

**This assessment review was compiled by our students and is intended to be used as a guide in assisting clinicians. We encourage you to review the evaluations and assessments for yourself to guarantee the most accurate and updated information.*

I. General Information

Title of the test: Wolf Motor Function Test (WMFT)

Author: Steven L. Wolf, Ph.D, Emory University School of Medicine (original version)
Edward Taub, Ph.D., Paul Blanton, Ph.D., Karen McCulloch, M.S.P.T. (modified version)
David Morris, M.S.P.T, Jean Crago, M.S.P.T., and Edward Taub, Ph.D (current version)
Stephanie DeLuca, B.S, Jean Crago, M.S.P.T., and Edward Taub, Ph.D (graded version)

Publisher: University of Alabama at Birmingham, Birmingham, AL 35294-1170

Time required to administer: Not specified – estimate approximately 45 minutes - All tasks are performed as quickly as possible and are truncated at 120 seconds for up to 17 possible movements.

Cost of the Test: Instructions are free, template costs \$25.00, and a videotape of the model of the regular WMFT can also be obtained for an additional fee.

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II. Description of Test

Type/Purpose of Test: The WFMT is a laboratory time-based test to assess upper extremity performance for strength and functional ability (quality of movement). There are 15 timed and 2 strength tasks ranging from simple to complex. The test helps to determine motor status in chronic patients with stroke or traumatic brain injury who are typically higher functioning (the graded version compensates for patients with severe deficits). Individuals with very low functioning struggle, are only able to complete less than half of the activities. Therefore, calculating meaningful summary scores is difficult. Specific areas addressed are strength and performance time tasks. Strength tasks include, forward flexion of the shoulder and dynamometer grip strength. Performance time tasks include, shoulder movement, straightening the elbow with and without a 1-lb weight, reaching to retrieve a 1-lb weigh, using elbow and wrist flexion. Several timed tasks that engage the entire upper extremity, one bimanual activity and one standing task.

Population: Upper extremity motor deficits for individuals with stroke and traumatic brain injury.

The original test was designed for higher functioning patients, and the modified versions evaluate patients with moderate to severe motor deficits.

Focus of measurement:

Organic systems Abilities Participation/life habits Environmental Factors

III. Practical Administration

Ease of Administration: Once the test is set up, and the tester understands how to demonstrate and score each task, the WMFT is easy to administer. The instruction packet includes, setup, task description, timing procedure, measure, verbal instructions, and scoring. The 17 tasks range from simple (i.e. placing forearm on table) to complex (i.e. adding weight or

grasping small objects). Each task is described and then demonstrated two times to prepare the patient. Verbal instructions of exactly what to say to the patient are provided. The tasks are timed and should be performed as rapidly as possible with a two-minute limit. The administrator uses a stopwatch to time each task and then records the score on the form provided.

Clarity of Directions: The instructions are very specific and clear about what the tester should say, how to set up the test, what objects to use for each task, how to position the patient, height of table and chairs, and how to demonstrate each task.

Scoring Procedures: For scoring purposes the setup includes, placing dots on the floor to indicate position of the chair, taping the template flush with the edge of the table with the center of the template in the center of the table, and an outline of each test object traced on the template. A third demonstration is allowed if needed, but the patient is not allowed to practice the task before testing. The time is recorded on the “data collection form”, but if the patient is unable to perform the task correctly within two chances, a score of 120+ is recorded. Also, if the therapist sees that the patient is not able to complete the task, it should be terminated to prevent discouragement and a score of 120+ should be given.

Examiner Qualification & Training: Not specified, however, upper extremity biomechanics would be important.

IV. Technical Considerations

Standardization: ___ Norms ___ Criterion Referenced ___ Other _____

Reliability: Inter-rater = .97 > for performance time and .88 for functional ability

Internal consistency = .86 - .92 for performance time and .92 for functional ability

Test-retest = .90 for performance time and .95 for functional ability

(Interrater reliability was examined by using intraclass correlation coefficients and internal consistency by using Cronbach's alpha).

Morris DM, Uswatte G, Crago JE, Cook EW 3rd, Taub E.

Validity: Construct validity, and criterion validity of the WMFT, as used in these subject samples, are supported

“Assessing Wolf Motor Function Test as Outcome Measure for Research in Patients After Stroke” Steven L. Wolf, PhD, PT; Pamela A. Catlin, EdD, PT; Michael Ellis, MPT; Audrey Link Archer, MPT; Bryn Morgan, MPT Aimee Piacentino, MPT, Emory University School of Medicine, Atlanta, swolf@emory.edu

Manual: ___ Excellent ___ Adequate ___X___ Poor

What is (are) the setting/s that you would anticipate using this assessment?

Rehabilitation clinics

Summary of strengths and weaknesses:

Weakness:

- Preparation is extensive – such as collecting exact objects and being precise with the setup
- Individuals with very low functioning - calculating meaningful summary scores is difficult

Strength:

- Cost effective
- Several versions to fit severity of deficits including the graded version
- Able to demonstrate the task three times if patient did not understand
- Considerate of patient - terminating task if patient cannot complete to prevent discouragement