

Web Table 1. Effects of Different Practice Effects Specifications on Cognitive Change for Depression, by Study, Balanced Data From 3C-Dijon (Dijon, France, 1999–2010), NAS (Greater Boston Area, MA, 1993–2007) and WHICAP (New York City, NY, 1999–2012) Using Age (Years) as the Time Scale With Main Exposure by Time Interaction

	No Practice Effects				Visit 1 Indicator				No. of Prior Tests				Square Root of No. of Prior Tests			
	β	95% CI	<i>P</i> Value	AIC	β	95% CI	<i>P</i> Value	AIC	β	95% CI	<i>P</i> Value	AIC	β	95% CI	<i>P</i> Value	AIC
Verbal Fluency - 3C-Dijon																
depression ^a	-0.56	-0.96, -0.17	0.01	52229	-0.56	-0.96, -0.17	0.01	52138	-0.56	-0.96, -0.17	0.01	52207	-0.56	-0.96, -0.17	0.01	52148
depression*time	0.00	-0.04, 0.05	0.84		0.01	-0.04, 0.05	0.82		0.01	-0.04, 0.05	0.79		0.01	-0.04, 0.05	0.80	
PE					0.72	0.58, 0.87	<0.01		0.59	0.35, 0.82	<0.01		0.80	0.63, 0.97	<0.01	
time ^b	-0.14	-0.15, -0.12	<0.01		-0.20	-0.22, -0.18	<0.01		-0.40	-0.5, -0.29	<0.01		-0.30	-0.34, -0.26	<0.01	
Verbal Fluency - WHICAP																
depression ^a	-0.03	-6.52, 6.45	0.99	12024.22	-0.04	-6.53, 6.45	0.99	12023.34	-0.07	-6.57, 6.43	0.98	12025.04	-0.06	-6.55, 6.44	0.99	12023.19
depression*time	-0.01	-0.09, 0.08	0.89		-0.01	-0.09, 0.08	0.89		-0.01	-0.09, 0.08	0.90		-0.01	-0.09, 0.08	0.89	
PE					0.37	-0.06, 0.80	0.09		0.34	-0.27, 0.96	0.27		0.47	-0.06, 0.99	0.08	
time	-0.23	-0.28, -0.18	<0.01		-0.27	-0.34, -0.20	<0.01		-0.36	-0.60, -0.12	<0.01		-0.33	-0.45, -0.21	<0.01	
Verbal Fluency - NAS																
depression ^a	0.27	-1.15, 1.70	0.71	5605.2	0.26	-1.17, 1.69	0.72	5606.9	0.32	-1.1, 1.74	0.66	5606.1	0.28	-1.15, 1.70	0.70	5607.2
depression*time	0.03	-0.13, 0.19	0.75		0.02	-0.14, 0.19	0.76		0.03	-0.13, 0.19	0.68		0.03	-0.13, 0.19	0.74	
PE					0.20	-0.55, 0.95	0.60		-0.45	-1.29, 0.40	0.30		-0.04	-0.96, 0.87	0.93	
time ^b	-0.14	-0.20, -0.07	<0.01		-0.16	-0.27, -0.05	<0.01		-0.03	-0.25, 0.19	0.80		-0.13	-0.30, 0.04	0.14	
Buschke - WHICAP																
depression ^a	-7.87	-20.64, 4.90	0.23	14845.85	-7.87	-20.65, 4.90	0.23	14847.80	-7.87	-20.65, 4.90	0.23	14847.85	-7.88	-20.65, 4.90	0.23	14847.84
depression*time	0.09	-0.07, 0.25	0.28		0.09	-0.07, 0.25	0.28		0.09	-0.07, 0.25	0.28		0.09	-0.07, 0.25	0.28	
PE					0.10	-0.73, 0.93	0.82		0.01	-1.19, 1.20	0.99		0.05	-0.96, 1.07	0.92	
time ^b	-0.53	-0.63, -0.42	<0.01		-0.54	-0.67, -0.40	<0.01		-0.53	-0.99, -0.06	0.03		-0.54	-0.77, -0.30	<0.01	
Immediate Recall - NAS																
depression ^a	0.08	-1.21, 1.36	0.91	5140.4	0.06	-1.22, 1.34	0.93	5140.5	0.06	-1.23, 1.34	0.93	5142.0	0.05	-1.24, 1.33	0.94	5140.8
depression*time	0.02	-0.09, 0.14	0.68		0.02	-0.09, 0.14	0.71		0.02	-0.09, 0.14	0.71		0.02	-0.1, 0.14	0.73	
PE					0.38	-0.16, 0.93	0.17		0.21	-0.44, 0.85	0.53		0.45	-0.23, 1.12	0.20	
time ^b	-0.07	-0.11, -0.02	<0.01		-0.12	-0.2, -0.03	0.01		-0.12	-0.28, 0.05	0.16		-0.15	-0.27, -0.02	0.02	

3C, Three-City Study; AIC, Akaike information criterion; Buschke, Buschke Selective Reminding test; CI, confidence interval, NAS, Normative Aging Study; WHICAP, Washington Heights-Inwood Community Aging Project.

a. Depression coefficients are for depressive patients.

b. Time coefficients are for one year of aging.

Web Table 2. Effects of Different Practice Effects Specifications on Cognitive Change for Diabetes, by Study, Balanced Data From 3C-Dijon (Dijon, France, 1999–2010), NAS (Greater Boston Area, MA, 1993–2007) and WHICAP (New York City, NY, 1999–2012) Using Age (Years) as the Time Scale With Main Exposure by Time Interaction

	No Practice Effects				Visit 1 Indicator				No. of Prior Tests				Square Root of No. of Prior Tests			
	β	95% CI	<i>P</i> Value	AIC	β	95% CI	<i>P</i> Value	AIC	β	95% CI	<i>P</i> Value	AIC	β	95% CI	<i>P</i> Value	AIC
Verbal Fluency 3C-Dijon																
diabetes ^a	-0.60	-1.09, -0.11	0.02	52231	-0.60	-1.09, -0.11	0.02	52140	-0.60	-1.09, -0.11	0.02	52209	-0.60	-1.09, -0.11	0.02	52150
diabetes*time	0.00	-0.06, 0.05	0.97		0.00	-0.06, 0.05	0.97		0.00	-0.06, 0.05	0.96		0.00	-0.06, 0.05	0.97	
PE					0.72	0.58, 0.87	<0.01		0.59	0.35, 0.82	<0.01		0.80	0.63, 0.97	<0.01	
time ^b	-0.14	-0.15, -0.12	<0.01		-0.20	-0.22, -0.18	<0.01		-0.40	-0.5, -0.29	<0.01		-0.30	-0.34, -0.26	<0.01	
Verbal Fluency WHICAP																
diabetes ^a	-4.11	-12.81, 4.60	0.35	12066.02	-4.18	-12.89, 4.53	0.35	12064.84	-4.39	-13.13, 4.34	0.32	12066.76	-4.31	-13.03, 4.41	0.33	12064.71
diabetes*time	0.04	-0.07, 0.15	0.47		0.04	-0.07, 0.15	0.46		0.04	-0.07, 0.16	0.43		0.04	-0.07, 0.16	0.44	
PE					0.39	-0.04, 0.81	0.07		0.35	-0.26, 0.97	0.26		0.49	-0.04, 1.01	0.07	
time ^b	-0.24	-0.28, -0.19	<0.01		-0.28	-0.35, -0.21	<0.01		-0.37	-0.61, -0.13	<0.01		-0.34	-0.46, -0.22	<0.01	
Verbal Fluency NAS																
diabetes ^a	0.20	-1.74, 2.13	0.84	7872.4	0.20	-1.74, 2.13	0.84	7874.4	0.24	-1.7, 2.17	0.81	7873.6	0.21	-1.72, 2.14	0.83	7874.2
diabetes*time	0.18	-0.02, 0.39	0.08		0.18	-0.02, 0.39	0.08		0.19	-0.02, 0.39	0.07		0.19	-0.02, 0.39	0.08	
PE					-0.01	-0.64, 0.62	0.97		-0.33	-1.02, 0.36	0.35		-0.17	-0.91, 0.58	0.66	
time ^b	-0.14	-0.2, -0.09	<0.01		-0.14	-0.23, -0.05	<0.01		-0.06	-0.24, 0.11	0.50		-0.11	-0.25, 0.03	0.11	
Buschke WHICAP																
diabetes ^a	-18.38	-35.52, -1.24	0.04	14895.78	-18.39	-35.53, -1.25	0.04	14897.76	-18.39	-35.56, -1.21	0.04	14897.78	-18.39	-35.54, -1.24	0.04	14897.78
diabetes*time	0.19	-0.03, 0.41	0.08		0.19	-0.03, 0.41	0.08		0.19	-0.03, 0.41	0.08		0.19	-0.03, 0.41	0.08	
PE					0.07	-0.76, 0.89	0.88		0.00	-1.20, 1.20	1.00		0.02	-1.00, 1.04	0.97	
time ^b	-0.53	-0.62, -0.44	<0.01		-0.54	-0.67, -0.41	<0.01		-0.53	-1.00, -0.07	0.03		-0.53	-0.77, -0.30	<0.01	
Immediate Recall NAS																
diabetes ^a	0.54	-1.18, 2.25	0.54	7264.1	0.49	-1.22, 2.20	0.57	7259.9	0.49	-1.22, 2.20	0.58	7264.6	0.47	-1.24, 2.18	0.59	7260.8
diabetes*time	0.01	-0.14, 0.15	0.93		0.00	-0.14, 0.15	0.98		0.00	-0.14, 0.15	0.98		0.00	-0.15, 0.14	0.995	
PE					0.57	0.12, 1.02	0.01		0.32	-0.20, 0.84	0.22		0.64	0.10, 1.19	0.02	
time ^b	-0.08	-0.12, -0.04	<0.01		-0.15	-0.22, -0.08	<0.01		-0.16	-0.29, -0.03	0.02		-0.19	-0.29, -0.09	<0.01	

3C, Three-City Study; AIC, Akaike information criterion; Buschke, Buschke Selective Reminding test; CI, confidence interval, NAS, Normative Aging Study; WHICAP, Washington Heights-Inwood Community Aging Project.

a. Diabetes coefficients are for diabetic patients.

b. Time coefficients are for one year of aging.

Web Table 3. Effects of Different Practice Effects Specifications on Cognitive Change for Diabetes, by Study, Unbalanced Data From 3C-Dijon (Dijon, France, 1999–2010), NAS (Greater Boston Area, MA, 1993–2007) and WHICAP (New York City, NY, 1999–2012) Using Time Elapsed (Years) Since Baseline as the Time Scale With Main Exposure by Time Interaction

	No Practice Effects				Visit 1 Indicator				No. of Prior Tests				Square Root of No. of Prior Tests			
	β	95% CI	P Value	AIC	β	95% CI	P Value	AIC	β	95% CI	P Value	AIC	β	95% CI	P Value	AIC
Verbal Fluency 3C-Dijon																
diabetes ^a	-0.47	-0.84, -0.11	0.01	90884	-0.46	-0.83, -0.10	0.01	90806	-0.47	-0.83, -0.10	0.01	90828	-0.46	-0.83, -0.10	0.01	90801
diabetes*time	-0.04	-0.10, 0.01	0.10		-0.05	-0.10, 0.01	0.09		-0.05	-0.10, 0.00	0.07		-0.05	-0.10, 0.01	0.08	
PE					0.49	0.39, 0.60	<0.01		0.60	0.44, 0.75	<0.01		0.60	0.47, 0.73	<0.01	
time ^b	-0.14	-0.15, -0.12	<0.01		-0.19	-0.21, -0.17	<0.01		-0.40	-0.47, -0.33	<0.01		-0.27	-0.30, -0.24	<0.01	
Verbal Fluency WHICAP																
diabetes ^a	-0.81	-1.85, 0.25	0.13	12051.69	-0.81	-1.86, 0.24	0.13	12050.38	-0.81	-1.86, 0.24	0.13	12052.30	-0.81	-1.86, 0.24	0.13	12050.22
diabetes*time	-0.03	-0.17, 0.11	0.65		-0.03	-0.17, 0.11	0.66		-0.03	-0.17, 0.11	0.70		-0.03	-0.17, 0.11	0.69	
PE					0.39	-0.03, 0.80	0.07		0.38	-0.25, 1.02	0.24		0.49	-0.03, 1.01	0.06	
time ^b	-0.23	-0.28, -0.17	<0.01		-0.27	-0.34, -0.20	<0.01		-0.37	-0.62, -0.12	<0.01		-0.33	-0.45, -0.21	<0.01	
Verbal Fluency NAS^c																
diabetes ^a	-0.16	-1.23, 0.90	0.76	14081.0	-0.17	-1.24, 0.89	0.75	14082.6	-0.15	-1.22, 0.91	0.78	14081.3	-0.16	-1.23, 0.9	0.76	14083.0
diabetes*time	0.06	-0.13, 0.25	0.53		0.06	-0.13, 0.25	0.51		0.06	-0.13, 0.25	0.54		0.06	-0.13, 0.25	0.53	
PE					-0.14	-0.62, 0.33	0.56		0.32	-0.16, 0.79	0.20		0.00	-0.59, 0.58	0.99	
time ^b	-0.10	-0.14, -0.06	<0.01		-0.09	-0.15, -0.02	<0.01		-0.18	-0.30, -0.06	<0.01		-0.10	-0.20, 0.00	0.05	
Buschke WHICAP																
diabetes ^a	-3.85	-6.16, -1.54	<0.01	14886.10	-3.85	-6.16, -1.54	<0.01	14888.05	-3.85	-6.16, -1.54	<0.01	14888.08	-3.85	-6.16, -1.54	<0.01	14888.08
diabetes*time	0.16	-0.11, 0.43	0.24		0.16	-0.11, 0.43	0.24		0.16	-0.11, 0.44	0.24		0.16	-0.11, 0.43	0.24	
PE					0.08	-0.72, 0.89	0.84		0.08	-1.15, 1.31	0.90		0.06	-0.94, 1.05	0.91	
time ^b	-0.53	-0.63, -0.43	<0.01		-0.54	-0.67, -0.40	<0.01		-0.56	-1.04, -0.08	0.02		-0.54	-0.77, -0.31	<0.01	
Immediate Recall NAS^c																
diabetes ^a	0.09	-0.71, 0.89	0.83	12728.5	0.12	-0.68, 0.91	0.78	12724.1	0.10	-0.70, 0.90	0.80	12719.7	0.13	-0.67, 0.92	0.76	12718.7
diabetes*time	0.01	-0.13, 0.14	0.93		0.00	-0.14, 0.13	0.95		0.00	-0.13, 0.14	0.99		-0.01	-0.14, 0.13	0.91	
PE					0.44	0.10, 0.78	0.01		0.61	0.25, 0.98	<0.01		0.76	0.32, 1.19	<0.01	
time ^b	-0.09	-0.12, -0.06	<0.01		-0.14	-0.19, -0.09	<0.0001		-0.24	-0.34, -0.15	<0.01		-0.21	-0.29, -0.14	<0.01	

3C, Three-City Study; AIC, Akaike information criterion; Buschke, Buschke Selective Reminding test; CI, confidence interval, NAS, Normative Aging Study; WHICAP, Washington Heights-Inwood Community Aging Project.

a. Diabetes coefficients are for diabetic patients.

b. Time coefficients are for one year of aging.

c. Analyses in NAS included up to 4 repeat assessments per individual, given the extremely small number of persons with 5 repeat assessments.

Web Table 4. Effects of Different Practice Effects Specifications on Cognitive Change for Depression by Study, Balanced Data From 3C-Dijon (Dijon, France, 1999–2010), NAS (Greater Boston Area, MA, 1993–2007) and WHICAP (New York City, NY, 1999–2012) Using Time Elapsed (Years) Since Baseline as the Time Scale With Main Exposure by Time Interaction and Exposure by Practice Effects Interaction

	No Practice Effects				Visit 1 Indicator			
	β	95% CI	<i>P</i> Value	AIC	β	95% CI	<i>P</i> Value	AIC
Verbal Fluency 3C-Dijon								
depression ^a	-0.57	-1.01, -0.14	0.01	52229.0	-0.64	-1.12, -0.16	0.01	52139
depression*time	0.00	-0.05, 0.05	0.87		-0.01	-0.07, 0.06	0.831	
PEs					0.71	0.55, 0.86	<0.01	
time ^b	-0.14	-0.15, -0.12	<0.01		-0.2	-0.22, -0.17	<0.01	
depression*PEs					0.14	-0.31, 0.6	0.539	
Verbal Fluency WHICAP								
depression ^a	-0.44	-1.22, 0.34	0.27	12009.31	-0.70	-1.54, 0.15	0.11	12007.78
depression*time	-0.02	-0.13, 0.08	0.70		-0.10	-0.24, 0.04	0.17	
PEs					0.15	-0.36, 0.65	0.57	
time ^b	-0.23	-0.28, -0.17	<0.01		-0.24	-0.32, -0.16	<0.01	
depression*PEs					0.73	-0.17, 1.63	0.11	
Verbal Fluency NAS								
depression ^a	0.20	-1.36, 1.76	0.80	5607.0	0.42	-1.21, 2.06	0.61	5609.9
depression*time	-0.02	-0.24, 0.20	0.83		0.12	-0.27, 0.52	0.54	
PEs					0.33	-0.46, 1.12	0.41	
time ^b	-0.13	-0.2, -0.07	<0.01		-0.17	-0.29, -0.06	0.004	
depression*PEs					-1.14	-3.66, 1.38	0.38	
Buschke WHICAP								
depression ^a	-1.19	-2.92, 0.53	0.18	14835.42	-1.58	-3.41, 0.25	0.09	14837.81
depression*time	0.08	-0.12, 0.29	0.42		-0.04	-0.31, 0.24	0.81	
PEs					-0.22	-1.19, 0.75	0.66	
time ^b	-0.53	-0.64, -0.41	<0.01		-0.50	-0.66, -0.35	<0.01	
depression*PEs					1.09	-0.64, 2.83	0.22	
Immediate Recall NAS								
depression ^a	0.11	-	0.84	5139.6	0.22	-0.98, 1.41	0.72	5141.4
depression*time	-0.03	1.03, 1.26	0.69		0.03	-0.25, 0.32	0.83	
PEs		0.18, 0.12			0.43	-0.15, 1.00	0.15	
time ^b	-0.06	-	0.01		-0.11	-0.20, -0.03	0.01	
depression*PEs		0.11, -0.01			-0.5	-2.34, 1.33	0.59	

3C, Three-City Study; AIC, Akaike information criterion; Buschke, Buschke selective reminding test; CI, confidence interval, NAS, normative aging study; PEs, practice effects; WHICAP, Washington Heights-Inwood Community Aging Project.

a. Depression coefficients are for depressive patients.

b. Time coefficients are for one year of aging.

Web Table 5. Effects of Different Practice Effects Specifications on Cognitive Change for Diabetes by Study, Balanced Data From 3C-Dijon (Dijon, France, 1999–2010), NAS (Greater Boston Area, MA, 1993–2007) and WHICAP (New York City, NY, 1999–2012) Using Time Elapsed (Years) Since Baseline as the Time Scale With Main Exposure by Time Interaction and Exposure by Practice Effects Interaction

	No Practice Effects				Visit 1 Indicator			
	β	95% CI	P Value	AIC	β	95% CI	P Value	AIC
Verbal Fluency 3C-Dijon								
diabetes ^a	-0.51	-1.05, 0.03	0.06	52231	-0.5	-1.03, 0.04	0.07	52135
diabetes*time	-0.02	-0.09, 0.04	0.48		-0.63	-1.12, -0.15	0.01	
PEs					0.71	0.56, 0.86	<0.01	
time ^b	-0.13	-0.15, -0.12	<0.01		-0.19	-0.22, -0.17	<0.01	
diabetes*PE					-0.02	-0.09, 0.04	0.5	
Verbal Fluency WHICAP								
diabetes ^a	-0.81	-1.85, 0.25	0.13	12051.69	-0.59	-1.73, 0.55	0.31	12051.44
diabetes*time	-0.03	-0.17, 0.11	0.65		0.03	-0.16, 0.22	0.74	
PEs					0.47	0.02, 0.92	0.04	
time ^b	-0.23	-0.28, -0.17	0		-0.28	-0.35, -0.21	0	
diabetes*PE					-0.6	-1.82, 0.62	0.33	
Verbal Fluency NAS								
diabetes ^a	-1.65	-3.58, 0.29	0.1	7876.1	-2.02	-4.05, 0.01	0.05	7878.7
diabetes*time	0.22	-0.05, 0.5	0.11		-0.02	-0.52, 0.47	0.92	
PEs					-0.09	-0.73, 0.55	0.79	
time ^b	-0.14	-0.2, -0.09	<0.01		-0.13	-0.23, -0.04	0.01	
diabetes*PE					1.87	-1.24, 4.97	0.24	
Buschke WHICAP								
diabetes ^a	-3.85	-6.16, -1.54	0	14886.1	-3.63	-6.09, -1.18	0	14889.79
diabetes*time	0.16	-0.11, 0.43	0.24		0.23	-0.14, 0.60	0.23	
PEs					0.17	-0.70, 1.03	0.7	
time ^b	-0.53	-0.63, -0.43	0		-0.55	-0.68, -0.41	0	
diabetes*PE					-0.61	-2.94, 1.73	0.61	
Immediate Recall NAS								
diabetes ^a	0.45	-0.96, 1.87	0.53	7268	0.21	-1.27, 1.69	0.78	7264.3
diabetes*time	0.01	-0.18, 0.20	0.91		-0.17	-0.52, 0.18	0.34	
PEs					0.52	0.06, 0.97	0.03	
time ^b	-0.08	-0.12, -0.04	<0.01		-0.14	-0.21, -0.08	<.0001	
diabetes*PE					1.31	-0.87, 3.49	0.24	

AIC, Akaike information criterion; Buschke, Buschke selective reminding test; CI, confidence interval, NAS, normative aging study; PEs, practice effects; WHICAP, Washington Heights-Inwood Community Aging Project.

a. Diabetes coefficients are for diabetic patients.

b. Time coefficients are for one year of aging.