



MHFMS-EXTEND TEST FOR CHILDREN WITH SPINAL MUSCULAR ATROPHY

FINE MOTOR MODULE

PROTOCOL ADMINISTRATION AND SCORING MANUAL

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*MHFMS-EXTEND: FINE MOTOR TEST MODULE
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MHFMS-EXTEND FINE MOTOR TEST MODULE

Equipment needed
1. Child and adolescent adjustable sized benches
2. Adjustable height <i>Table Mate</i>
3. Foam seat and foot blocks to adjust seating as necessary
4. Stopwatch
5. Timer
6. Athletic Arm band - 2
7. Measuring tape
8. Blue masking/painter's tape
9. Appropriate sized table and chair for subject
10. 9 Hole Peg Test
11. Dycem Pad
12. 10 ounce 2 handled non-spill cup with lid filled with water to 8 ounce marker line.
13. 8 ounce Ziploc container with lid
14. 4" X 6" precut paper
15. 1 pair of Fiskars blunt tip scissors
16. Nut & bolt
17. 10 pennies
18. 1 non skid mat with marked penny and container placement on one side, white on the reverse side
19. Resistive pinch pins (mark force weight on each pin w/ permanent marker). There are a total of 5. Can be purchased through Sammons Preston.
20. Clear ruler with premarked 2" line.
21. Dowel rod and dowel rod frame – see specifications.

MHFMS-EXTEND TEST MODULES

FINE MOTOR MODULE

Item #1: Bilateral functional arm lift

Start position

Subject sitting in chair. Place standard test cup filled with 8 ounces of water on table in front of subject at midline.

Directions

Instruct the subject to raise cup to his mouth using both hands. Cup should be presented at midline, however subject may move it prior to picking it up.

Scoring

- 0- Unable to raise both hands to mouth.
- 1- Able to raise both hands to mouth, but cannot raise cup filled with 8 ounces of water to mouth.
- 2- Able to raise cup, using both hands, with 8 ounces of water to mouth. Do not have to drink the water to score a 2.



Item #2: Ziploc container

Start position

Subject sitting at table with white side of non-skid mat placed at table's edge in front of subject. Standard round 8 ounce Ziploc container placed on the mat, in midline in front of subject.

Directions

Instruct subject to remove the lid of the Ziploc container. If child tries to use legs to stabilize, reinstruct to try without using legs. If he/ she still uses legs, note such on Clinical Record Form (CRF).

Scoring

- 0- Unable to open.
- 1- Subject stabilizes container with one hand or against body while attempting to pry the lid off with the alternate hand. Opens partially, but does not get lid off completely.
- 2- Subject stabilizes container with one hand but not against body while prying lid off completely with alternate hand.



Item #3: Tears paper

Start position

Subject is sitting at table. 4"x6" precut piece of paper is placed on table at subject's midline.

Directions

Instruct subject to tear paper in half. Use ruler in kit with premarked line at 2" to measure length of tear.

Scoring

- 0- Unable to tear paper.
- 1- Able to tear paper 2" or more only if tear is initiated by the evaluator or tears paper less than 2 ".
- 2- Able to tear paper 2" or more. Must initiate and complete tear independently.



Item #4: Cut a line on paper with scissors

Prior to starting this task, ask parents/guardian if subject has had experience with scissors. Check appropriate box (yes, no) in comments column on Clinical record Form (CRF).

Start position

Subject is sitting at table. Place a 4" x 6" paper and blunt tipped scissors on the table in front of subject at midline.

Directions

Instruct subject to cut paper in half. Clinical Evaluator (CE) may verbally encourage subject to "keep cutting" if they have not cut at least a 2 "line. CE may not hold paper for the subject. A 6" ruler with 2" marker is provided for line measurement.

Scoring

- 0- Unable to cut with scissors.
- 1- Able to cut a line less than 2" in length.
- 2- Able to cut a line 2" or greater in length.

Record which hand they cut with on Clinical Report Form (CRF) and Clinical Evaluator Reminder (CE) form.



Item #5: Unscrewing nut/bolt

Start position

Subject is sitting at table. Place nut/bolt on table in front of subject at midline. Prior to starting, screw nut up to the bolt head. Do not tighten.

Directions

Instruct subject to unscrew the nut from bolt.

Scoring

- 0- Unable to unscrew nut from bolt.
- 1- Able to partially unscrew nut from bolt.
- 2- Completely unscrews nut from bolt.



Item #6: Picks up and places pennies in container

Start position

Subject is sitting at a table. Place non-skid mat on edge of table with pennies and Ziploc container on marked spaces in front of subject's midline.

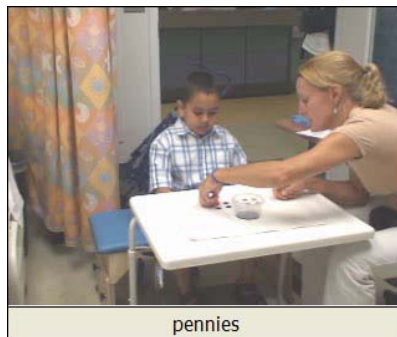
Directions

Instruct subject to place one penny at a time into the container, using only 1 hand. If subject starts to use 2 hands, stop task and re-instruct. Set timer to 5 seconds. Start timer at the "go" command. If the subject has a penny in hand when timer beeps, but has not yet placed it in the container at the beep it does not count toward total # of pennies. Order in which they pick up pennies does not matter.

Scoring

- 0- Unable to pick up pennies and place in container.
- 1- Able to pick up and place < 5 pennies in 5 seconds.
- 2- Able to pick up and place \geq 5 pennies in 5 seconds.

Record hand used on CRF and CE Reminder form.





Item #7: Squeeze pinch pin with one hand

Start position

Subject is sitting at table. Place red (2 lb.) pinch pin in front of subject at midline.

Directions

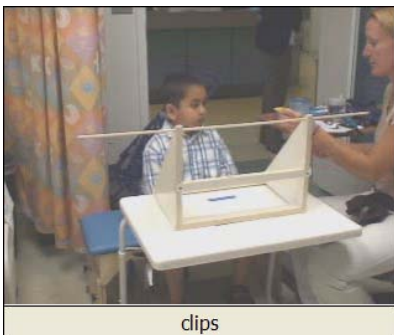
Place dowel rod frame horizontally 12" from the table's edge and 12" from the table surface (height) in front of subject. Instruct subject to squeeze the **red** (2 lb.) pinch pin with preferred hand and clip it on to the dowel rod.

Scoring

- 0- Unable to squeeze red (2 lb) pinch pin open or uses 2 hands to do so.
- 1- Using 1 hand only is able to squeeze red (2 lb) pinch pin partially open, but cannot clip onto horizontal rod. (Method used does not matter)
- 2- Using one hand only able to completely open red (2 lb.) pinch pin and place on horizontal dowel rod.

If subject is able to clip the 2-pound pin onto the horizontal dowel rod, repeat the process with the 4 lb. green, 6 lb. blue and 8 lb. black pin until subject is unable to clip the pin onto the dowel rod. Record pound force of last pin subject is able to open and clip onto the dowel rod using one hand only on CRF in comments column. If they were unable to open and clip the 2 lb (red) pin onto the dowel rod ask them to try to clip the 1 lb (yellow) pin onto the dowel rod. Record on CRF if they were able to clip the 1 lb (yellow) pin on the dowel rod using one hand only in comments column.

Record hand used R(right)/L(left) on CE Reminder form and on CRF.



Item #8: Puts on t-shirt

Start position

Subject is sitting. May be sitting on chair, on plinth, or on the floor. Record start position (plinth, floor, chair) on CRF form under start position and on CE reminder sheet. Large pullover T-shirt is placed on table with bottom hem at the table's edge, in front of the subject. May be easiest to start with subject's own shirt removed before attempting this item.

Directions

Instruct the subject to put the T-shirt on. Can demonstrate, but for scoring, do not hold shirt open to start.

Scoring

- 0- Unable to put on T-shirt. Any combo not described in 1 or 2 below is a 0.
- 1- Subject is able to initiate donning T-shirt, but requires assistance to complete task or able to get T-shirt over head and at least one arm through sleeve. If initiates and gets 2 arms through, but not head score as a 1.
- 2- Pulls large T-shirt over head and neck and puts arms through sleeves completely by self. Shirt is considered on if both arms are in the sleeves and the head is in the neck hole. Back/bottom of the shirt does not have to be pulled down completely.

