm 9^\circ$  à  $0,35 \pm 5^\circ$ ). En phase d'appui, l'ORPD augmentait la dorsiflexion de cheville ( $11 \pm 4^\circ$  à  $17 \pm 4^\circ$ ) et diminuait la plantarflexion ( $-13 \pm 7^\circ$  à  $-5 \pm 6^\circ$ ) et la flexion de hanche ( $3 \pm 11^\circ$  à  $1 \pm 10^\circ$ ) du côté parétique. En phase oscillante, l'ORPD augmentait la dorsiflexion de cheville ( $-2 \pm 6^\circ$  à  $6 \pm 4^\circ$ ) et la flexion de genou ( $36 \pm 13^\circ$  à  $40 \pm 14^\circ$ ), et diminuait la