

Participant ID

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Nickname

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Outcome Visit

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Diabetes Prevention Program Outcomes Study
Q17 Cognitive Assessments Questionnaire

This form is administered by the interviewer at the 15A and 18A visits. Read and follow instructions given for each section.

A. Participant Identification

1. Clinic number

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2. Participant number

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3. Nickname

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4. Date of randomization

month		day		year			

5. Sex Male ¹

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 Female ²

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6. Outcome visit

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 VISIT

7. Date of visit

month		day		year			

 Q17VSTDT
Replaced by
DAYSRAND

B. Participant Information

1. What language were the tests administered in? English ¹

--

 Spanish ²

--

 Q17LANG

2. Handedness Right ¹

--

 Left ²

--

 Q17HANDED

3. Hearing Adequate ¹

--

 Inadequate ²

--

 Q17HEARING

4. Vision Adequate ¹

--

 Inadequate ²

--

 Q17VISION

Identification code of cognitive assessments interviewer	<table border="1"><tr><td></td><td></td><td></td></tr></table>				
Identification code of person reviewing completed form	<table border="1"><tr><td></td><td></td><td></td></tr></table>				Form entered in computer? <input type="checkbox"/>

INFORMATION FOR QUALITY CONTROL SUBMISSION																	
Date chosen for mailing: <u> </u> / <u> </u> / <u> </u> month day year	Date mailed to Neurocognitive Core: <table border="1"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td colspan="2">month</td><td colspan="2">day</td><td colspan="4">year</td></tr></table>									month		day		year			
month		day		year													

Participant ID

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Nickname

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Outcome Visit

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C. Cognitive Assessments Summary

Introduction script:
"IN THIS FOLLOW-UP ASSESSMENT OF DPPOS, WE WILL REPEAT THE COGNITIVE TESTS THAT YOU PREVIOUSLY UNDERWENT WITH SMALL CHANGES. WE ONLY ASK YOU TO DO YOUR BEST AND PUT FORTH YOUR BEST EFFORT. PLEASE KNOW THAT NO ONE PERFORMS PERFECTLY IN THE TESTS."

If a participant asks about the measures/tests or is concerned about their memory, say:

"THE TESTS USED TO ASSESS MEMORY AND COGNITION IN DPPOS ARE FOR RESEARCH PURPOSES ONLY. THEY ARE NOT MEANT TO BE USED FOR CLINICAL DIAGNOSIS. IN OTHERS WORDS, THIS IS NOT INFORMATION THAT A DOCTOR COULD USE TO TREAT YOU. HOWEVER, IF YOU ARE CONCERNED ABOUT YOUR MEMORY OR MENTAL ABILITIES IN GENERAL, WE WILL PROVIDE YOU WITH NAMES AND CONTACT INFORMATION OF SPECIALISTS THAT CAN MAKE A CLINICAL EVALUATION AND ADDRESS YOUR CONCERNS."

ASSESSMENT A: 3MS
 Complete the 3MS Assessment before completing the SEVLT and DSST tests. Refer to Neurocognitive Functional Manual section 2.1 for instructions and scripts for this assessment. The script to be read to participants is in CAPITALS. Additional instructions are in bold.

1. Place & date of birth **Q17PLDTBT** Score (5)
 Say to the participant, "WHERE WERE YOU BORN?"

Town: _____ State: _____

Say to the participant, "WHEN WERE YOU BORN?"

Year: _____ Month: _____ Day: _____

If the participant gives part of the information, ask them for missing information.

2. Registration: **Q17RGTION** Score (3)
 "I AM GOING TO SAY THREE WORDS FOR YOU TO REMEMBER. REPEAT THEM AFTER I HAVE SAID ALL THREE".

Shirt _____, Brown _____, Honesty _____

If the participant repeats the words after each word is presented, say "TELL ME THREE WORDS AGAIN." If the participant is not sure of the words, say "WHAT THREE WORDS TO YOU THINK I JUST SAID?" If the participant cannot repeat all three words, re-present the words up to three times The first re-presentation of the three words, you can say. "LET ME SAY THE THREE WORDS AGAIN. THEY ARE SHIRT—SOMETHING YOU WEAR, BROWN —A COLOR AND HONESTY — TO BE TRUTHFUL".

No. presentations (max 4): _____

3. Mental reversal (coach fwd. once if needed) **Q17MTLRVAL** Score (7)

First say, "COUNT FROM 1 TO 5". If the subject cannot count, say "SAY, ONE, TWO, THREE, FOUR, FIVE." If the subject can or cannot count, proceed and say, "NOW COUNT BACKWARDS FROM 5 TO 1."

5 to 1: (Can _____ Can't _____ count 1-5)

	1	2	3	4	5
Accurate					2
1 or 2 errors/misses					1
3 or more errors/misses					0

Next say, "SPELL 'WORLD'." If cannot spell correctly, say "IT'S SPELLED W-O-R-L-D." If the participant does not say it, say "Say W-O-R-L-D." (rate of 1.5 sec per letter). Whether or not they spelled it correctly, say "NOW SPELL 'WORLD' BACKWARDS."

DLROW: (Can _____ Can't _____ Spell WORLD)

Participant ID

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Nickname

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4. **First** recall of three words **Q17FTRCAL**

Score (9)

Say to the participant, "WHAT THREE WORDS DID I ASK YOU TO REMEMBER EARLIER?" When a word is not recalled spontaneously provide category cuing, followed by multiple choices if necessary. Do not wait more than 3 sec for spontaneous recall, and do not wait more than 2 sec after category cuing., before providing next level of help. Give the correct answer if the participant does not know after both prompts. If the participant did not remember all three words, say "THE THREE WORDS I ASKED YOU TO REMEMBER ARE SHIRT, BROWN, AND HONESTY."

Spontaneous recall	3
After "Something to wear"	2
After "SHOES, SHIRT, SOCKS"	1
Still does not know	0
Spontaneous recall	3
After "A color"	2
After "BLUE, BLACK, BROWN"	1
Still does not know	0
Spontaneous recall	3
After "A good personal quality"	2
After "HONESTY, CHARITY, MODESTY"	1
Still does not know	0

5. Temporal orientation **Q17TEMPORT**

Score (15)

Say to the participant, "WHAT IS TODAY'S DATE?" Probe for items not reported, "What year is this?" etc.

Year

Accurate	8
Missed by 1 yr.	4
Missed by 2 - 5 yrs.	2
Missed by > 5 yrs.	0

Month

Accurate or within 5 days	2
Missed by 6 days to 1 mo.	1
Missed by > 1 mo.	0

Date (of the month)

Accurate	3
Missed 1-2 days	2
Missed 3-5 days	1
Missed > 5 days	0

Say to the participant, "What is the day of the week?" If no response, say, 'Is it Sunday, Monday, etc.)

Day (of the week)

Accurate	1
Inaccurate	0

Say to the participant, , What season is this?

Season (changes ~ 21st of March, June, September, & December)

Accurate (within 30 days)	1
Inaccurate	0

6. Spatial orientation **Q17STLORT**

Score (5)

For State, County, City/Town- Say to the participant, "WHAT ___ARE IN?" For last item, say, "ARE WE IN A STORE, A HOSPITAL, CLINIC OR A HOME?"

State	0 2
County	0 1
City/Town	0 1
Store/Hospital(Clinic)/Home?	0 1

Participant ID

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Nickname

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Outcome Visit

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7. Naming (2 seconds to name each) Q17NMING

Score (5)

- "WHAT DO YOU CALL THIS PART OF THE FACE?" (point to middle of forehead) Forehead _____
- "AND THIS PART?" (point to your chin) Chin _____
- "AND THIS PART OF THE BODY?" (point to your shoulder) Shoulder _____
- "AND THIS PART?" (point to your elbow) Elbow _____
- "AND THIS PART OF THE HAND?" (point to your knuckle) Knuckle _____

8. Four-legged animals (30 seconds) Q17FRLGAM

Score (10)

Say to the participant, "WHAT ANIMALS HAVE FOUR LEGS? TELL ME AS MANY AS YOU CAN." Start timing. If the participant gives an incorrect response say, "I WANT FOUR-LEGGED ANIMALS." If 10 sec. pass with no response, say "WHAT OTHER ANIMALS HAVE FOUR LEGS?"

1. _____ 2. _____ 3. _____ 4. _____ 5. _____
6. _____ 7. _____ 8. _____ 9. _____ 10. _____

9. Similarities (coach with Orange-Banana) Q17SMLTIES

Score (6)

Say to the participant, "AN APPLE AND A BANANA ARE ALIKE IN THAT THEY ARE BOTH FRUIT." Wait 2 sec and then proceed with questions below:

Arm-Leg (Teach if score <2)

"IN WHAT WAY ARE AN ARM AND A LEG ALIKE", or "AN ARM AND A LEG ARE BOTH.....?"

- Body parts; limbs; extremities 2
- Other correct answer 1
- Incorrect; tells difference; doesn't know 0

Laughing-Crying

"IN WHAT WAY ARE CRYING AND LAUGHING ALIKE", or "CRYING AND LAUGHING ARE BOTH.....?"

- Feelings; emotions 2
- Other correct answer 1
- Incorrect; tells difference; doesn't know 0

Eating-Sleeping

"IN WHAT WAY ARE AN EATING AND A SLEEPING ALIKE", or "SLEEPING AND EATING ARE BOTH.....?"

- Necessary bodily functions; essential for life 2
- Other correct answer 1
- Incorrect; tells difference; doesn't know 0

10. Repetition Q17RPTON

Score (5)

Tell the participant: "REPEAT EXACTLY WHAT I SAY---'HE WOULD LIKE TO GO HOME.'"

- "HE WOULD LIKE TO GO HOME." 2
- 1 or 2 missed/wrong words 1
- >= 3 missed/wrong words 0

NOW SAY "NO IFS, ANDS, OR BUTS."

"NO IFS _____ ANDS _____ OR BUTS _____"

- Perfect repetition 2
- 1 or 2 missed/wrong words 1

For each of the three parts (no ifs; ands; or buts), 1 point for perfect repetition. Give no credit if the "s" is missed.

11. Read and Obey. Prompt participant, "Close Your Eyes"

Q17RDOEY

Score (3)

The command is printed in a sheet of paper in capital letters. Fold the sheet of paper one third down to show the command and (Close Your Eyes) and say : 'PLEASE DO THIS'. If no response, point to the words and state, 'DO WHAT THIS SAYS.' When participant closes eyes say, 'THANKS. YOU CAN OPEN YOUR EYES NOW.' If no response to prompt after 5 seconds, move on.

Participant ID

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Nickname

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Outcome Visit

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Obeys without prompting	3
Obeys after prompting	2
Reads only	1
Neither reads nor obeys	0

12. Writing (1 minute) **Q17WRTING** Score (5)

Fold the sheet of paper once more to show the blank part of the sheet and say, "I WOULD LIKE TO HAVE A SAMPLE OF YOUR HANDWRITING. WRITE 'HE WOULD LIKE TO GO HOME'." If needed, dictate the sentence word for word as they write.

(He) WOULD LIKE TO GO HOME

Score 1 point for each correct word. 0 if spelling errors or incorrect mixed capitalizations. All capital letters OK.

13. Copying 2 pentagons (1 minute) **Q17CPYPGON** Score (10)

Show the lower one-third of the sheet that contains the pentagons and say, "COPY THIS DRAWING."

Each pentagon:

5 approx. equal sides	4	4
5 but unequal (>2:1) sides	3	3
Other enclosed figure	2	2
2 or more lines	1	1
Less than 2 lines	0	0

Intersection:

4 corners	2
Not 4-cornered enclosure	1
No intersection	0

14. Three-stage command (finish commands first) **Q17TRSTCMD** Score (3)

Use a blank piece of paper and say, "TAKE THIS PAPER WITH YOUR L (R) HAND (NON-dominant hand), FOLD IT IN HALF, AND HAND IT BACK TO ME." If the subject interrupts do NOT stop to respond, continue with command and say, "DO WHAT YOU THINK I ASKED YOU TO DO." If participant is trying to fold paper with one and is having difficulty, you can say, "YOU CAN USE BOTH HANDS NOW." If participant requests to repeat part of the command or all, say "SORRY, I CANNOT REPEAT. JUST DO WHAT YOU THINK I ASKED YOU TO DO."

_____ TAKE THIS PAPER WITH YOUR L/R HAND

_____ FOLD IT IN HALF, AND

_____ HAND IT BACK TO ME

15. **Second** recall of three words **Q17RECAL** Score (9)

Say to the participant, "WHAT THREE WORDS DID I ASK YOU TO REMEMBER EARLIER?" When a word is not recalled spontaneously within 3 seconds, follow prompts on score sheet and 2 seconds after category cuing as well.

Spontaneous recall	3
After "Something to wear"	2
After "SHOES, SHIRT, SOCKS"	1
Still does not know	0
Spontaneous recall	3
After "A color"	2
After "BLUE, BLACK, BROWN"	1
Still does not know	0
Spontaneous recall	3
After "A good personal quality"	2
After "HONESTY, CHARITY, MODESTY"	1
Still does not know	0

Participant ID

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Nickname

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Outcome Visit

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ASSESSMENT B: SPANISH AND ENGLISH VERBAL LEARNING TEST (SEVLT)

Record the number of correct words, repetitions and intrusions recalled for trials 1-4 on assessment B (page 6). Refer to Neurocognitive Functional Manual section 2.2 for instructions and scripts for this assessment. The script to be read to participants is in CAPITALS. Additional instructions are in bold.

Script for Assessment B- Spanish English Verbal Learning Test (SEVLT)- Timed: ≤ 60 seconds

Trial 1

“FIRST, I AM GOING TO READ A LIST OF WORDS TO YOU. I WANT YOU TO LISTEN CAREFULLY AND TRY TO REMEMBER THE WORDS AS I READ THEM. WHEN I STOP, I WOULD LIKE YOU TO RECALL AS MANY OF THE WORDS AS YOU CAN. YOU WILL NOT BE ABLE TO REMEMBER ALL OF THE WORDS SO JUST DO THE BEST YOU CAN. YOU DO NOT HAVE TO RECALL THE WORDS IN THE SAME ORDER THAT I READ THEM. ARE YOU READY?”

“NOW TELL ME ALL OF THE WORDS YOU CAN REMEMBER”

“ANYTHING ELSE?”

Trial 2

“I AM GOING TO READ THE SAME LIST OF WORDS TO YOU AGAIN. I WANT YOU TO TRY TO REMEMBER AS MANY OF THE WORDS AS YOU CAN, INCLUDING THOSE YOU HAVE RECALLED BEFORE. WHEN I STOP, I WANT YOU TO RECALL AS MANY OF THE WORDS AS YOU CAN REMEMBER.”

“NOW TELL ME ALL OF THE WORDS YOU CAN REMEMBER”

“ANYTHING ELSE?”

Trial 3

“I WILL READ THE SAME LIST AGAIN. LISTEN CAREFULLY AND WHEN I FINISH TELL ME AS MANY OF THE WORDS AS YOU CAN REMEMBER.”

“NOW TELL ME ALL OF THE WORDS YOU CAN REMEMBER”

“ANYTHING ELSE?”

After trial 3, read the distracter list.

“I AM GOING TO READ A DIFFERENT LIST OF WORDS. THIS TIME, I WANT YOU TO REPEAT EACH WORD OUT LOUD AFTER I READ IT.”

Trial 4

“NOW, I WANT YOU TO TELL ME AS MANY OF THE WORDS FROM THE FIRST LIST THAT I READ AS YOU CAN REMEMBER. THAT IS THE LIST THAT I READ TO YOU THREE TIMES.”

“ANYTHING ELSE?”

If they do not remember any words, prompt, “JUST GIVE IT A TRY” or “TAKE A MOMENT TO SEE IF ANY OF THE WORDS COME TO MIND”.

16. Was the ‘SEVLT’ test completed?

Q17SEVLT

Yes No

If NO,

a. Why was it discontinued?

Q17NOSEVLT

MARK WITH AN ‘X’ ONLY ONE

Refusal

Task difficulty

Impairment (Visual, Hearing, Limb or Motor)

If YES,

Words recalled from assessment B:

		Correct		Repetitions		Intrusions
b. Trial 1.....	Q17VLTC1	<input type="text"/>	Q17VLTR1	<input type="text"/>	Q17VLT11	<input type="text"/>
c. Trial 2.....	Q17VLTC2	<input type="text"/>	Q17VLTR2	<input type="text"/>	Q17VLT12	<input type="text"/>
d. Trial 3.....	Q17VLTC3	<input type="text"/>	Q17VLTR3	<input type="text"/>	Q17VLT13	<input type="text"/>
e. Trial 4.....	Q17VLTC4	<input type="text"/>	Q17VLTR4	<input type="text"/>	Q17VLT14	<input type="text"/>
f. Total Correct, Repetitions & Intrusions.....	Q17VLTOTC	<input type="text"/>	Q17VLTOTR	<input type="text"/>	Q17VLTOTI	<input type="text"/>

Participant ID

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Nickname

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Outcome Visit

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Assessment B: Spanish English Verbal Learning Test (SEVLT)

**Short Delay Recall
immediately after
reading distracter
list to participant**

Word List (Trials 1-3)

- Repollo / Cabbage
- Cucharón / Ladle
- Café / Coffee
- Remolachas / Beets
- Diccionario/ Dictionary
- Cacao / Cocoa
- Frijoles / Beans
- Coladera / Strainer
- Durazno / Peach
- Maíz / Corn
- Periódico /Newspaper
- Jugo / Juice
- Espárrago /Asparagus
- Cazuela / Pan
- Té / Tea

**Distracter List (Read
after Trial 3 recall)**

- Huevos/Eggs
- Olla/Pot
- Leche/Milk
- Cerezas/Cherries
- Tazón/Bowl
- Queso/Cheese
- Lechuga/Lettuce
- Cuchara/Spoon
- Agua/Water
- Pescado/Fish
- Pluma/Pen
- Naranjas/Oranges
- Galletas/Cookies
- Libreta/Notebook
- Cebollas/Onions

	Trial 1		Trial 2		Trial 3		Trial 4	
		Resp Type		Resp Type		Resp Type		Resp Type
1			1		1		1	
2			2		2		2	
3			3		3		3	
4			4		4		4	
5			5		5		5	
6			6		6		6	
7			7		7		7	
8			8		8		8	
9			9		9		9	
10			10		10		10	
11			11		11		11	
12			12		12		12	
13			13		13		13	
14			14		14		14	
15			15		15		15	
16			16		16		16	
17			17		17		17	
18			18		18		18	
19			19		19		19	
20			20		20		20	

Total Correct C

Total Repetition R

Total Intrusion I

Total Correct C

Total Repetition R

Total Intrusion I

Total Correct C

Total Repetition R

Total Intrusion I

Total Correct C

Total Repetition R

Total Intrusion I

Participant ID

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Nickname

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Outcome Visit

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ASSESSMENT C: DIGIT SYMBOL SUBSTITUTION TEST (DSST)

Apply the DSST scoring template to the responses on assessment C (page 7) and enter the number of correct symbols below. Refer to Neurocognitive Functional Manual section 2.3 for instructions and scripts for this assessment. The script to be read to participants is in CAPITALS. Additional instructions are in bold.

Script for Assessment C- Digit Symbol_Timed: 90 seconds

"THIS LAST TASK IS THE DIGIT-SYMBOL TASK. LOOK AT THESE BOXES. NOTICE THAT EACH BOX HAS A NUMBER IN THE UPPER PART AND A SPECIAL MARK IN THE LOWER PART. EACH NUMBER HAS ITS OWN MARK."

"NOW, LOOK DOWN HERE TO WHERE THE BOXES HAVE NUMBERS IN THE TOP PART, BUT THE SQUARES AT THE BOTTOM ARE EMPTY." Point to the sample items.

"I WANT YOU TO PUT IN EACH OF THE EMPTY SQUARES THE MARK THAT SHOULD GO THERE, LIKE THIS."

"HERE IS A 2; THE 2 HAS THIS MARK. SO I PUT IT IN THIS SQUARE, LIKE THIS."

"HERE IS A 1; THE 1 HAS THIS MARK."

"SO I PUT IT IN THIS SQUARE."

"THIS NUMBER IS 3; THE 3 HAS THIS MARK."

"SO I PUT IT IN THIS SQUARE."

"NOW, YOU FILL IN THE SQUARES UP TO THIS HEAVY LINE."

"YES, NOW YOU KNOW HOW TO DO THEM."

To begin the formal test say: **"WHEN I TELL YOU TO START, YOU DO THE REST OF THEM."**

Point to the first item. **"BEGIN HERE AND FILL IN AS MANY SQUARES AS YOU CAN, ONE AFTER THE OTHER, WITHOUT SKIPPING ANY. KEEP WORKING UNTIL I TELL YOU TO STOP. WORK AS QUICKLY AS YOU CAN WITHOUT MAKING MISTAKES. WHEN YOU FINISH THIS LINE, GO ON TO THIS ONE."**

Point to the first item in Row 2. **"READY? GO AHEAD."** Begin timing.

At the end of 90 seconds, say: **"STOP. THAT'S GOOD, THANK YOU. THAT COMPLETES THIS SET OF TASKS."**

Prompts:

"Do them in order. Don't skip any."

"Do this one next."

"Please go on to the next line."

"Please continue until I tell you to stop."

17. Was the 'Digit Symbol Substitution Test' completed? **Q17DSST** Yes 1 No 2

If NO,

a. Why was it discontinued? **Q17NODSST**

MARK WITH AN 'X' ONLY ONE

Refusal 1

Task difficulty 2

Impairment (Visual, Hearing, Limb or Motor) 3

If YES, **Q17DSSTOTC**

b. Total correct symbols on assessment C.....

