Toronto Cognitive Assessment

(TorCA)[1]

Toronto Dementia Research Alliance

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NAME:_____

AGE: _____

GENDER: _____

HANDEDNESS: _____

EDUCATION: _____

DATE: _____

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* Contributed equally to the paper

Toronto Cognitive Assessment (TorCA)

Toronto Dementia Research Alliance

Name:		**DOB:**	**ID No:**
Hand: R L A	**Education** (yrs or highest degree)**:**		**Gender: M F**
Occupation:			

Subtest	**Orientation**	**Memory Immediate Recall**	**Memory Delayed Recall**	**Memory Delayed Recognition**	**Visuospatial**	**Working Memory/ Attention/ Executive Control**	**Language**
Orientation	/12						
Serial 7's						/13	
Serial 3/s						/13	
CERAD Word List Trial 1		/10					
CERAD Word List Trial 2		/10					
CERAD Word List Trial 3		/10					
Benson Figure Copy					/17		
Digit Span – Forwards						/9	
Digit Span - Backwards						/8	
Clock Drawing					/15		
Trails Numbers						/24	
Trails Number - letter						/24	
CERAD – Delayed Recall			/10				
CERAD – Delay Recognition				/20			
Benson Figure Delayed Recall			/17				
Benson Figure Delayed Recognition				/1			
Alternating Sequences						/2	
Similarities						/10	
Verbal Fluency – F words						*	
Verbal Fluency - Animals							*
MiNT Naming							/15
Repetition							/10
Single Word Comprehension							/8
Single Word Reading Comprehension							/2
Sentence Comprehension							/8
Single Word Reading							/12
Semantic Knowledge							/10
Domain Totals	/12	/30	/27	/21	/32	*	*
Percentile Ratings							
	Orient	**MIR**	**MDR**	**MDRec**	**VisSpat**	**ExecCon**	**Lang**

Sum ____ **Sum Percentile** ____ *** No max score**

Start time: _____ End time:_____ Total time:_____

Patient's Name: **MR#** **Date:**
Examiner's Name:

START TIME: _____

MEMORY: ORIENTATION

Instructions:
Say to the patient: ***"Tell me, what is the …?"*** or ***"Who is the …?"*** Record the answers verbatim.

	RESPONSE	SCORE
Year		
Month		
Day		
Date		
Season	(If a statement is made that indicates estimate is based on current weather say: "According to the calendar what season is it?)	
Place/Building	(If they state "hospital" say: "Yes but what is the name of the hospital?)	
Floor		
City		
Province		
Country		
Prime Minister		
Premier		
	Total	**/12**

Score: 1 point for each correct response

Patient's Name: **MR#** **Date:**
Examiner's Name:

ATTENTION & CONCENTRATION: SERIAL SUBTRACTIONS:

Serial 7's

Instructions: Say to the patient: ***"Begin at 100 and take away/subtract 7 and keep taking away 7 from the next number until I say stop."*** Record responses verbatim. If the person stops or loses track, prompt them to continue.

Serial 3's

Instructions: Say to the patient*:* ***"Begin at 90 and take away/subtract 3 and keep taking away 3 from the next number until I say stop."*** Record responses verbatim.. If the person stops or loses track, prompt them to continue

NOTE: If the patient loses set on either Serial 7's or 3"s (i.e. starts subtracting by another number), or states that s/he does not know what to do or does not know where s/he is in the sequence, then remind them by saying**: *"Remember, count backwards by* [***7 or 3***]. *The last number you said was* [*supply the patient with the last response*]".** In order to insure that the patient has lost set and not simply miscalculated, wait until there have been two successive responses using the incorrect number to be subtracted (e.g. *5* instead of 7) before correcting.

SERIAL 7's (100-7)

	RESPONSE
93	
86	
79	
72	
65	
58	
51	
44	
37	
30	
23	
16	
9	
Total	**/13**

SERIAL 3's (90-3)

	RESPONSE
87	
84	
81	
78	
75	
72	
69	
66	
63	
60	
57	
54	
51	
Total	**/13**

Score:
Give credit for each correct subtraction, as long as the difference between two successive subtractions is correct.

Patient's Name: **MR#** **Date:**
Examiner's Name:

MEMORY: VERBAL LEARNING (CERAD)

Materials: CERAD Word List Memory Task booklet.

Instructions: The words for the list are contained in the stimulus book. The patient is shown each word and requested to read it aloud as quickly as possible.

Open the CERAD Word List Memory Task booklet to the page that titled Trial 1 and say to the patient: ***"I am going to show you a list of words. I would like you to read each word out loud. Afterwards, I would like you to repeat back as many words as you can remember. It does not matter in what order you repeat them. Just try to remember as many as you can."*** Turn the page and ask the patient to begin reading the words. Turn the page to the next word as soon as the patient has read each word. Encourage the patient to read the words as quickly as possible.

After the patient has read the 10 words, tell the patient: "**Now, tell me all the words you can remember, in any order**". Record the responses verbatim and in the order recalled in the table below. NO feedback should be given regarding the number of correct responses, repetitions or errors. Prompt "**anything else**?" at the end of each recall.

Trials 2 & 3 say to the patient: ***"Now I am going to show you the same words to read, but in a different order. Again, when you finish reading the word recall as many words as you can, including words you said the first time. It does not matter in what order you repeat them. Just try to remember as many as you can."*** Record all responses verbatim in the spaces below.

IMMEDIATE RECALL

Correct responses	**TRIAL 1**	**TRIAL 2**	**TRIAL 3**
Arm			
Butter			
Cabin			
Engine			
Grass			
Letter			
Pole			
Queen			
Shore			
Ticket			
Total Correct			
Intrusions			
Repetitions			
		Trial 1 – 3 Total	**/30**

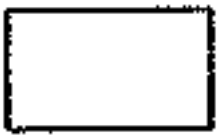
Patient's Name: **MR#** **Date:**
Examiner's Name:

VISUOSPATIAL: COMPLEX FIGURE COPY

Materials: TorCA Response book page 1; pencil or pen.

Instructions: Give the patient a pencil [pen], place page 1 of the response book in front of the patient and say: ***"Please copy this design as best you can down here*** **[**point to the bottom half of the page**]*."*** Have the patient copy the figure in the lower half of the page. When completed, leave the figure in front of the patient for 5 seconds while you say: ***"Be sure to remember this design, because I'll ask you to draw it again later from memory."***

Scoring:
Circle if accurately drawn and/or accurately placed. Otherwise, do not give the point for A) distortion of the element or B) misplacement of the element.

	Details	Accurately drawn	Accurately placed	Score
Outer rectangle		Y / N	Y / N	/2
Internal element on left		Y / N	Y / N	/2
Internal box on bottom		Y / N	Y / N	/2
External lines on right		Y / N	Y / N	/2
Intersecting diagonal lines		Y / N	Y / N	/2
Internal circle on right		Y / N	Y / N	/2
External element on left		Y / N	Y / N	/2
External element on right		Y / N	Y / N	/2
			BONUS (if unusually well-proportioned and accurate drawing)	/1
			TOTAL SCORE:	**/17**

TIME NEEDED TO COPY (optional):_____
TIME WHEN COPY WAS COMPLETED (optional): _____

Patient's Name: **MR#** **Date:**
Examiner's Name:

WORKING MEMORY: DIGIT SPAN

FORWARD SPAN

Instructions: Say to the patient*: **"I am going to say some numbers. Listen carefully, and when I am through, I want you to say them right after me and in the same order that I said them."*** Read the numbers at a rate of between 1 - 1½ second per digit. Keep your voice prosody flat and do not vary your rhythm. Inflect your voice downwards after reading the last digit to indicate the end but do not prompt for recall. Record all responses verbatim.

If the patient responds correctly on the first trial of any span length, move immediately to the next higher span length. Administer second trial of span length only if response to first trial is incorrect. Discontinue when both trials of a span length are failed.

Scoring:

Total score = longest forward span length recalled correctly before discontinuation.

Trial	Digits Forward	Trial Score (1 or 0)	Span
1	**7 - 1**		**2**
	3 - 6		
2	**2 - 8 - 5**		**3**
	4 - 9 - 6		
3	**9 - 3 - 4 - 6**		**4**
	6 - 8 - 2 - 1		
4	**1 - 3 - 7 - 2 - 4**		**5**
	6 - 3 - 8 - 5 - 7		
5	**3 - 7 - 4 - 9 - 1 - 6**		**6**
	7 - 8 - 4 - 2 - 9 - 3		
6	**8 - 2 - 4 - 7 - 1 - 9 - 5**		**7**
	6 - 8 - 3 - 9 - 7 - 1 - 4		
7	**7 - 4 - 6 - 2 - 9 - 1 - 8 - 5**		**8**
	4 - 7 - 1 - 5 - 9 - 2 - 8 - 3		
8	**4 - 8 - 5 - 2 - 6 - 8 - 5 - 7 - 2**		**9**
	8 - 6 - 5 - 2 - 4 - 9 - 3 - 1 - 7		
		Longest Forward Span Recalled Correctly	

Patient's Name: **MR#** **Date:**
Examiner's Name:

WORKING MEMORY: DIGIT SPAN

REVERSE SPAN

Instructions: Say to the patient*:* ***"I am going to say some more numbers, but this time, when I stop, I want you to say the numbers backward – in the reverse order. For example, if I say 1-5, then you would say 5-1. Let's try another one. If I say 2-5, then you would say…".*** If the response is incorrect, then say: ***"Let's try that one again"*** and repeat the digits. Discontinue if the patient cannot establish the set. If the patient can establish set, then say: ***"Let's start"*** and proceed to present the digits. Read the digits at the rate of approximately 1 - 1½ second per digit. Keep your voice prosody flat and do not vary your rhythm. Inflect your voice downwards after reading the last digit to indicate the end but do not prompt for recall. Record all responses verbatim.

If the patient responds correctly on the first trial of any span length, move immediately to the next higher span length. Administer second trial of span length only if response to first trial is incorrect. Discontinue when both trials of a span length are failed.

Scoring:

Total Score = longest backward span length recalled correctly before discontinuation.

Trial	Digits Backward	Trial Score (1 or 0)	Span
1	**4 - 2** *(2- 4)*		**2**
	7 - 5 *(5 -7)*		
2	**9 – 2 - 6** *(6-2-9)*		**3**
	5 - 1 - 4 *(4-1-5)*		
3	**9 - 7 - 2 - 3** *(3-2-7-9)*		**4**
	8 - 6 - 9 - 4 *(4-9-6-8)*		
4	**6 - 8 - 2 - 5 - 1** *(1-5 -2-8- 6)*		**5**
	3 - 4 - 8 - 1 - 6 *(6-1-8-4 -3)*		
5	**5 - 3 - 9 - 4 - 1 - 8** *(8-1-4-9-3-5)*		**6**
	6 - 5 - 8 - 4 - 2 - 7 *(7-2-4-8-5-6)*		
6	**5 - 6 - 3 - 9 - 2 - 1 - 8** *(8-1-2-9-3-6-5)*		**7**
	8 - 2 - 1 - 9 - 3 - 7 - 4 *(4-7-3-9-1-2-8)*		
7	**8 - 5 - 2 - 6 - 7 - 3 - 4 - 9** *(9-4-3-7-6-2-5-8)*		**8**
	3 - 5 - 6 - 9 - 1 - 8 - 2 - 7 *(7-2-8-1-9-6-5-3)*		
		Longest Backward Span Recalled Correctly	

Patient's Name: **MR#** **Date:**
Examiner's Name:

VISUOSPATIAL: CLOCK DRAW

Materials: TorCA Response Book page 2; pencil or pen

Instructions: Place the page 2 of the response book in front of the patient, hand him/her a pencil [pen] and say*: **"Draw the face of a clock, put in the numbers and set the hands at 10 after 11."***

Scoring:

Contour:	**Scoring Criteria**	**SCORE**	
1 point:	Contour is closed or within 1/8 inch or 3 mm of closure and is not too small to contain all numbers		
1 point:	Contour is circular with the ratio of the shortest to the longest diameter no greater that 1:1.5		
		Subtotal - Contour	**/2**

Numbers:

1 point:	Numbers 1 to 12 are all present without additional numbers		
1 point:	Numbers are represented by either Arabic numerals alone or by Roman numerals alone by not by a combination of both		
1 point:	Numbers are in the correct order		
1 point:	Paper not rotated		
1 point:	Numbers are approximately in the correct position.		
1 point:	All numbers are within the clock contour		
		Subtotal - Numbers:	**/6**

Hands:

1 point:	Two and only two hands are present (allow three hands if the patient spontaneously or on cue clearly indicates one hand is a second hand)		
1 point:	Hour target number indicated in some manner		
1 point:	Minute target number indicated in some manner (e.g., a hand, or a mark of some sort)		
1 point:	Hands in correct proportion (i.e. minute hand longer than hour)		
1 point:	No superfluous markings on the clock face		
1 point:	Hands overlap or join within 2 mm (1/16 inch)		
		Subtotal – Hands:	**/6**

Centre:

1 point:	Centre drawn or inferred		
		Subtotal – Centre:	**/1**
		TOTAL (sum of subtotals of contour, numbers, hands, centre):	**/15**

Modified from Clock Drawing: A Neuropsychological Analysis by Morris Freedman, Larry Leach, Edith Kaplan, Gordon Winocur, Kenneth I Shulman, and Dean Delis. Copyright 1994 by Oxford University Press, Inc. Used by permission of Oxford University Press, Inc.

Patient's Name: **MR#** **Date:**
Examiner's Name:

EXECUTIVE FUNCTION: Trails Number Sequencing

Materials: TorCA Response Book pages 3 and 4; pencil or pen

Instructions: Place page 3 of the response book in front of the patient, hand him/her a pencil/pen and give the following instructions: ***See this page. Notice that there are numbers inside each circle. I'd like you start with the number 1 and draw a line to 2, from 2 to 3,*** [as you give the instruction, trace the path with your pen but do not mark the trail] ***and so on in order until you reach the end*** [point to the number 8] ***. Remember, the rule here is to go from number, to number in order. Try to go as quickly as you can without making a mistake and try not to lift your pencil [pen] from the paper. When I say GO you may begin. Place your pencil [pen] on number 1, ready GO."***

If the patient makes a mistake immediately point out the error and place a mark across the incorrect line, have them go back to the last previous correct response and resume. Remind the patient of the instructions if they appear to have forgotten them or do not grasp the instructions. If the patient is able to complete the sample, even with corrections, continue to the Trails task.

Place page 4 of the response book in front of the patient and give the following instructions: ***Good! On this page, there are more numbers to be joined. Again, start with 1, and draw your line 2, from 2 to 3, and so on, in order, until you reach the end*** [point to the number 25]***. Remember to go from number to number in order. Go as quickly as you can without making a mistake, and try not to lift your pencil [pen] from the paper. Place your pencil [pen] on number 1, ready GO."***

Start timing as soon as you say GO. Stop timing when the patient reaches the End point. Again, if the patient makes a mistake immediately point out the error, cross out the incorrect line, and have them go back to the last previous correct response and resume, but **do not explain the error.** Discontinue after 90 seconds (1 ½ minutes). Record completion time below.

Completion time: _____

Scoring: 1 point for each correct sequence within the time limit. Subtract one point for each correction. Total points = 24.

Total complete: _____ **- Total corrections:** _____ **= Score:** _____ **/24**

Patient's Name: **MR#** **Date:**
Examiner's Name:

EXECUTIVE FUNCTION: Trails Number-letter Switching

Materials: TorCA Response Book pages 5 and 6; pencil or pen.

Instructions: Place page 5 of the response book containing the sample in front of the patient and give the following instructions: ***See this page. Notice that there are numbers and letters inside each circle. I'd like you start with the number 1 and draw a line from 1 to A, from A to 2, from 2 to B, from B to 3,*** [as you give the instruction, trace the path with your pen but do not mark the trail] ***and so on in order until you reach the end*** [point to the letter D] ***. Remember, the rule here is to go number, letter, number, letter, each one in order and alternating between the two. Try to go as quickly as you can without making a mistake and try not to lift your pencil [pen] from the paper. When I say GO you may begin. Place your pencil [pen] on number 1, ready, GO."***

If the patient makes a mistake immediately point out the error and place a mark across the incorrect line, have them go back to the last previous correct response and resume. Remind the patient of the instructions if they appear to have forgotten them or do not grasp the instructions. If the patient cannot acquire the alternating response after 4 attempts at explanation, discontinue. If the patient is able to complete the sample, even with corrections, continue to the switching task.

Place page 6 of the response book in front of the patient and give the following instructions: ***Good! On this page, there are more numbers and letters to be joined. Again, start with 1, and draw your line from 1 to A, from A to 2, from 2 to B, B to 3, and so on, in order, until you reach the end*** [point to the number 13]***. Remember to go number, letter, number, letter, number, letter. Try to go as quickly as you can without making a mistake, and try not to lift your pencil [pen] from the paper. Place your pencil [pen] on number 1, ready GO."***

Start timing as soon as you say GO. Stop timing when the patient reaches the End point. Again, if the patient makes a mistake immediately point out the error, cross out the incorrect line, and have them go back to the last previous correct response and resume, but **do not explain the error.** Discontinue after 240 seconds (4 minutes). Record completion time below.

Completion time: _____

Scoring: 1 point for each correct alternation within the time limit. Subtract one point for each correction. Total points = 24.

Total complete: _____ **- Total corrections:** _____ **= Score:** _____ **/24**

Patient's Name: **MR#** **Date:**
Examiner's Name:

MEMORY: VERBAL RECALL (10 MINUTES DELAY)

FREE RECALL

Instructions: Say to the patient: ***"A while ago, I showed a list of words to you several times, and you had to repeat back the words. Please tell me the words from that list you remember."*** Record below all responses verbatim and in the same order recalled.

Score: 1 point for each correct recall. Do not count repeated correct responses.

RECOGNITION

Materials: CERAD Word List Memory Task booklet.

Instructions: On completion of the delayed recall trial, perform the recognition recall. Open the CERAD Word List Memory Task booklet to the page titled Delayed Recognition Task and place it in front of the patient. Say to the patient: ***"I will now show you some words that were on the word lists and some words that were not on those lists. If the word was on the list say YES, if it was not on the list say NO."*** Turn the page to the first word. Circle responses in the table below. Show each word in the Recognition set of the stimulus booklet Record the answers below as 1 or 0. Correct responses are indicated in ***BOLD ITALICS***. If the patient says s/he is not sure or gives an equivocal response say: "***Do you think it was on the list – yes or no?***"

FREE RECALL

DO NOT READ THE LIST AGAIN	
Arm	
Butter	
Cabin	
Engine	
Grass	
Letter	
Pole	
Queen	
Shore	
Ticket	
Total Correct	
Intrusions:	
Repetitions:	

RECOGNITION

	(circle response)	**Score**
Church	Y / ***N***	
Coffee	Y / ***N***	
Butter	***Y*** / N	
Dollar	Y / ***N***	
Arm	***Y*** / N	
Shore	***Y*** / N	
Five	Y / ***N***	
Letter	***Y*** / N	
Hotel	Y / ***N***	
Mountain	Y / ***N***	
Queen	***Y*** / N	
Cabin	***Y*** / N	
Slipper	Y / ***N***	
Pole	***Y*** / N	
Village	Y / ***N***	
String	Y / ***N***	
Ticket	***Y*** / N	
Troops	Y / ***N***	
Grass	***Y*** / N	
Engine	***Y*** / N	
	TOTAL Correct	**/20**
	True Positives	
	False Positives	

Patient's Name: **MR#** **Date:**
Examiner's Name:

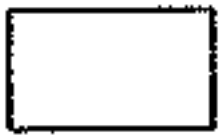
MEMORY: VISUAL RECALL (DELAYED – FREE)

Materials: TorCA Response Book page 7; pencil or pen.

Instructions: Place page 7 of the response book in front of the patient, hand the patient a pencil or pen and say: ***"Please draw again that figure I had you copy before."*** If the patient begins to draw a clock say: ***"No, there was that other figure I asked you to draw before that one."***

Scoring: See scoring criteria below

Time to completion: (optional):_____

	Details	Accurately drawn	Accurately placed	Score
Outer rectangle		Y / N	Y / N	/2
Internal element on left		Y / N	Y / N	/2
Internal box on bottom		Y / N	Y / N	/2
External lines on right		Y / N	Y / N	/2
Intersecting diagonal lines		Y / N	Y / N	/2
Internal circle on right		Y / N	Y / N	/2
External element on left		Y / N	Y / N	/2
External element on right		Y / N	Y / N	/2
			BONUS (if unusually well-proportioned and accurate drawing)	/1
			TOTAL SCORE:	**/17**

Patient's Name: **MR#** **Date:**
Examiner's Name:

MEMORY: VISUAL RECALL (DELAYED – RECOGNITION)

Materials: TorCA Response Book page 8; pencil or pen

Instructions: Place page 8 of the response book in front of the patient and say: ***"Which of these figures was the one you copied earlier? Please circle the one you remember."*** If the patient states s/he cannot remember or is not sure say: ***"It's OK to guess, just circle the one you think you saw before.***

Scoring: 1 point: For correct identification otherwise 0 point

Score: _____

Patient's Name: **MR#** **Date:**
Examiner's Name:

EXECUTIVE FUNCTION - ALTERNATING SEQUENCES

Materials: TorCA Response Book page 9; pencil or pen

Instructions: Place page 9 of the response book, in landscape orientation, in front of the patient and hand him/her a pencil or pen. Point to the end of the alternating sequences and say: ***"Starting here, continue with the same design until you reach the end of the page."*** If the patient stops before reaching the end say: "***Keep going until you reach the end of the page.***" Indicate below if a prompt to continue was required.

Score: _____

Scoring:

2 points: For a complete correct sequence
1 point: For 1 error
0 point: For 2 or more errors

MAXIMUM SCORE: 2 points

Patient's Name: **MR#** **Date:**
Examiner's Name:

EXECUTIVE FUNCTION - SIMILARITIES

Instructions: Say to the patient: **"*I am going to read two words to you and I want you to tell me how they are alike. In what way are an orange and apple alike?"*** If the answer is either a 1 – or 0 – point response then say: ***"Well an orange and an apple are alike because they are both fruits."*** Only give the example for the first item. Record all responses verbatim

Certain responses warrant a query to determine whether a better response can be obtained. These are noted with (Q). To query a response say ***"Tell me more about that."*** Only give one query per item. Score the queried response even if the second response results in a lower score than the initial response. If the patient gives two scoreable responses, repeat each response verbatim and say: "***Which answer do you think is best***?" Score the chosen response.

Scoring: (see examples next to item.

2 points: Abstract or categorical response
1 point: Concrete response
0 point: Irrelevant or non-specific response

	SCORE
ORANGE-APPLE (note: give abstract answer only for this item.)	
2 points: fruit 1 point: food (Q), eat both, have peels or seeds, grow on trees 0 point: round, same shape, different (fruits), there're not alike	
SALT-PEPPER	
2 points: condiments, flavorings, spices 1 point: improve taste (of food), used on food, edible 0 point: used for the same thing (Q), one's spicy the other is salty, they make you want to drink water	
FORK-KNIFE	
2 points: utensils, eating utensils, flatware, silverware, cutlery 1 point: use them to eat (food) (Q), used to cut food 0 point: made of metal/plastic/wood, used with food (Q), both long	
TRAIN-BICYCLE	
2 points: means of transportation, you take trips in both 1 point: they have wheels, you ride them, you can travel in (on) them (Q) 0 point: use them, both move(Q); Irrelevant answers or differences (e.g. one big the other is small, made of steel)	
SONG-PAINTING	
2 points: works of art, artistic creations 1 point: man made, symbolic (Q), beautiful, tell stories, express feelings (or ideas, emotions), have meaning 0 point: culture (Q), a song is heard – a painting is seen, makes you feel good	
Total score	/10

Patient's Name: **MR#** **Date:**
Examiner's Name:

VERBAL FLUENCY – F WORDS

Instructions: The patient is to generate as many words as s/he can in 1 minute.

Say to the patient: ***"I'm going to say a letter of the alphabet. When I tell you to start, I would like you to tell me as many words as you can think of that begin with that letter. But do not tell me names of people or places or any words that would usually be capitalized. For example if the letter was N then don't say Nancy or November. The other rule is that you should not give me the same word you have told me in different ways. For example, if you say nap do not say naps, napped, or napping."*** Having given the instructions say to the patient: ***"The letter is "F," start now."***

Record the responses verbatim, in 15 second intervals, below. If the patient pauses for more than 15 seconds without a response, prompt them by saying ***"What other words beginning with 'F' can you think of?"***

Scoring: 1 point: For each word starting with the letter "F." There is no maximum score.

Do not count repeated words.

F-WORDS	*Score*
15 sec	
30 sec	
45 sec	
60 sec	
TOTAL correct	
Intrusions	
Repetitions	

Patient's Name: **MR#** **Date:**
Examiner's Name:

SEMANTIC FLUENCY - ANIMAL NAMES

Say to the patient: ***"Now I want you to tell me as many animals as you can think of. It does not matter what letter they start with. Just tell me all the animals that you can think of, as quickly as you can. An animal is anything that walks, crawls, flies or swims."*** Record the responses verbatim, in 15 second units, below. If the patient pauses for more than 15 seconds without a response, prompt them by saying ***"What other animal names can you think of?"***

Scoring: 1 point: For each animal. There is no maximum score. **Do not count repeated animal names** but adult and infant, or male and female variations of the same type are allowed as individual names. For example, caterpillar / butterfly or sheep / lamb would be scored as unique names.

ANIMALS	Score
15 sec	
30 sec	
45 sec	
60 sec	
TOTAL correct	
Intrusions	
Repetitions:	

Patient's Name: **MR#** **Date:**
Examiner's Name:

LANGUAGE - Naming

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Materials: Language Assessment Test Book- Multilingual Naming Test (MiNT) Plates 1 - 15

Instructions: Patient are shown pictures in the stimulus book and asked to provide the name. The patient is allowed 10 seconds to name the item.

Turn to the first picture in the MiNT book and say to the patient: ***"What is this called?".*** If the patient clearly misidentifies the item say: ***"No, it is*** [give the semantic cue given in parentheses]**."**

Scoring: 1 point: For each correct item. Correct responses following a semantic cue are scored 1.

	RESPONSE	**Score**
1. Book, Bible, Torah *(something you read)*		
2. Apple *(something to eat)*		
3. Drum *(a musical instrument)*		
4. Candle *(used in the dark to make light)*		
5. Clown *(found in a circus)*		
6. Seesaw, teeter-totter (*found on a playground*)		
7. Peacock *(a bird; if response is turkey state: "It's another type of bird – what is it?")*		
8. Whale; sperm whale *(an ocean animal)*		
9. Cage *(an enclosure for animals)*		
10. Nest *(where birds lay their eggs)*		
11. Scarf *(clothing worn on the neck)*		
12. Dustpan *(used for cleaning)*		
13. Parachute *(used to jump from an airplane)*		
14. Hinge *(part of a door)*		
15. Blinds *(used to block out light)*		
	Total Correct:	**/15**

Patient's Name: **MR#** **Date:**
Examiner's Name:

LANGUAGE - SENTENCE REPETITION

Instructions: Say to the patient: ***"I'm going to read some sentences to you. Please repeat the sentence back to me, exactly the way I said it."*** Read each sentence out loud to the patient. One repetition of the sentence is allowed in cases where the patient did not hear the sentence, but only if the patient explicitly requests it. If the patient does not repeat the sentence perfectly, transcribe his/her response verbatim in the space below.

Scoring: 2 points for response without error and repetition; 1 point for correct response without errors but with repetition; 0 for response with any errors.

Sentence	Score	# omitted words	# semantic errors	# phonological/ other errors
1. The cat ate the caterpillar.				
2. Justin is taller than Henry.				
3. A teacher bought three pairs of gloves.				
4. We walked to the lake and then to the store.				
5. The rabbit was given to the child by a fireman.				
Total Score	**/10**			
Total number of words omitted from sentence (0–37)				
Total number of semantically related or unrelated incorrect real words (0-20)				
Total number of phonologically related words or non-word errors (0–20)				

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General Scoring Instructions for Comprehension Items.

Most items receive 2 points for correct answers, and 0 for incorrect answers or no response, but 1 point is given in following three situations:

- Code d - Correct responses delayed more than 5 seconds after stimulus is presented;
- Code sc - Correct responses occurring after a spontaneous self-correction: Note: false starts should only be counted as self-corrected if it was clear that the patient was going to make an error. Otherwise they should be ignored.
- Code r - Correct responses made after requests for the stimulus to be repeated coded as (r): Only one repetition should be provided in any case. Note that requests for repetitions that were clearly due to mishearing, investigator accent, etc., do not count as requests for repetitions and should not be noted.

Where applicable, the d, sc, and/or r boxes should be checked for either correct or incorrect responses. Phonological paraphasias count as errors but mild dysarthric errors are ignored so long as all phonemes can be made out.

Patient's Name: **MR#** **Date:**
Examiner's Name:

LANGUAGE - Single Word Comprehension

Materials: Language Assessment Test Book- Comprehension Subtests Plates 1 and 2. Plate 1 is used for items 1 and 2. Plate 2 is used for items 3 and 4.

Instructions: Open the Test Book to the appropriate plate and place in front of patient. Say to the patient "***I'm going to say a word; I want you point to what I say. Point to the*** _____ (read the word aloud)". If the patient requests a repetition, say the word again but only one repetition is allowed. Circle the response in the table below. If applicable, record the presence of delays, self-corrections or repetitions in the check boxes below each response.

Scoring: 2 points for correct response within 5 seconds or less. 1 point for correct response after a delay greater than 5 seconds or after a self-correction or after a repetition.

Plate	Item	Correct	Incorrect			Score
1	1	lion ☐ d ☐ sc ☐ r	bear (s) ☐ d ☐ sc ☐ r	apple (u) ☐ d ☐ sc ☐ r	pear (u) ☐ d ☐ sc ☐ r	
	2	pear ☐ d ☐ sc ☐ r	bear (p) ☐ d ☐ sc ☐ r	apple (s) ☐ d ☐ sc ☐ r	lion (u) ☐ d ☐ sc ☐ r	
2	3	cat ☐ d ☐ sc ☐ r	mouse (s) ☐ d ☐ sc ☐ r	church (u) ☐ d ☐ sc ☐ r	house (u) ☐ d ☐ sc ☐ r	
	4	house ☐ d ☐ sc ☐ r	mouse (p) ☐ d ☐ sc ☐ r	church (s) ☐ d ☐ sc ☐ r	cat (u) ☐ d ☐ sc ☐ r	
					Total Score	**/8**

Response Analysis

Response Type	Number
Delayed response (d)	
Self-correction (sc)	
Repetitions (r)	
Semantic error (s)	
Phonetic error (p)	
Unrelated error (u)	

LANGUAGE – Reading Single Word Comprehension

Materials: Language Assessment Test Book- Comprehension Subtests Plate 3

Instructions: Place Plate 3 in front of the patient and say."***See this word*** **[**point to the word *goat*]**,** ***read it out loud and then point to the picture that goes with it.***" Circle the response in the table below and if appropriate, indicate the presence of a delayed response or self-correction in the check boxes below.

Scoring: 2 points for correct response within 5 seconds or less. 1 point for correct response after a delay greater than 5 seconds or after a self-correction.

Plate	Response		Score
Plate 3	coat	***goat***	**/2**
	sheep	pants	

☐ d ☐ sc

Patient's Name: **MR#** **Date:**
Examiner's Name:

LANGUAGE - Sentence Comprehension

Materials: Language Assessment Test Book- Comprehension Subtests Plates 4, 5, 6, and 7.

Instructions: Place the appropriate plate in front of the patient and say: "***Now I'm going to read a sentence, and show you some pictures. I'd like you to point to the picture that goes with the sentence.***" Correct choices are indicated in ***bold italics***. For each item, circle the response in the table below. Record the time to make response in the space indicated to the nearest second. If applicable, record the presence of a delay, self-correction or repetition in the check boxes below.

Scoring: 2 points for correct response within 5 seconds or less. 1 point for correct response after a delay greater than 5 seconds or after a self-correction or after a repetition.

Item / Plate	Response	Score
1. ***The boy is pushing the girl.*** Plate 4 Time: _____	1 | ***2*** / 3 | 4 ☐ d ☐ sc ☐ r	
2. ***The girl is washed by the boy.*** Plate 5 Time: _____	1 | 2 / 3 | ***4*** ☐ d ☐ sc ☐ r	
3. ***The boy who is pushed by the girl is blue.*** Plate 6 Time: _____	1 | 2 / ***3*** | 4 ☐ d ☐ sc ☐ r	
4. ***The girl who is kissed by the boy is blue.*** Plate 7 Time: _____	***1*** | 2 / 3 | 4 ☐ d ☐ sc ☐ r	
	Total Score	**/8**

Patient's Name: **MR#** **Date:**
Examiner's Name:

LANGUAGE - Single Word Reading

Materials: Language Assessment Test Book- Comprehension Subtests Plate 8.

Instructions: Place Plate 8 in front of patient and say: "***Read each of these words aloud.***" Record responses verbatim. If applicable, indicated presence of a delay or self-correction in the check boxes below.

Scoring: 2 points for correct response within 5 seconds or less. 1 point for correct response after a delay greater than 5 seconds or after a self-correction.

Item / correct response	Response	Score
1. cough	☐ d ☐ sc	
2. pint	☐ d ☐ sc	
3. receipt	☐ d ☐ sc	
4. octopus	☐ d ☐ sc	
5. unforgettable	☐ d ☐ sc	
6. island	☐ d ☐ sc	
	Total Score	**/12**

Patient's Name: **MR#** **Date:**
Examiner's Name:

LANGUGE - Semantic Knowledge

Materials: Language Assessment Book Plates 9, 10, 11, 12, 13, and 14

Instructions. Open the Language Assessment book to Plate 9 for the practice item. Say to the patient: "***I am going to show you some pictures. Which of these pictures*** (motion to the four pictures in the corner) ***goes with the one in the middle?***" If correct say: "***That's right.***" If incorrect say: "***It goes with this one*** (point to the banana); ***the apple goes with the banana.***" Turn to Plate 10 and say: "***Now, which of these*** (motion to the corner pictures) ***goes with this one*** (point to the lock)". Repeat the instructions for the remaining plates.

Only give feedback for the practice item, do not give feedback for responses to Plates 10 – 14. Circle the response in the table below. If applicable, indicate the presence of a delay or self-correction in the check boxes below. Correct answers are in ***BOLD ITALICS***.

Scoring: 2 points for correct response within 5 seconds or less. 1 point for correct response after a delay greater than 5 seconds or after a self-correction.

Item / Plate	Response		Score
1. lock.			
Plate 10	***key***	file	
	clothespin	pen	
	☐ d ☐ sc		
2. glasses			
Plate 11	foot	lips	
	eye	brush	
	☐ d ☐ sc		
3. ironing board			
Plate 12	pan	stove	
	thimble	***iron***	
	☐ d ☐ sc		
4. carrot			
Plate 13	lion	***rabbit***	
	squirrel	bear	
	☐ d ☐ sc		
5. owl			
Plate 14	***moon***	corn	
	mountain	sun	
	☐ d ☐ sc		
		Total Score	**/10**

END TIME:_____

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