

*\*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:** Nine-Hole Peg Test (NHPT) - 1985

**Author:** Not Specified

**Publisher:** Sammons Preston Rolyan, Inc.

**Time required to administer:** 10 minutes for both hands

**Cost of the Test:** \$64.82-129.99 (Amazon)

## II. Description of Test

**Type/Purpose of Test:** To measure unilateral finger dexterity to determine the extent of fine motor impairment in people experiencing difficulties with functional performance. (Nine-Hole Peg Test, 2007)

**Population:** Children and adolescents age 5 to 19; adults age 20 to 94

**Focus of measurement:**

X Organic systems    X Abilities    X Participation/life habits    \_\_\_ Environmental Factors

## III. Practical Administration

**Ease of Administration:** This test is incredibly easy to administer. The only materials that are required are a test kit (small pegboard and 9 pegs), a stopwatch, instructions, and norm tables. The test itself requires little set-up and is quick to administer.

**Clarity of Directions:** The directions/instructions given by Mathiowetz et al. (1985) are very straightforward and easy to follow. They include information regarding the order of testing, number of practice trials, when to start/stop stopwatch, specifics on materials, and step-by-step instructions to be given to client when testing.

**Scoring Procedures:**

- Subject is seated at a table; tool is placed in front of subject at midline.
- Pegs are placed off to the side being assessed, in close proximity to the board.
- Subject is read standardized instructions to put pegs into the board as quickly as possible and then remove them, placing them into a small container. Time is recorded in seconds.
- Two consecutive trials with the dominant hand are immediately followed by two consecutive trials with the non-dominant hand.
- Times reported for each hand are compared with normative tables, according to subject age. Faster time generally indicates better function. (Rehabilitations Measures Database, 2010)

**Examiner Qualification & Training:**

"Can be administered by a wide variety of trained examiners." (Hitech Therapy, 2013)

## IV. Technical Considerations

**Standardization:** X Norms \_\_\_\_\_ Criterion Referenced \_\_\_\_\_ Other \_\_\_\_\_

**Reliability:** High interrater reliability using Pearson correlation coefficient (right = 0.97, left r = 0.99). Test –retest reliability was high for the right hand (r = 0.69) and moderate (r = 0.43) for the left. Several versions of this test are available, including homemade. To improve reliability, choose one style and use it consistently. (Mathiowetz, 1985)

**Validity:** Concurrent validity was assessed between the Nine-Hole Peg Test and the Purdue Pegboard using Pearson correlation coefficient (right r = -0.61, left r = -0.53), with the results indicating strong concurrent validity. (Mathiowetz, 1985)

**Manual:** \_\_\_\_\_ Excellent \_\_\_\_\_ Adequate \_\_\_\_\_ Poor

\*Cannot be reported since the OT program kits do not have manuals with them.

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

Outpatient clinic, home therapy, hand clinic, or hospital rehabilitation clinic. Any setting where clients present with impairments in UE or finger dexterity.

### **Summary of strengths and weaknesses**

#### **Weakness:**

- Only tests a small area of function; therefore, should not be used in isolation.
- Performance may be sensitive to practice effects (improved performance after practice trials).
- Patients often display poorer performance when first tested due to lack of familiarity with the task.
- Should not be used to test normal subjects (i.e. for job placement). Other tests are more suitable or appropriate (i.e. Purdue Pegboard).
- While it was said that “faster time generally indicates better function” (Rehabilitations Measures Database, 2010), there is no other mention of whether or not this test gives a good idea of how someone might function in daily tasks that require fine motor skills.

#### **Strength:**

- Written and verbal standardized instructions.
- Can be administered by wide variety of trained examiners.
- Norms are available.
- Relatively inexpensive construction cost and brief administration time.
- Used with wide range of populations.
- Easily portable.

#### **References:**

Hitech Therapy (2013). Mobilis Rolyan Workshop: 9 Hole Peg Test. Retrieved from [http://www.htherapy.co.za/user\\_images/splinting/Hole\\_Peg\\_Test\\_2009.pdf](http://www.htherapy.co.za/user_images/splinting/Hole_Peg_Test_2009.pdf)

Mathiowetz, V., Weber, K., Kashman, N., & Volland, G. (1985). Adult norms for the Nine-Hole Peg Test of finger dexterity. *Occupational therapy Journal of Research*, 5, pp. 24-38.

Nine-Hole Peg Test (2007). Nine-Hole Peg Test. In I. E. Asher (Eds.), *Occupational therapy assessment tools: An annotative index* (p. 324). Bethesda, MD: AOTA Press.

Rehabilitation Measures Database (2010). Nine Hole Peg Test instructions. Retrieved from

<http://www.rehabmeasures.org/PDF%20Library/Nine%20Hole%20Peg%20Test%20Instructions.pdf>