

## Neuropsychological testing procedures

“ Indicate what is said directly to the volunteer  
( ) indicate examiner’s task

- (On the summary score sheet, write ID, completed by, and date)
- (‘Test taken’ field on the summary sheet reflects whether the test was taken, if not, the reason for not taking the test. The coding is as follows:
  - 1 test taken
  - 2 test refused by volunteer
  - 3 subject has medical problem
  - 4 insufficient time
  - 5 administrator absent/not available
- (Place DO NOT DISTURB SIGN on the door)
- (Greet the volunteer)
  - “Hello, my name is \_\_\_\_.”
  - “I am here to do the paper and pencil test.”
  - “You did one a while back and we would like to test you again.”
  - “You can continue with the questionnaire (if they are doing so) after we’re done.”
  - “The test will take about 30 minutes.”
- (Position the desk in front of the volunteer, clearing all the contents. If needed, place any beverages behind the volunteer. Examiner sits across the volunteer.)
  - “I’d like to thank you for letting me come in and do the paper and pencil test.”
  - “What I am going to do is administer some tests.”
  - “Some are really easy, but some may be a little difficult.”
  - “No one gets everything right and all I expect is that you do your best.”
  - “If you happen to have any questions with the instructions or the procedures, let me know.”
  - “If you wish not to go further with the test after you’ve started, just let me know.”
  - “Before we begin, are you having any problems hearing me?”

## Background info

- - “I’d just like to get some background information before we start.  
What is the highest grade you completed, education wise?”
- (Write on the summary sheet, highest grade: 12 (high school), 16(BS or BA), 18(MS or MA), 19 (Lawyers) 20 (PhD or MD). Do not count technical or vocational school.)

## AVLT (Learning)

- Trial 1
  - “For the first test, what I am going to do is say a list of words to you.”
  - “I would like for you to listen carefully and after I am done, I would like you to say all the words you can think of from the list, in any order.”
  - “Please let me know when you can’t think of any more.”
  - “Again, I am going to say a list of words and I would like you to repeat them for me, as many as you can, in any order.”
    - (Read one word per second – use the stop watch to keep pace, if needed. Practice with stopwatch early on and wean off of it. Occasionally, use the stopwatch to see if you are at the correct pace).
    - (Write down ALL the words said by the volunteer, even repeats. If the volunteer goes too fast, write in short hand the first 2 letters of the word. Go back and complete the words after the volunteer finishes with the list.)
- Trial 2
  - “I am going to read the same list again.”
  - “What I would like for you to do is listen carefully and after I am done I would like you to say all the words you can think of from the list in any order, INCLUDING the words you said before.”
  - “So, we are going to do the same list over again.”

- (Make sure to emphasize the list is to be done again with ALL the words to be recalled)
- Trial 3-5
  - “I am going to read the same list again and I would like you to do the same thing, recalling all the words in any order.”
    - (Encourage the volunteers by stating 1. They are doing very well, 2. Do the best they can.)
- Trial 6 - second list
  - “I am going to read a DIFFERENT list of words to you.”
  - “Again, I would like you to listen carefully and after I am done, I would like you to say all the words you can think of from the list, in any order.”
  - “Again, it’s a different list of words.”
    - (Write down the words from the second list)
- Trial 7, immediate recall of first list DO NOT say the words
  - “Now, I would like you to go back to the first list I read to you, the list I read 5 times.”
  - “I would like you to tell me all the words you can think of from the list, in any order.”
  - “I am not going to repeat them.”
- (There is no time limit. During the test, DO NOT tell the volunteer how many words are on the list. If asked, tell them it’s part of the test and you will tell them after the test. It’s common for the volunteer to ask what the tests have to do with the study and what they measure. Tell them kindly that you will explain it to them after the tests are finished.)

## Pegboard

- (Place the pegboard on the desk, positioning the pegside toward the volunteer. Do not slant left or right. If the volunteer makes adjustments, then state that the peg has to be in the middle without being slanted. See appendix 2 for diagram.)
  - “Which hand do you write with?”
- (Note the handedness on the top of the pegboard sheet)
  - “I am going to test you for your manual dexterity.”
  - “What I would like you to do is to put these pegs into the board as fast as you can.”
  - “You can see that each peg has a groove on the side like an old key (Show one peg to volunteer so they understand that all pegs are the same and they have to turn it different ways so it fits properly.)”
  - “With your **right** hand only, I would like you to put the pegs in from **left to right**, going down the rows.”
- (Time the right hand.)
  - “Now, I would like you to do the same thing with your **left** hand.”
  - “This time, I would like you to go from **right to left**.”
- (It is common for the volunteers to go in the different direction after they start, i.e. going right to left with the right hand. The reason for going to in the correct direction is that the previous peg does not hinder volunteer from inserting pegs. Quickly tell the volunteer to go in the correct direction **without** stopping the stop watch. If the volunteer drops a peg, note on the sheet how many.)

## Trail – Making

- (Show the sample side first.)
  - “You can see on this page that there are numbers and letters in each circle.”
  - “What I would like you to do is to draw a line from 1 to A, A to 2, 2 to B, B to 3, 3 to C, C to 4, and 4 to D.”
  - “I would like you to draw the lines as fast as you can in that proper order.”
  - “So it goes from “number” to a “letter”, then to a “number, and so on.”
  - “Please put your pencil on number 1 and begin.”
- (The sample section acclimates the volunteer before performing the real test on the back side. It is important that they understand the rules. It may take a little explaining that it alternates from a number to a letter then to a number, etc. Start the clock when saying “begin” and stop when they reach “4.” Point out the mistake if the volunteer incorrectly goes to circle by placing your pencil on the last correct circle, then stating, “I would like you to go to the correct circle from there.” **Do not stop the stopwatch until they get to “4.”**)

- (Turn the sheet over to show the real test)
  - “You can see that there are more numbers and letters.  
“I would like you to draw a line from 1 to A, A to 2, 2 to B, B to 3, 3 to C, C to 4, and 4 to D **and so on in that proper order until you come to “13.”**  
“I would like you to draw the lines as fast as you can in that proper order.”  
“Please put your pencil on number 1 and begin.”
- (Start the clock when saying “begin” and stop when they reach “13.” Point out the mistake if the volunteer incorrectly goes to the wrong circle by placing your pencil on the last correct circle, then stating, “I would like you to go to the correct circle from here.” **Do not stop the stopwatch until they get to “13.”**)

## Symbol-Digit Modalities

- (Show the SDMT sheet to the volunteer)
  - “You can see that there is a row of symbols on the top of this page.”  
“And in the next row there are numbers.”
    - (Point to the number key on the top of the page.)
  - “You can see that there are symbols at the top, but no numbers at the bottom.”
    - (Point to the bottom section where the numbers are blank.)
  - “I would like for you to put the numbers into these boxes, as fast as you can, according to the way the numbers are keyed with the symbols that you see at the top.”  
“Note that some symbols, like 3 and 5, are the reverse of each other.”
- (Practice section, first 10-until the double line)
  - “I would like you to practice until you come to the double line, starting at the beginning.”
- (After practice)
  - “Please start at the double line in putting the numbers into the boxes, box-by-box, and stop when I tell you to.”
    - (Start the stopwatch when saying “begin” and stop when reaching 90 seconds.)

## Oral Word Controlled Association

- “I am going to say a letter of the alphabet and I would like you to tell me all the words you can think of which start with that letter.  
“It could be any word, but try not to use proper names such as words for people or places, like Robert or Rochester.  
“Also, do not repeat the words you said before. For example, if you said “eat,” don’t say “eating” or “eaten,” or vice versa.  
“You have 1 minute for each letter.  
“**Again, any words except the types that I have mentioned.**  
“If you get stuck, just keep on trying until the time limit is up.
- “The first letter is the letter ‘C,’ begin.”
- “The next letter is the letter ‘F,’ begin.”
- “The next letter is the letter ‘L,’ begin.”
- (Start the stopwatch.)
- (Write the words down.)
- (There can be cases where you cannot keep up with the pace of the volunteer. Use short-hand and complete the spelling after the list. Keep an eye on the stopwatch and say ‘stop’ at the 1 minute mark.)

## Digit cancellation

- (Show the RED page)
  - “I would like for you to cross out all the 6s you see on this page as fast as you can.”
- (Examiner crosses out two 6s as an example)

- “I would like for you to cross out all the 6s you see on this page as fast as you can.”  
“You can go from left to right, or from right to left, or zigzag, but do not go up and down.”  
“I would like for you to practice on the top 2 lines on the very top.”
- (after practice)
  - “I would like for you to cross out all the 6s as fast as you can and finish the whole page.”  
“Don’t ponder on one line for too long and don’t go back and correct.”  
“Ready, begin”
- (Start the stopwatch and stop when volunteer finishes. Take the sheet and mark the time on the left margin of the page).
- (Show the BLUE page)
  - “I would like you to do the same thing on this page, crossing out the 6s as fast as you can.”  
“Ready, begin”
- (Start the stopwatch and stop when volunteer finishes. Take the sheet and mark the time on the left margin of the page.)

### **AVLT (delayed)**

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- - “We are coming down to the end. Now I would like you to think back to the list of words I read you – the first list that I read you 5 times.  
“Please tell me all words you can think of.”
    - (Do not read the list. Only have volunteers recall)

### **AVLT (recognition)**

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- - (Show the page)
    - “The paragraph on this page has some underlined words.”  
“I would like you to cross out the underlined words that were on the first list of words I read you.”

### **Impairment question**

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- - “Was there anything that may have gotten in the way of taking any of these tests tonight?
    - (Write down what the volunteer stated and match closest category on impairment list.)

### **Final comments to volunteer**

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- “I would like to thank you for coming in and doing the test.
- “The test will be used to see if there are any relationships between the test outcomes and the data collected from the overnight study.”