

**NINDS CDE Notice of Copyright
Motor Function Measure (MFM)**

Availability:	<p>Contact : Dr. Carole Bérard Phone:33 (0)4 72 12 95 04 E-mail : carole.berard@chu-lyon.fr or</p> <p>For further information, consult the website: Motor Function Measure Website</p> <p>The 2nd edition English translation was revised and corrected in December 2009 (validated by the steering committee). Click here to download the User Manual or the Score Sheet.</p>
Classification:	<p>Supplemental: Congenital Muscular Dystrophy (CMD)</p> <p>Exploratory: Mitochondrial Disease (Mito)</p>
Short Description of Instrument:	<p>The Motor Function Measure (MFM) is a generic scale which provides a measurement of the effects of muscle weakness in neuromuscular diseases (NMD). Assessments are based on posture and movements of the whole body.</p> <p>This tool makes it possible to follow the evolution of the patients, and to anticipate certain events such as the loss of ability to walk. The MFM can be used to evaluate the effectiveness of therapeutic measures.</p>
Administration and Scoring Information:	<p>Scoring: The 32 or 20 items are scored 0-3 based on the ability of the patient to complete the task. The % of the maximum score is calculated.</p> <p>Administration: Administered by trained evaluator.</p> <p>Time to Administer: 15-45 minutes</p> <p>Age: (MFM-32) 2-60 years old. (MFM-20) 2-6 years old.</p>

**NINDS CDE Notice of Copyright
Motor Function Measure (MFM)**

Rationale/ Justification:	<p>Strengths/Weaknesses: Measures patient important functions, excellent reliability and validity, sensitive to change, large age range, possible in ambulatory and non-ambulatory children, measures arm/leg and gross/fine motor function.</p> <p>Time consuming, ceiling effect in more able patients, not determined whether it measures the activities in daily life patients with mitochondrial disease are most limited in (items were included based on experience in patients with neuromuscular disease), dependent on cooperation of the patient</p> <p>Psychometric Properties: Internal consistency 0.99. Inter- and intrarater reliability 0.96-0.99 in neuromuscular disorders. Correlation with physicians and physiotherapists' severity score 0.88 and 0.91. High correlation between MFM and Brooke, Vignos, WeeFIM in neuromuscular disorders. Predictive for loss of ambulation in patients with DMD.</p> <p>This instrument has been specifically applied in Duchenne muscular dystrophy, Spinal muscular atrophy, and congenital myopathy.</p> <p>Validated in populations:</p> <ul style="list-style-type: none">• Duchenne muscular dystrophy,• Becker's muscular dystrophy (BMD),• Facio-scapulo-humeral dystrophy (FSHD)• Limb girdle muscular dystrophy (LGMD)• Myotonic dystrophy (DM)• Spinal muscular atrophy (SMA)• Congenital myopathy (CM) and congenital muscular dystrophy (CMD)• Hereditary neuropathy (HN)
--------------------------------------	--

**NINDS CDE Notice of Copyright
Motor Function Measure (MFM)**

References:

C. Vuillerot, KG. Meilleur, M. Jain, M. Waite, T. Wu, M. Linton, J. Datsgir, S. Donkervoort, ME. Leach, A. Rutkowski, P. Rippert, C. Payan, J. Iwaz, D. Hamroun, C. Bérard, I. Poirot, CG. Bönnemann. English cross-cultural translation and validation of the NM-Score: a system for motor function classification in patients with neuromuscular diseases. *Arch Phys Med Rehabil*. 2014.

Vuillerot C, Rippert P, Kinet V, Renders A, Jain M, Waite M, Glanzman AM, Girardot F, Hamroun D, Iwaz J, Ecochard R, Quijano-Roy S, Bérard C, Poirot I, Bönnemann CG; CDM MFM study group. Rasch Analysis of the Motor Function Measure in Patients with Congenital Muscle Dystrophy and Congenital Myopathy. *Arch Phys Med Rehabil*. 2014.

Capucine de Lattre, Christine Payan, Carole Vuillerot, Pascal Rippert, Denis de Castro, Carole Bérard, Isabelle Poirot and the MFM-20 Study Group. Motor Function Measure: validation of a short form (MFM-20) for young children with neuromuscular diseases. *Arch Phys Med Rehabil*. 2013. 94 : 2218-26.

Carole Vuillerot, MD, PhD, Christine Payan, MD, Françoise Girardot, SRP, Jacques Fermanian, MD, PhD, Jean Iwaz, PhD, Carole Bérard, MD, René Ecochard, MD, PhD, the MFM Study Group. Responsiveness of the Motor Function Measure in Neuromuscular Diseases. *Arch Phys Med Rehabil* Dec 2012; 93(12):2551-2556.

Vuillerot C, Girardot F, Payan C, Fermanian J, Iwaz J, De Lattre C, Berard C. Monitoring changes and predicting loss of ambulation in Duchenne muscular dystrophy with the Motor Function Measure. *Dev Med Child Neurol*. 2010 Jan;52(1):60-5.

C. Benaïm, S. Sacconi, M. Fournier-Mehouas, V. Tanant, C. Desnuelle. Validity of the motor function measurement scale when routinely used in the follow-up of adult outpatients in a neuromuscular center. *Revue Neurologie* 2010. 166 : 49-53.

Bérard C, Payan C, Fermanian J, Girardot F; Groupe d'Etude MFM. [A motor function measurement scale for neuromuscular diseases - description and validation study]. *Rev Neurol (Paris)*. 2006 Apr;162(4):485-93. French.

Bérard C, Payan C, Hodgkinson I, Fermanian J and the MFM collaborative study group. A motor function measure scale for neuromuscular diseases. Construction and validation study. *Neuromuscular Disorders*. 2005. 15: 463-470.