

## Means and standard deviations for the UDS3 neuropsychological battery in cognitively normal participants AS OF SEPTEMBER 2020

**Table 1. Sample distribution of clinically cognitive normal UDS participants with UDS3 battery  
AS OF SEPTEMBER 2020**

Age (yrs)	Education (yrs)	Male	Female	Total
	≤12	37	81	118
	13-15	57	133	190
	16	140	222	362
	17+	143	247	390
60-69	≤12	81	208	289
	13-15	123	371	494
	16	245	481	726
	17+	421	742	1163
70-79	≤12	111	320	431
	13-15	143	393	536
	16	276	522	798
	17+	637	896	1533
80-89	≤12	55	164	219
	13-15	58	200	258
	16	124	188	312
	17+	301	320	621
≥90	≤12	10	35	45
	13-15	10	25	35
	16	21	25	46
	17+	32	46	78
<b>Grand total</b>		<b>3025</b>	<b>5619</b>	<b>8644</b>

**CRITERIA** — Subjects have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0. NOTE: includes only the first available visit meeting criteria in items 1–3.

*Note: 3% of participants took these tests in a language other than English*

**Table 2. Summary statistics for clinically cognitive normal UDS participants with UDS3 battery AS OF SEPTEMBER 2020**

Test	N	Mean (SD)	Q25	Median	Q75	Range
Montreal Cognitive Assessment (MoCA) — total score	8597	26.3 (2.8)	25	27	28	10-30
Craft Story 21 Recall Immediate — verbatim	8571	21.8 (6.6)	17	22	26	0-41
Craft Story 21 Recall Immediate — paraphrase	8571	16.1 (3.9)	14	17	19	0-25
Craft Story 21 Recall Delayed — verbatim	8563	19 (6.6)	14	19	24	0-40
Craft Story 21 Recall Delayed — paraphrase	8563	15 (4.2)	12	15	18	0-25
Craft Story 21 Recall Delayed — delay time (minutes)	8544	17.8 (3.9)	15	18	20	0-72
Benson Complex Figure Copy	8583	15.5 (1.4)	15	16	17	5-17
Benson Complex Figure Recall	8563	11.4 (3)	10	12	14	0-17
Number Span Test Forward — total correct trials	8614	8.2 (2.4)	6	8	10	0-14
Number Span Test Forward — longest span	8614	6.6 (1.3)	6	7	8	0-9
Number Span Test Backward — total correct trials	8612	7.1 (2.2)	6	7	8	0-14
Number Span Test Backward — longest span	8612	5 (1.3)	4	5	6	0-8
Multilingual Naming Test (MINT) — total score	8553	29.8 (2.4)	29	30	32	4-32
Verbal Fluency Phonemic Test — correct F-words	8604	14.7 (4.6)	12	15	18	1-35
Verbal Fluency Phonemic Test — correct L-words	8578	13.9 (4.4)	11	14	17	0-35
Verbal Fluency Phonemic Test — total correct F & L	8574	28.5 (8.4)	23	28	34	0-64
Category Fluency — Animals	8623	21.2 (5.6)	17	21	25	3-49
Category Fluency — Vegetables	8613	14.8 (4.3)	12	15	17	0-35
Trail Making Test Part A	8581	31.7 (14.2)	23	29	37	9-150
Trail Making Test Part B	8500	83.7 (46.9)	55	71	96	13-300

**CRITERIA** — Subjects have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0. NOTE: includes only the first available visit meeting criteria in items 1–3.

Note: 3% of participants took these tests in a language other than English

**Table 3. Montreal Cognitive Assessment (MoCA) total score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery** AS OF SEPTEMBER 2020

Age (yrs)	Education (yrs)	MALE						FEMALE					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	26.9	2.4	24.5	23.2	22.0	81	27.4	3.0	24.4	22.9	21.4
	13-15	57	26.7	2.6	24.2	22.9	21.6	133	26.4	2.9	23.5	22.1	20.6
	16	139	27.2	1.9	25.3	24.3	23.3	219	27.5	1.9	25.5	24.6	23.6
	17+	143	28.0	1.8	26.2	25.3	24.4	245	27.8	2.0	25.8	24.8	23.8
60-69	≤12	80	25.4	3.3	22.1	20.5	18.8	207	25.2	3.6	21.5	19.7	17.9
	13-15	123	25.7	2.5	23.2	22.0	20.7	367	25.9	2.7	23.2	21.8	20.5
	16	245	26.4	2.2	24.2	23.1	22.0	480	27.0	2.2	24.8	23.6	22.5
	17+	419	27.1	2.0	25.1	24.1	23.1	741	27.5	1.9	25.6	24.6	23.6
70-79	≤12	110	24.8	3.2	21.6	20.0	18.4	318	24.8	3.8	21.1	19.2	17.3
	13-15	143	24.6	2.8	21.8	20.5	19.1	393	25.5	2.8	22.7	21.3	19.9
	16	275	26.0	2.4	23.6	22.4	21.2	521	26.4	2.6	23.9	22.6	21.3
	17+	635	26.5	2.2	24.3	23.2	22.1	895	27.0	2.2	24.8	23.7	22.6
80-89	≤12	53	23.1	3.7	19.3	17.4	15.6	157	23.3	4.7	18.6	16.2	13.9
	13-15	58	24.3	3.3	21.1	19.4	17.8	199	24.7	3.3	21.5	19.8	18.2
	16	124	25.3	2.5	22.7	21.5	20.2	187	25.8	2.5	23.2	22.0	20.7
	17+	299	25.9	2.2	23.7	22.6	21.4	318	25.9	2.6	23.3	22.1	20.8
≥90	≤12	10	23.8	3.2	20.6	19.1	17.5	35	21.3	4.7	16.7	14.4	12.0
	13-15	9	23.2	2.2	21.0	19.9	18.8	23	24.1	3.6	20.5	18.7	17.0
	16	20	23.5	2.5	21.0	19.7	18.5	24	25.1	2.9	22.1	20.7	19.2
	17+	32	25.1	2.4	22.8	21.6	20.4	44	24.5	3.1	21.4	19.9	18.3

**CRITERIA** — Subjects have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0. NOTE: includes only the first available visit meeting criteria in items 1–3.

Note: 3% of participants took these tests in a language other than English

**Table 4. Craft Story 21 Recall Immediate verbatim score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery AS OF SEPTEMBER 2020**

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	20.9	7.5	13.4	9.7	6.0	78	20.1	6.9	13.2	9.7	6.3
	13-15	57	21.0	5.8	15.2	12.3	9.4	131	21.1	6.3	14.7	11.6	8.4
	16	139	22.4	6.8	15.6	12.1	8.7	222	23.3	6.4	16.9	13.7	10.5
	17+	141	23.9	6.5	17.4	14.1	10.8	246	23.8	6.3	17.5	14.3	11.2
60-69	≤12	81	19.6	7.3	12.3	8.6	5.0	205	19.5	7.0	12.5	9.0	5.6
	13-15	122	21.3	6.5	14.8	11.5	8.3	368	21.7	6.0	15.6	12.6	9.6
	16	245	20.9	5.9	14.9	12.0	9.0	477	23.1	6.1	17.0	13.9	10.9
	17+	418	23.1	6.1	17.0	14.0	10.9	737	24.5	6.1	18.4	15.4	12.3
70-79	≤12	110	18.4	6.9	11.6	8.1	4.7	318	19.2	6.9	12.3	8.9	5.4
	13-15	143	20.3	6.5	13.8	10.5	7.3	389	21.1	6.5	14.6	11.3	8.1
	16	274	21.6	6.0	15.6	12.6	9.5	517	22.4	6.1	16.3	13.3	10.2
	17+	633	21.8	6.4	15.4	12.3	9.1	891	23.4	6.1	17.3	14.3	11.2
80-89	≤12	54	17.9	6.1	11.8	8.8	5.7	163	17.2	7.1	10.1	6.5	2.9
	13-15	58	18.1	6.9	11.2	7.7	4.2	198	20.2	6.5	13.7	10.5	7.3
	16	122	18.8	6.2	12.6	9.5	6.5	187	20.6	6.7	13.9	10.6	7.3
	17+	297	20.4	6.2	14.3	11.2	8.1	317	21.6	6.1	15.5	12.5	9.4
≥90	≤12	10	18.0	5.8	12.2	9.2	6.3	35	15.9	6.3	9.6	6.4	3.3
	13-15	10	17.1	5.0	12.1	9.6	7.1	23	16.2	6.2	10.0	6.8	3.7
	16	19	19.8	5.0	14.8	12.3	9.8	24	18.4	7.7	10.7	6.8	3.0
	17+	32	17.8	6.4	11.3	8.1	4.9	44	17.9	5.7	12.2	9.3	6.4

**CRITERIA** — Subjects have: 1.) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0.  
**NOTE:** includes only the first available visit meeting criteria in items 1-3.

Note: 3% of participants took these tests in a language other than English

**Table 5. Craft Story 21 Recall Immediate paraphrase score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery** AS OF SEPTEMBER 2020

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	15.1	5.1	10.1	7.6	5.0	78	15.0	4.0	11.0	9.0	7.1
	13-15	57	15.6	3.6	12.0	10.2	8.4	131	15.8	3.7	12.0	10.2	8.3
	16	139	16.7	4.1	12.7	10.7	8.6	222	17.1	3.9	13.1	11.2	9.2
	17+	141	17.3	3.6	13.6	11.8	10.0	246	17.4	3.6	13.8	12.0	10.2
60-69	≤12	81	15.1	4.7	10.5	8.1	5.8	205	14.5	4.4	10.1	7.8	5.6
	13-15	122	16.1	3.7	12.4	10.6	8.8	368	16.1	3.6	12.5	10.8	9.0
	16	245	15.9	3.5	12.4	10.7	8.9	477	17.0	3.6	13.5	11.7	9.9
	17+	418	17.1	3.5	13.6	11.8	10.1	737	17.9	3.3	14.6	12.9	11.3
70-79	≤12	110	13.7	4.5	9.2	7.0	4.7	318	14.3	4.4	10.0	7.8	5.6
	13-15	143	15.2	3.8	11.4	9.5	7.6	389	15.6	3.9	11.7	9.8	7.9
	16	274	16.0	3.5	12.6	10.8	9.1	517	16.5	3.6	12.9	11.1	9.3
	17+	633	16.2	3.7	12.5	10.6	8.8	891	17.1	3.5	13.6	11.8	10.0
80-89	≤12	54	13.5	3.8	9.7	7.8	5.9	163	13.1	4.7	8.4	6.0	3.7
	13-15	58	13.5	4.2	9.3	7.3	5.2	198	14.9	4.1	10.8	8.8	6.8
	16	122	14.6	3.8	10.8	8.9	7.0	187	15.5	4.2	11.3	9.2	7.0
	17+	297	15.3	3.7	11.6	9.8	7.9	317	15.9	3.9	12.0	10.1	8.2
≥90	≤12	10	13.2	3.3	9.9	8.2	6.5	35	12.2	4.5	7.7	5.4	3.2
	13-15	10	13.6	4.2	9.4	7.3	5.3	23	12.5	3.9	8.5	6.6	4.6
	16	19	14.1	3.0	11.1	9.6	8.1	24	13.8	4.7	9.1	6.7	4.4
	17+	32	14.1	3.8	10.3	8.4	6.5	44	13.5	3.7	9.8	8.0	6.2

**CRITERIA** — Subjects must have: 1.) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0. NOTE: includes only the first available visit meeting criteria in items 1-3.

Note: 3% of participants took these tests in a language other than English

**Table 6. Craft Story 21 Recall Delayed verbatim score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery AS OF SEPTEMBER 2020**

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	19.0	7.4	11.6	7.9	4.3	78	17.1	7.2	10.0	6.4	2.8
	13-15	57	18.2	6.2	12.0	8.9	5.8	131	19.2	6.5	12.7	9.5	6.2
	16	139	19.9	6.5	13.5	10.2	7.0	222	20.8	6.5	14.3	11.0	7.7
	17+	140	22.0	6.6	15.4	12.1	8.8	246	21.8	6.5	15.3	12.1	8.8
60-69	≤12	81	16.9	7.1	9.8	6.3	2.7	205	17.2	6.9	10.3	6.8	3.4
	13-15	122	18.8	6.5	12.3	9.1	5.8	368	18.7	6.2	12.6	9.5	6.4
	16	245	18.4	6.0	12.5	9.5	6.5	477	20.2	6.5	13.7	10.5	7.3
	17+	418	20.4	6.0	14.4	11.4	8.4	735	21.6	6.0	15.6	12.6	9.6
70-79	≤12	110	16.3	6.7	9.6	6.3	2.9	318	16.4	6.9	9.4	6.0	2.5
	13-15	143	17.5	6.6	10.9	7.6	4.2	389	18.3	6.5	11.8	8.6	5.3
	16	274	19.0	6.1	12.8	9.8	6.7	517	19.4	6.4	13.0	9.8	6.6
	17+	633	18.9	6.4	12.5	9.3	6.1	890	20.7	6.3	14.4	11.3	8.1
80-89	≤12	54	14.9	6.0	9.0	6.0	3.0	163	14.0	6.9	7.1	3.6	0.2
	13-15	58	14.9	6.6	8.3	5.0	1.7	197	17.1	7.1	10.0	6.4	2.8
	16	122	16.0	5.8	10.2	7.3	4.4	187	17.6	7.1	10.4	6.9	3.3
	17+	297	17.5	6.0	11.5	8.5	5.5	316	18.5	6.2	12.3	9.1	6.0
≥90	≤12	10	15.7	5.5	10.2	7.4	4.7	35	12.7	5.9	6.8	3.9	0.9
	13-15	10	14.6	6.2	8.4	5.3	2.3	23	13.9	5.7	8.2	5.3	2.4
	16	18	16.7	5.6	11.0	8.2	5.4	24	15.8	6.5	9.3	6.1	2.8
	17+	32	15.9	5.5	10.4	7.6	4.9	43	15.9	5.5	10.4	7.6	4.9

**CRITERIA** — Subjects must have: 1.) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0. NOTE: includes only the first available visit meeting criteria in items 1-3.

Note: 3% of participants took these tests in a language other than English

**Table 7. Craft Story 21 Recall Delayed paraphrase score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery** AS OF SEPTEMBER 2020

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	14.4	4.8	9.5	7.1	4.7	78	14.1	4.2	9.9	7.8	5.7
	13-15	57	14.5	4.2	10.3	8.3	6.2	131	15.1	4.0	11.0	9.0	7.0
	16	139	15.8	4.1	11.7	9.7	7.6	222	16.3	4.1	12.2	10.2	8.1
	17+	140	16.6	3.7	12.9	11.0	9.2	246	17.0	3.7	13.3	11.4	9.6
60-69	≤12	81	14.0	4.8	9.2	6.8	4.4	205	13.5	4.7	8.8	6.5	4.1
	13-15	122	15.0	3.8	11.2	9.3	7.4	368	14.8	3.9	10.9	9.0	7.0
	16	245	15.0	3.7	11.3	9.5	7.6	477	16.0	3.9	12.1	10.2	8.3
	17+	418	16.2	3.7	12.5	10.7	8.9	735	16.8	3.6	13.2	11.4	9.6
70-79	≤12	110	13.0	4.3	8.7	6.6	4.4	318	13.0	4.5	8.5	6.2	3.9
	13-15	143	13.9	4.2	9.7	7.6	5.6	389	14.5	4.1	10.4	8.3	6.3
	16	274	14.9	3.7	11.2	9.3	7.4	517	15.3	4.0	11.3	9.3	7.3
	17+	633	15.1	4.0	11.1	9.1	7.1	890	16.1	3.7	12.4	10.5	8.6
80-89	≤12	54	11.9	3.9	8.0	6.0	4.0	163	11.4	5.1	6.3	3.7	1.1
	13-15	58	12.2	4.5	7.7	5.5	3.2	197	13.4	4.5	8.8	6.6	4.3
	16	122	13.2	3.9	9.4	7.4	5.5	187	14.3	4.7	9.5	7.2	4.8
	17+	297	14.1	3.9	10.2	8.2	6.3	316	14.7	4.1	10.6	8.5	6.5
≥90	≤12	10	12.4	3.4	9.0	7.2	5.5	35	10.4	4.2	6.3	4.2	2.1
	13-15	10	12.5	3.2	9.3	7.7	6.1	23	11.3	4.2	7.1	5.0	2.9
	16	18	12.8	3.6	9.3	7.5	5.7	24	12.3	4.5	7.8	5.6	3.4
	17+	32	13.1	3.4	9.7	8.0	6.3	43	12.9	4.1	8.8	6.8	4.8

**CRITERIA** — Subjects must have: 1.) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0. NOTE: includes only the first available visit meeting criteria in items 1-3.

Note: 3% of participants took these tests in a language other than English

**Table 8. Benson Complex Figure Copy score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery AS OF SEPTEMBER 2020**

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	35	15.2	1.2	14.0	13.4	12.7	81	15.4	1.2	14.2	13.5	12.9
	13-15	57	15.5	1.4	14.1	13.4	12.7	133	15.5	1.1	14.4	13.9	13.3
	16	138	15.9	1.1	14.9	14.3	13.8	218	15.8	1.4	14.4	13.7	13.0
	17+	143	16.0	0.9	15.0	14.6	14.1	246	15.8	1.1	14.6	14.0	13.5
60-69	≤12	78	15.3	1.5	13.8	13.1	12.3	206	15.1	1.6	13.5	12.7	11.9
	13-15	123	15.5	1.4	14.1	13.4	12.7	370	15.4	1.4	14.0	13.3	12.6
	16	245	15.7	1.1	14.7	14.1	13.6	479	15.6	1.3	14.2	13.6	12.9
	17+	420	15.7	1.2	14.5	13.9	13.3	737	15.8	1.1	14.7	14.2	13.6
70-79	≤12	111	15.2	1.4	13.9	13.2	12.5	320	15.1	1.7	13.4	12.5	11.6
	13-15	143	15.3	1.3	14.0	13.3	12.7	389	15.3	1.4	13.9	13.2	12.5
	16	274	15.4	1.4	13.9	13.2	12.5	518	15.6	1.3	14.2	13.5	12.9
	17+	636	15.5	1.4	14.1	13.4	12.7	896	15.8	1.2	14.6	14.0	13.4
80-89	≤12	52	14.6	1.8	12.8	11.9	11.0	160	14.7	1.8	12.9	12.0	11.1
	13-15	56	14.9	1.6	13.3	12.5	11.7	195	15.2	1.7	13.4	12.6	11.7
	16	122	15.1	1.5	13.6	12.8	12.1	187	15.4	1.5	14.0	13.2	12.5
	17+	299	15.4	1.3	14.1	13.4	12.7	319	15.6	1.4	14.2	13.5	12.8
≥90	≤12	10	14.0	2.4	11.6	10.5	9.3	35	15.4	1.5	13.9	13.2	12.4
	13-15	10	15.0	2.0	13.0	12.0	11.0	23	14.4	2.6	11.8	10.5	9.2
	16	20	15.3	1.3	14.0	13.3	12.7	23	15.4	1.4	14.0	13.3	12.6
	17+	32	15.9	1.4	14.5	13.9	13.2	44	15.4	1.3	14.1	13.4	12.8

**CRITERIA** — Subjects must have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0. **NOTE:** includes only the first available visit meeting criteria in items 1-3.

*Note: 3% of participants took these tests in a language other than English*



**Table 9. Benson Complex Figure Recall score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery AS OF SEPTEMBER 2020**

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	35	12.3	2.7	9.6	8.3	6.9	81	12.5	2.6	9.9	8.6	7.3
	13-15	57	12.9	2.9	10.0	8.6	7.1	133	12.2	2.4	9.8	8.6	7.3
	16	137	13.3	2.1	11.2	10.1	9.0	218	12.5	2.5	9.9	8.7	7.4
	17+	143	13.3	2.4	10.9	9.7	8.4	246	12.9	2.3	10.6	9.4	8.2
60-69	≤12	77	11.9	2.7	9.2	7.8	6.5	205	11.0	3.0	8.0	6.5	5.1
	13-15	123	11.9	3.0	8.9	7.4	5.9	369	11.7	2.7	8.9	7.6	6.2
	16	244	12.0	2.5	9.5	8.3	7.0	478	11.6	2.8	8.8	7.4	6.1
	17+	419	12.4	2.7	9.7	8.3	7.0	736	12.0	2.6	9.4	8.1	6.7
70-79	≤12	111	11.0	2.9	8.1	6.7	5.3	319	10.2	3.2	7.0	5.4	3.9
	13-15	143	11.0	3.0	8.1	6.6	5.1	388	10.9	3.0	8.0	6.5	5.0
	16	273	11.3	3.2	8.1	6.5	5.0	517	11.2	2.8	8.4	7.0	5.5
	17+	635	11.5	2.9	8.5	7.1	5.6	895	11.3	2.8	8.5	7.1	5.8
80-89	≤12	52	9.3	3.8	5.5	3.6	1.7	159	8.6	3.6	5.1	3.3	1.5
	13-15	56	10.5	3.1	7.4	5.9	4.4	195	9.8	3.2	6.6	5.0	3.4
	16	121	10.4	3.0	7.5	6.0	4.5	186	10.1	3.0	7.1	5.7	4.2
	17+	299	11.1	2.8	8.3	6.8	5.4	319	10.0	3.2	6.9	5.3	3.7
≥90	≤12	10	10.6	3.9	6.7	4.7	2.8	35	8.0	3.7	4.4	2.6	0.7
	13-15	10	9.4	3.8	5.6	3.6	1.7	23	8.0	3.7	4.3	2.5	0.6
	16	19	9.5	3.4	6.1	4.3	2.6	22	10.3	2.6	7.7	6.3	5.0
	17+	32	10.7	3.4	7.3	5.6	3.9	43	9.6	3.1	6.4	4.9	3.3

**CRITERIA** — Subjects must have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0. NOTE: includes only the first available visit meeting criteria in criteria 1-3.

Note: 3% of participants took these tests in a language other than English

**Table 10. Number Span Test Forward (correct trials) score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery AS OF SEPTEMBER 2020**

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	8.5	2.5	6.0	4.8	3.5	81	7.8	2.3	5.5	4.4	3.2
	13-15	57	8.3	2.2	6.2	5.1	4.0	133	8.4	2.4	6.0	4.8	3.5
	16	140	8.8	2.4	6.4	5.1	3.9	220	8.7	2.4	6.3	5.1	4.0
	17+	143	9.5	2.5	7.0	5.8	4.6	245	9.1	2.3	6.8	5.7	4.6
60-69	≤12	81	7.8	2.7	5.1	3.7	2.4	207	7.2	2.3	4.9	3.8	2.7
	13-15	123	8.0	2.4	5.6	4.4	3.2	370	7.8	2.3	5.5	4.4	3.3
	16	245	8.5	2.1	6.3	5.3	4.2	479	8.3	2.3	5.9	4.8	3.6
	17+	420	9.1	2.4	6.7	5.4	4.2	740	8.4	2.3	6.1	5.0	3.8
70-79	≤12	111	7.6	2.4	5.3	4.1	2.9	320	7.0	2.3	4.6	3.5	2.3
	13-15	143	7.9	2.4	5.5	4.3	3.1	392	7.8	2.3	5.5	4.4	3.2
	16	275	8.6	2.3	6.3	5.1	3.9	519	8.2	2.2	6.0	4.9	3.8
	17+	637	8.7	2.3	6.5	5.3	4.2	896	8.4	2.3	6.1	5.0	3.8
80-89	≤12	54	6.4	2.4	4.0	2.8	1.6	164	6.8	2.1	4.7	3.6	2.5
	13-15	58	7.5	2.3	5.2	4.1	2.9	197	7.9	2.1	5.8	4.7	3.7
	16	122	8.1	2.2	6.0	4.9	3.8	188	7.9	2.1	5.8	4.7	3.7
	17+	299	8.4	2.4	6.0	4.8	3.6	319	8.1	2.2	5.9	4.8	3.7
≥90	≤12	10	5.9	2.0	3.9	2.9	2.0	35	6.0	1.5	4.5	3.8	3.0
	13-15	10	8.6	2.4	6.2	5.1	3.9	24	7.5	1.8	5.7	4.8	3.9
	16	20	7.1	1.7	5.3	4.5	3.6	24	8.2	2.7	5.4	4.1	2.7
	17+	32	8.1	2.5	5.6	4.4	3.2	45	8.2	2.3	5.9	4.8	3.6

**CRITERIA** — Subjects must have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0.

**NOTE:** includes only the first available visit meeting criteria in items 1-3.

*Note: 3% of participants took these tests in a language other than English*

**Table 11. Number Span Test Forward (longest span) score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery** AS OF SEPTEMBER 2020

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	6.6	1.3	5.3	4.6	4.0	81	6.5	1.3	5.1	4.5	3.8
	13-15	57	6.7	1.3	5.4	4.8	4.2	133	6.7	1.4	5.3	4.6	4.0
	16	140	6.9	1.3	5.7	5.0	4.4	220	6.9	1.3	5.6	5.0	4.3
	17+	143	7.3	1.3	6.0	5.3	4.7	245	7.1	1.3	5.8	5.2	4.6
60-69	≤12	81	6.4	1.5	4.8	4.1	3.3	207	6.1	1.3	4.8	4.1	3.5
	13-15	123	6.6	1.4	5.2	4.5	3.9	370	6.4	1.3	5.1	4.5	3.8
	16	245	6.8	1.2	5.6	5.0	4.3	479	6.7	1.3	5.3	4.7	4.0
	17+	420	7.1	1.3	5.8	5.1	4.5	740	6.8	1.3	5.5	4.8	4.2
70-79	≤12	111	6.4	1.4	5.1	4.4	3.7	320	5.9	1.4	4.6	3.9	3.2
	13-15	143	6.5	1.5	5.0	4.3	3.5	392	6.4	1.3	5.1	4.4	3.8
	16	275	6.8	1.4	5.5	4.8	4.1	519	6.6	1.3	5.4	4.8	4.1
	17+	637	6.9	1.2	5.7	5.0	4.4	896	6.8	1.3	5.5	4.9	4.2
80-89	≤12	54	5.6	1.3	4.3	3.6	3.0	164	5.9	1.3	4.6	4.0	3.3
	13-15	58	6.2	1.3	4.9	4.3	3.7	197	6.6	1.2	5.3	4.7	4.1
	16	122	6.5	1.3	5.3	4.6	4.0	188	6.5	1.2	5.3	4.7	4.1
	17+	299	6.8	1.3	5.5	4.8	4.2	319	6.6	1.2	5.4	4.8	4.2
≥90	≤12	10	5.3	1.1	4.2	3.7	3.2	35	5.4	1.0	4.4	4.0	3.5
	13-15	10	6.8	1.5	5.3	4.6	3.8	24	6.3	1.2	5.1	4.5	3.9
	16	20	6.1	1.2	4.9	4.3	3.7	24	6.5	1.6	4.9	4.1	3.3
	17+	32	6.5	1.4	5.1	4.4	3.7	45	6.5	1.4	5.1	4.4	3.7

**CRITERIA** — Subjects must have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0.

**NOTE:** includes only the first available visit meeting criteria in items 1-3.

*Note: 3% of participants took these tests in a language other than English*

**Table 12. Number Span Test Backward (correct trials) score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery AS OF SEPTEMBER 2020**

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	7.3	2.8	4.5	3.1	1.7	81	6.9	2.1	4.8	3.7	2.7
	13-15	57	7.3	2.3	4.9	3.8	2.6	133	7.2	2.3	4.9	3.8	2.6
	16	140	7.8	2.3	5.5	4.4	3.3	220	7.7	2.2	5.5	4.4	3.3
	17+	143	8.6	2.3	6.3	5.1	4.0	245	7.9	2.2	5.6	4.5	3.4
60-69	≤12	81	6.2	2.5	3.7	2.5	1.2	206	6.2	2.2	4.0	2.9	1.8
	13-15	123	6.7	2.4	4.2	3.0	1.8	370	6.6	2.1	4.4	3.4	2.3
	16	245	7.4	2.0	5.4	4.4	3.4	479	7.3	2.2	5.1	4.0	2.9
	17+	420	7.9	2.2	5.7	4.7	3.6	740	7.5	2.1	5.4	4.4	3.4
70-79	≤12	111	6.1	2.2	3.9	2.9	1.8	320	5.8	2.2	3.6	2.6	1.5
	13-15	143	6.5	2.0	4.5	3.5	2.5	392	6.5	2.0	4.5	3.5	2.5
	16	275	7.4	2.3	5.0	3.9	2.7	519	7.0	2.1	4.9	3.9	2.8
	17+	636	7.5	2.2	5.3	4.2	3.1	895	7.5	2.1	5.4	4.3	3.3
80-89	≤12	54	5.1	1.9	3.2	2.3	1.4	163	5.3	2.1	3.2	2.1	1.1
	13-15	58	6.4	2.3	4.1	3.0	1.8	196	6.6	2.1	4.5	3.5	2.4
	16	123	6.5	2.0	4.5	3.5	2.5	188	7.0	2.1	4.9	3.9	2.8
	17+	300	7.2	2.1	5.1	4.1	3.1	320	6.9	2.3	4.6	3.5	2.4
≥90	≤12	10	5.6	2.1	3.5	2.4	1.4	35	4.9	1.8	3.2	2.3	1.4
	13-15	10	7.0	1.7	5.3	4.5	3.6	24	5.6	1.9	3.7	2.8	1.8
	16	20	6.3	2.0	4.2	3.2	2.2	24	6.8	2.5	4.3	3.0	1.7
	17+	32	6.4	2.2	4.2	3.1	2.0	45	7.0	2.4	4.6	3.4	2.2

**CRITERIA** — Subjects must have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0.

NOTE: includes only the first available visit meeting criteria in criteria 1-3.

Note: 3% of participants took these tests in a language other than English

**Table 13. Number Span Test Backward (longest span) score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery AS OF SEPTEMBER 2020**

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	5.1	1.6	3.5	2.6	1.8	81	5.0	1.3	3.7	3.1	2.5
	13-15	57	5.1	1.4	3.8	3.1	2.4	133	5.2	1.3	3.9	3.2	2.6
	16	140	5.5	1.3	4.2	3.6	2.9	220	5.4	1.3	4.1	3.5	2.8
	17+	143	5.9	1.3	4.6	4.0	3.3	245	5.5	1.3	4.2	3.6	3.0
60-69	≤12	81	4.6	1.4	3.1	2.4	1.7	206	4.5	1.2	3.3	2.7	2.1
	13-15	123	4.8	1.4	3.4	2.7	1.9	370	4.8	1.2	3.5	2.9	2.3
	16	245	5.2	1.2	4.1	3.5	2.9	479	5.1	1.3	3.9	3.2	2.6
	17+	420	5.5	1.3	4.2	3.6	3.0	740	5.3	1.2	4.1	3.5	2.9
70-79	≤12	111	4.5	1.3	3.3	2.6	2.0	320	4.3	1.3	3.0	2.4	1.7
	13-15	143	4.7	1.2	3.6	3.0	2.4	392	4.7	1.2	3.6	3.0	2.4
	16	275	5.1	1.3	3.8	3.1	2.5	519	5.0	1.2	3.8	3.2	2.6
	17+	636	5.3	1.3	4.0	3.3	2.7	895	5.3	1.2	4.1	3.5	2.9
80-89	≤12	54	4.0	1.1	2.8	2.3	1.7	163	4.1	1.3	2.8	2.1	1.5
	13-15	58	4.6	1.2	3.3	2.7	2.1	196	4.8	1.2	3.6	2.9	2.3
	16	123	4.8	1.2	3.5	2.9	2.3	188	5.0	1.3	3.7	3.1	2.4
	17+	300	5.1	1.2	3.9	3.3	2.7	320	5.0	1.3	3.7	3.1	2.4
≥90	≤12	10	4.2	1.4	2.8	2.1	1.4	35	3.9	1.1	2.8	2.3	1.7
	13-15	10	5.1	1.4	3.7	3.0	2.4	24	4.3	1.1	3.2	2.7	2.2
	16	20	4.7	1.3	3.4	2.7	2.0	24	4.9	1.6	3.3	2.5	1.7
	17+	32	4.6	1.3	3.3	2.7	2.0	45	5.0	1.5	3.5	2.7	2.0

**CRITERIA** — Subjects must have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0.

**NOTE:** includes only the first available visit meeting criteria in items 1-3.

*Note: 3% of participants took these tests in a language other than English*

**Table 14. Multilingual Naming Test (MINT) score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery AS OF SEPTEMBER 2020**

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	29.0	2.3	26.8	25.6	24.5	79	28.9	2.3	26.6	25.5	24.4
	13-15	57	29.9	1.6	28.3	27.5	26.7	133	29.0	2.3	26.7	25.5	24.4
	16	139	30.4	1.8	28.5	27.6	26.7	221	29.9	1.8	28.1	27.2	26.3
	17+	142	30.7	1.6	29.2	28.4	27.6	244	30.0	2.4	27.6	26.4	25.2
60-69	≤12	79	29.6	2.1	27.5	26.4	25.4	203	28.2	2.9	25.3	23.8	22.4
	13-15	123	30.2	1.6	28.6	27.8	27.0	366	29.3	2.6	26.7	25.4	24.0
	16	245	30.6	1.9	28.7	27.7	26.8	477	30.1	2.3	27.8	26.6	25.4
	17+	419	30.8	1.9	28.9	28.0	27.1	739	30.5	2.0	28.5	27.5	26.6
70-79	≤12	109	29.6	2.2	27.3	26.2	25.1	308	28.3	2.7	25.6	24.3	22.9
	13-15	141	30.1	1.8	28.2	27.3	26.4	388	29.1	2.6	26.5	25.2	23.9
	16	275	30.5	1.8	28.7	27.8	26.9	516	29.9	2.3	27.6	26.4	25.3
	17+	637	30.7	1.9	28.9	28.0	27.0	891	30.0	2.3	27.6	26.5	25.3
80-89	≤12	52	28.0	4.7	23.3	21.0	18.7	158	27.4	3.6	23.8	22.1	20.3
	13-15	58	30.0	1.9	28.1	27.2	26.3	197	28.5	2.7	25.8	24.5	23.1
	16	123	30.5	1.9	28.7	27.7	26.8	185	29.4	2.3	27.0	25.9	24.7
	17+	299	30.6	2.0	28.7	27.7	26.7	317	29.4	2.5	27.0	25.8	24.5
≥90	≤12	10	29.5	2.3	27.2	26.0	24.9	35	25.6	3.8	21.8	19.9	18.1
	13-15	10	27.0	5.6	21.4	18.6	15.8	22	27.9	3.4	24.5	22.7	21.0
	16	20	30.2	2.0	28.2	27.2	26.2	24	28.8	2.2	26.5	25.4	24.3
	17+	32	30.3	2.1	28.2	27.2	26.1	44	28.5	3.4	25.1	23.4	21.7

**CRITERIA** — Subjects must have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0.

**NOTE:** includes only the first available visit meeting criteria in items 1-3.

*Note: 3% of participants took these tests in a language other than English*

**Table 15. Phonemic Test – F-words correct score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery** AS OF SEPTEMBER 2020

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	14.5	5.0	9.6	7.1	4.6	80	14.6	4.1	10.5	8.4	6.4
	13-15	57	14.2	4.3	9.9	7.7	5.5	132	14.7	4.7	10.0	7.7	5.3
	16	138	15.9	4.8	11.1	8.7	6.3	222	16.2	4.2	11.9	9.8	7.7
	17+	140	16.3	4.5	11.9	9.7	7.4	245	16.7	4.0	12.6	10.6	8.6
60-69	≤12	81	13.2	4.4	8.8	6.6	4.4	208	13.1	4.7	8.4	6.0	3.6
	13-15	123	13.1	4.1	9.0	6.9	4.9	369	14.0	4.4	9.7	7.5	5.3
	16	244	14.3	4.4	10.0	7.8	5.6	479	15.2	4.6	10.6	8.3	6.0
	17+	419	15.6	4.7	11.0	8.7	6.3	739	16.1	4.2	11.9	9.8	7.7
70-79	≤12	111	11.9	4.6	7.3	5.0	2.7	320	12.6	4.5	8.0	5.8	3.5
	13-15	143	12.7	4.1	8.6	6.5	4.5	390	13.8	4.5	9.4	7.1	4.9
	16	276	14.1	4.4	9.7	7.5	5.3	520	14.7	4.4	10.3	8.1	5.9
	17+	636	15.0	4.4	10.7	8.5	6.3	895	15.8	4.4	11.3	9.1	6.9
80-89	≤12	54	10.4	4.6	5.8	3.5	1.2	161	12.1	4.8	7.3	5.0	2.6
	13-15	58	12.8	4.1	8.7	6.6	4.5	197	13.6	4.3	9.3	7.1	5.0
	16	124	14.3	5.0	9.2	6.7	4.2	188	14.6	4.4	10.1	7.9	5.7
	17+	300	15.6	4.7	10.8	8.5	6.1	319	15.2	4.6	10.6	8.3	6.1
≥90	≤12	10	11.6	5.8	5.8	2.9	0.0	35	11.7	4.3	7.4	5.2	3.1
	13-15	10	9.3	1.9	7.4	6.5	5.5	24	12.5	4.8	7.7	5.3	2.8
	16	20	11.7	3.5	8.2	6.4	4.6	24	14.3	4.0	10.3	8.3	6.3
	17+	32	15.6	6.2	9.4	6.3	3.2	45	14.2	3.9	10.3	8.4	6.5

**CRITERIA** — Subjects must have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0.

NOTE: includes only the first available visit meeting criteria in items 1-3.

Note: 3% of participants took these tests in a language other than English

**Table 16. Phonemic Test – L-words correct score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery AS OF SEPTEMBER 2020**

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	13.9	5.2	8.7	6.1	3.5	79	13.5	4.1	9.4	7.4	5.4
	13-15	56	13.0	3.9	9.1	7.1	5.2	133	13.7	4.5	9.2	6.9	4.6
	16	138	15.1	4.1	11.0	8.9	6.9	222	15.1	3.9	11.2	9.2	7.3
	17+	140	15.4	4.2	11.3	9.2	7.1	245	15.4	4.0	11.4	9.4	7.4
60-69	≤12	80	12.1	5.1	6.9	4.4	1.8	207	12.3	4.4	7.9	5.7	3.5
	13-15	123	12.4	4.0	8.4	6.3	4.3	369	13.1	4.4	8.8	6.6	4.4
	16	242	13.4	4.3	9.1	7.0	4.8	478	14.5	4.5	10.0	7.8	5.6
	17+	417	14.9	4.3	10.6	8.4	6.3	739	15.4	4.0	11.4	9.4	7.4
70-79	≤12	111	11.1	4.6	6.5	4.2	1.8	320	11.4	4.2	7.2	5.1	3.0
	13-15	142	12.3	3.7	8.7	6.8	5.0	389	12.8	4.3	8.5	6.3	4.2
	16	275	13.5	4.2	9.3	7.2	5.1	515	13.9	4.2	9.7	7.6	5.6
	17+	635	14.3	4.2	10.0	7.9	5.8	893	14.9	4.2	10.7	8.6	6.5
80-89	≤12	53	9.9	4.4	5.4	3.2	1.0	159	11.1	4.5	6.5	4.3	2.0
	13-15	58	12.3	4.2	8.1	6.0	3.9	194	12.4	4.0	8.5	6.5	4.5
	16	123	12.9	4.7	8.2	5.9	3.5	187	13.6	4.1	9.5	7.4	5.4
	17+	300	14.7	4.1	10.6	8.6	6.6	320	14.5	4.2	10.3	8.2	6.0
≥90	≤12	10	12.4	4.2	8.2	6.0	3.9	35	10.9	3.9	7.0	5.1	3.1
	13-15	10	8.6	1.7	6.9	6.0	5.2	24	11.8	4.0	7.8	5.7	3.7
	16	20	10.5	3.8	6.7	4.8	2.9	24	12.9	4.5	8.4	6.1	3.8
	17+	32	14.0	6.0	8.0	5.0	2.0	45	13.2	3.7	9.5	7.7	5.8

**CRITERIA** — Subjects must have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0.

NOTE: includes only the first available visit meeting criteria in items 1-3.

Note: 3% of participants took these tests in a language other than English



**Table 17. Phonemic Test – F & L words correct score by age, education, and sex, among clinically cognitive normal UDS participants with UDS3 battery AS OF SEPTEMBER 2020**

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	28.5	9.7	18.8	13.9	9.1	79	28.2	7.5	20.7	17.0	13.3
	13-15	56	27.2	7.2	20.0	16.4	12.9	132	28.0	8.4	19.6	15.4	11.2
	16	138	30.9	8.0	23.0	19.0	15.0	222	31.2	7.3	23.8	20.1	16.5
	17+	140	31.8	7.8	24.0	20.2	16.3	245	32.0	7.3	24.7	21.0	17.4
60-69	≤12	80	25.0	8.8	16.2	11.8	7.4	207	25.2	8.6	16.6	12.3	7.9
	13-15	123	25.4	7.4	18.1	14.4	10.7	369	27.1	8.0	19.1	15.1	11.1
	16	242	27.6	8.0	19.6	15.6	11.7	478	29.7	8.4	21.3	17.1	12.9
	17+	416	30.5	8.3	22.2	18.0	13.8	738	31.4	7.6	23.8	20.0	16.2
70-79	≤12	111	23.0	8.6	14.4	10.1	5.8	320	23.9	8.1	15.8	11.8	7.8
	13-15	142	24.9	7.1	17.8	14.3	10.7	389	26.6	8.3	18.3	14.2	10.1
	16	275	27.4	7.8	19.6	15.7	11.8	515	28.5	7.8	20.7	16.8	12.9
	17+	635	29.3	7.8	21.4	17.5	13.6	893	30.6	8.1	22.5	18.5	14.4
80-89	≤12	53	20.0	8.7	11.3	6.9	2.6	159	23.1	8.6	14.5	10.2	5.9
	13-15	58	24.6	8.2	16.5	12.4	8.3	194	26.0	7.6	18.4	14.6	10.8
	16	123	27.2	9.0	18.2	13.7	9.3	187	28.2	7.9	20.3	16.4	12.5
	17+	300	30.2	7.8	22.4	18.5	14.6	319	29.7	8.1	21.6	17.5	13.5
≥90	≤12	10	24.0	9.2	14.8	10.2	5.5	35	22.6	7.8	14.7	10.8	6.9
	13-15	10	17.9	3.2	14.7	13.1	11.5	24	24.3	8.3	16.0	11.8	7.7
	16	20	22.3	6.7	15.6	12.2	8.9	24	27.2	7.8	19.4	15.4	11.5
	17+	32	29.6	11.5	18.1	12.3	6.6	45	27.4	6.9	20.5	17.0	13.6

**CRITERIA** — Subjects must have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0. NOTE: includes only the first available visit meeting criteria in items 1-3.

Note: 3% of participants took these tests in a language other than English

**Table 18. Category Fluency – Animals List Generation score by age, education, and sex, among clinically cognitive normal UDS participants with UDS 3 battery AS OF SEPTEMBER 2020**

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	21.7	5.3	16.4	13.7	11.1	81	21.7	4.8	16.9	14.5	12.1
	13-15	57	22.2	4.9	17.2	14.8	12.3	133	22.4	5.0	17.4	14.9	12.4
	16	140	23.6	6.0	17.7	14.7	11.7	222	23.8	4.7	19.0	16.7	14.3
	17+	143	25.1	5.8	19.3	16.4	13.5	246	25.2	5.5	19.7	16.9	14.2
60-69	≤12	81	19.8	4.8	14.9	12.5	10.1	208	18.8	4.7	14.2	11.8	9.5
	13-15	123	21.7	5.2	16.5	13.9	11.3	370	20.5	5.2	15.4	12.8	10.2
	16	244	21.6	5.3	16.3	13.7	11.1	480	22.1	5.4	16.7	14.0	11.3
	17+	421	23.2	5.4	17.8	15.1	12.4	741	23.7	5.6	18.1	15.3	12.6
70-79	≤12	111	18.5	5.0	13.5	11.0	8.5	320	18.4	4.7	13.7	11.4	9.0
	13-15	143	19.4	4.8	14.7	12.3	9.9	392	19.3	4.8	14.5	12.1	9.7
	16	276	20.6	4.9	15.7	13.3	10.9	519	21.2	5.1	16.1	13.5	11.0
	17+	635	21.7	5.3	16.4	13.8	11.2	895	22.3	5.3	17.0	14.4	11.7
80-89	≤12	54	16.4	5.6	10.8	8.0	5.1	164	16.0	4.7	11.3	9.0	6.6
	13-15	58	18.3	5.8	12.5	9.6	6.7	198	17.8	4.8	13.0	10.5	8.1
	16	124	18.5	5.1	13.5	10.9	8.4	188	20.1	5.0	15.1	12.5	10.0
	17+	300	20.6	5.3	15.3	12.6	10.0	320	20.5	5.6	14.9	12.1	9.2
≥90	≤12	10	14.8	5.1	9.7	7.1	4.6	35	13.6	4.2	9.4	7.3	5.2
	13-15	10	14.1	4.5	9.6	7.4	5.1	24	17.6	5.1	12.5	9.9	7.4
	16	20	17.8	4.8	13.0	10.6	8.2	24	19.0	5.3	13.7	11.0	8.4
	17+	32	18.6	5.3	13.3	10.6	8.0	45	18.3	4.6	13.8	11.5	9.2

**CRITERIA** — Subjects must have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0. NOTE: includes only the first available visit meeting criteria in items 1-3.

Note: 3% of participants took these tests in a language other than English

**Table 19. Category Fluency – Vegetables List Generation score by age, education, and sex, among clinically cognitive normal UDS participants with UDS 3 battery AS OF SEPTEMBER 2020**

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					-1SD	-1.5SD	-2SD				-1SD	-1.5SD	-2SD
<60	≤12	36	13.6	3.8	9.9	8.0	6.1	80	15.1	3.7	11.4	9.6	7.7
	13-15	57	13.9	3.8	10.0	8.1	6.2	133	15.4	3.9	11.5	9.6	7.6
	16	140	14.1	4.1	10.0	7.9	5.9	222	16.8	3.5	13.3	11.6	9.8
	17+	143	15.1	3.8	11.3	9.4	7.4	246	17.3	4.1	13.3	11.2	9.2
60-69	≤12	81	13.1	4.1	8.9	6.9	4.8	208	14.5	3.9	10.6	8.7	6.7
	13-15	123	13.3	4.3	9.0	6.9	4.8	369	15.4	3.8	11.6	9.7	7.8
	16	243	13.6	3.8	9.8	7.9	6.0	480	16.4	3.9	12.5	10.5	8.6
	17+	420	14.2	3.8	10.4	8.4	6.5	740	17.2	4.2	13.1	11.0	8.9
70-79	≤12	111	11.6	3.5	8.1	6.4	4.6	320	14.1	4.1	10.0	8.0	6.0
	13-15	143	11.9	3.5	8.4	6.6	4.8	392	14.8	3.7	11.1	9.2	7.4
	16	275	13.0	3.8	9.3	7.4	5.5	519	15.7	3.9	11.8	9.9	7.9
	17+	636	13.4	4.2	9.2	7.1	5.0	894	16.2	4.1	12.0	10.0	7.9
80-89	≤12	54	10.2	4.1	6.1	4.1	2.1	164	12.9	3.5	9.4	7.6	5.9
	13-15	58	12.4	3.8	8.6	6.7	4.8	197	14.1	3.6	10.5	8.7	6.9
	16	122	11.5	4.0	7.5	5.4	3.4	188	14.9	3.8	11.1	9.2	7.2
	17+	300	12.7	4.3	8.4	6.3	4.1	319	15.2	4.4	10.8	8.6	6.4
≥90	≤12	10	9.7	2.5	7.2	6.0	4.8	35	11.5	3.5	8.1	6.3	4.6
	13-15	10	9.3	3.9	5.4	3.5	1.5	24	12.5	3.2	9.3	7.7	6.1
	16	20	9.6	3.4	6.2	4.5	2.8	24	14.5	4.1	10.4	8.3	6.3
	17+	32	12.6	4.2	8.4	6.2	4.1	45	13.1	3.8	9.3	7.4	5.5

**CRITERIA** — Subjects must have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0. NOTE: includes only the first available visit meeting criteria in items 1-3.

Note: 3% of participants took these tests in a language other than English

**Table 20. Trail Making Part A score by age, education, and sex, among clinically cognitive normal UDS participants with UDS 3 battery** AS OF SEPTEMBER 2020

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					+1SD	+1.5SD	+2SD				+1SD	+1.5SD	+2SD
<60	≤12	35	26.3	9.8	36.1	41.0	45.9	79	26.0	11.8	37.8	43.7	49.7
	13-15	57	26.1	8.3	34.4	38.5	42.6	133	22.9	8.1	31.0	35.0	39.0
	16	138	22.4	8.3	30.7	34.9	39.0	221	23.4	9.3	32.7	37.4	42.1
	17+	140	23.1	12.8	36.0	42.4	48.8	245	22.8	8.5	31.4	35.6	39.9
60-69	≤12	80	37.1	20.6	57.6	67.9	78.2	208	35.3	18.6	53.9	63.2	72.5
	13-15	123	32.6	16.0	48.7	56.7	64.7	368	30.6	11.2	41.8	47.4	53.0
	16	244	28.2	9.4	37.6	42.4	47.1	477	28.9	10.3	39.2	44.4	49.6
	17+	420	26.8	8.8	35.6	40.0	44.4	741	27.2	9.1	36.3	40.9	45.4
70-79	≤12	109	38.6	20.0	58.6	68.5	78.5	320	39.7	20.9	60.7	71.1	81.6
	13-15	143	35.3	12.9	48.1	54.6	61.0	392	34.2	11.4	45.6	51.2	56.9
	16	275	32.5	11.7	44.2	50.0	55.8	518	31.5	10.7	42.1	47.4	52.8
	17+	631	30.9	10.9	41.7	47.2	52.6	894	31.3	11.3	42.6	48.3	54.0
80-89	≤12	52	45.3	21.0	66.3	76.8	87.3	162	47.7	27.6	75.3	89.1	102.9
	13-15	58	38.2	14.7	52.9	60.3	67.7	196	40.5	17.7	58.2	67.0	75.9
	16	124	36.2	12.8	49.1	55.5	61.9	185	35.1	13.5	48.6	55.3	62.1
	17+	299	34.5	14.0	48.5	55.5	62.5	319	35.1	13.0	48.1	54.6	61.1
≥90	≤12	10	37.6	6.3	43.9	47.0	50.2	34	57.6	34.0	91.5	108.5	125.5
	13-15	9	43.3	7.8	51.1	55.0	58.9	23	41.8	25.5	67.3	80.0	92.8
	16	20	40.2	14.9	55.0	62.4	69.9	24	44.0	17.6	61.6	70.3	79.1
	17+	32	41.9	15.3	57.3	64.9	72.6	43	49.2	19.7	68.8	78.7	88.5

**CRITERIA** — Subjects must have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0. NOTE: includes only the first available visit meeting criteria in items 1-3.

Note: 3% of participants took these tests in a language other than English

**Table 21. Trail Making Part B score by age, education, and sex, among clinically cognitive normal UDS participants with UDS 3 battery** AS OF SEPTEMBER 2020

Age (yrs)	Education (yrs)	Male						Female					
		n	Mean	SD	Cutpoints			n	Mean	SD	Cutpoints		
					+1SD	+1.5SD	+2SD				+1SD	+1.5SD	+2SD
<60	≤12	35	74.3	34.2	108.5	125.6	142.7	79	73.7	50.9	124.6	150.0	175.5
	13-15	57	69.5	36.5	106.0	124.2	142.5	133	61.6	27.9	89.5	103.4	117.4
	16	138	55.7	28.0	83.7	97.7	111.7	219	55.7	24.8	80.4	92.8	105.2
	17+	141	53.2	25.3	78.5	91.1	103.8	245	53.1	19.3	72.5	82.1	91.8
60-69	≤12	78	100.1	63.7	163.8	195.6	227.5	203	109.6	67.6	177.3	211.1	244.9
	13-15	123	87.4	45.8	133.2	156.1	179.0	368	85.5	44.7	130.2	152.5	174.9
	16	244	70.3	27.0	97.3	110.8	124.3	477	72.8	32.6	105.3	121.6	137.9
	17+	418	64.1	23.9	88.0	99.9	111.9	740	67.3	28.0	95.3	109.3	123.3
70-79	≤12	103	104.9	52.3	157.2	183.3	209.5	307	119.7	69.4	189.1	223.8	258.6
	13-15	143	94.3	47.3	141.6	165.3	189.0	389	98.0	51.7	149.6	175.5	201.3
	16	275	85.1	38.3	123.4	142.6	161.7	514	82.8	37.3	120.1	138.7	157.4
	17+	629	76.1	30.2	106.2	121.3	136.4	894	77.9	33.6	111.5	128.3	145.1
80-89	≤12	46	151.9	76.7	228.5	266.9	305.2	147	135.0	79.9	214.9	254.9	294.8
	13-15	58	111.0	56.4	167.3	195.5	223.7	191	114.2	58.3	172.5	201.7	230.9
	16	123	91.3	34.1	125.4	142.4	159.4	183	95.6	45.9	141.5	164.4	187.4
	17+	296	90.4	45.5	135.9	158.6	181.4	317	97.4	49.0	146.4	170.9	195.4
≥90	≤12	10	154.4	87.4	241.8	285.5	329.2	29	191.3	89.7	281.0	325.8	370.7
	13-15	9	117.9	22.0	139.9	150.9	162.0	23	110.9	58.5	169.4	198.7	228.0
	16	20	130.8	66.8	197.5	230.9	264.3	23	136.7	62.1	198.8	229.8	260.9
	17+	32	113.4	49.0	162.4	186.9	211.4	41	139.3	73.9	213.3	250.2	287.2

**CRITERIA** — Subjects must have: 1) at least one UDS3 battery test score available (MoCA total score; Craft Story Immediate/Delayed; Number Span Forward, Number Span Backward; or MINT total score); 2) clinical diagnosis of normal cognition; 3) global CDR=0. NOTE: includes only the first available visit meeting criteria in items 1-3.

Note: 3% of participants took these tests in a language other than English