Supplementary e-Tables

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| **Table 1. Patient Characteristics at Baseline** |
|   | **# Missing Observations** | **Overall N=395** | **Active N=286** | **Non-active N=90** | **Sedentary N=19** | **P-value** |
| **Follow-up (months)\*** | 0 | 42 [12-72] | 42 [18-72] | 33 [18-60] | 24 [12-60] | **0.0010** |
| **Education (years)** | 0 | 13.3 (3.6) | 13.6 (3.5) | 12.9 (3.8) | 10.8 (3.4) | **0.0018** |
| **Female** | 0 | 163 (41%) | 114 (40%) | 33 (37%) | 16 (84%) | **0.0004** |
| **Age (years)** | 0 | 72.4 (4.6) | 72.2 (4.5) | 73.1 (5.0) | 72.8 (3.1) | 0.2501 |
| **Years Since Diabetes Diagnosis\*** | 23 | 9.8 [0.5-18.3] | 9.8 [0.5-18.3] | 9.8 [0.8-17.3] | 12.6 [4.2-16.8] | 0.2896 |
| **HbA1c** | 23 | 6.8 (0.8) | 6.7 (0.8) | 6.8 (0.8) | 7.3 (1.0) | 0.0501 |
| **Triglyceride** | 23 | 155.5 (60.1) | 152.1 (61.1) | 166.3 (57.7) | 159.1 (44.1) | 0.1603 |
| **Cholesterol** | 23 | 177.0 (25.9) | 176.8 (26.0) | 175.4 (25.8) | 194.1 (21.3) | 0.0782 |
| **LDL** | 23 | 98.3 (20.9) | 98.0 (21.1) | 97.6 (20.5) | 110.4 (17.4) | 0.1498 |
| **HDL** | 23 | 47.6 (10.8) | 48.1 (10.9) | 45.4 (10.1) | 51.9 (9.7) | **0.0484** |
| **Creatinine** | 24 | 1.0 (0.2) | 1.0 (0.2) | 1.0 (0.2) | 0.9 (0.2) | 0.2059 |
| **BMI** | 26 | 28.0 (4.1) | 27.5 (3.9) | 28.8 (4.0) | 34.8 (7.1) | **<0.0001** |
| **Non-Functional ADL** | 0 | 108 (27%) | 62 (22%) | 27 (30%) | 19 (100%) | **<0.0001** |
| **Medication Use** **Hypoglycemic Only** **Hypoglycemic + Insulin** **Insulin Only** **None** | 23 | 23291 (78%)51 (14%)7 (2%)23 (6%) | 9219 (79%)35 (13%)4 (1%)19 (7%) | 664 (76%)14 (17%)3 (4%)3 (4%) | 88 (73%)2 (18%)0 (0%)1 (9%) | 0.4962 |
| mean (SD) presented |
| \* median [min-max] presented |

**Table 2:** Longitudinal analysis of cognitive change persons remaining in same activity group activity (MMRM)- partially adjusted model+ (upper line) and fully adjusted model++ (lower line)

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|  | Estimates for each group | Comparisons |
|  |  |  |
|  | Physically active  | Not physically active | Sedentary |
|  | n=286*n=276* | n=90*n=90* | n=19n=8 |
| **Domain** | Mean (95% CI) | Mean (95% CI) | Mean (95% CI) | Active vs. Non-active (Interaction p value)p |
| **Global Cognition** | 0.0022 (0.00001; 0.0044)0.0023 (0.000; 0.0046) | -0.0012 (-0.0048; 0.0023)-0.0014 (-0.0051;0.0022) | -0.0058 (-0.0134; 0.0018)-0.0131 (-0.0223;-0.0039) | 0.03*0.001* |
| **Attention/****Working Memory** | 0.0036 (0.001; 0.0063)0.038 (0.0011; 0.0065) | -0.0015 (-0.0061; 0.0031)-0.0013 (-0.0061; 0.0035) | -0.0079 (-0.0179; 0.0021)-0.0115 (-0.0241; 0.0010) | 0.016*0.012* |
| **Executive Functions** | -0.0022 (-0.0047; 0.0003)-0.0024 (-0.0050; 0.0001) | -0.0069 (-0.0114; -0.0024) -0.0074 (-0.0119; -0.0029) | -0.0063 (-0.0160; 0.0035)-0.0139 (-0.0258; -0.0021) | 0.120.029 |
| **Semantic Categorization** | 0.0023 (0.0001; 0.0045)0.0027 (0.0004; 0.0050) | 0.0010 (-0.0025; 0.0045)0.0008 (-0.0028; 0.0044) | 0.0040 (-0.0033; 0.0113)-0.0039 (-0.0129; 0.0051) | 0.680.23 |
| **Episodic Memory** | 0.0033 (0.0004; 0.0062)0.0033 (0.0003; 0.0063) | 0.0052 (0.0001;0.0104)0.0050 (-0.0002; 0.0103) | -0.0055 (-0.0168; 0.0057)-0.0065 (-0.0203; 0.0074) | *0.22**0.30* |

+Partially adjusted: Controlling for sex, education and age

++Fully adjusted: Additionally controlling for HbA1c, Cholesterol, Triglyceride, LDL, HDL, T2d medication use, Creatinine and BMI

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| **Table 3. Patient Characteristics at Baseline** |
|   | **# Missing Observations** | **Overall N=1213** | **Included N=395** | **Excluded N=818** | **P-value** |
| **Education (years)** | 157 | 13.2 (3.6) | 13.3 (3.6) | 13.1 (3.6) | 0.3493 |
| **Female** | 144 | 448 (42%) | 163 (41%) | 285 (42%) | 0.7445 |
| **Age (years)** | 147 | 72.1 (4.7) | 72.4 (4.6) | 71.9 (4.7) | 0.0860 |
| **Years Since Diabetes Diagnosis\*** | 187 | 9.8 (4.4) | 9.8 [0.5-18.3] | 9.5 [0.3- 19.9] | 0.1058 |
| **HbA1c** | 188 | 6.8 (0.8) | 6.8 (0.8) | 6.8 (0.8) | 0.5263 |
| **Triglyceride** | 187 | 157.0 (63.6) | 155.5 (60.1) | 157.9 (65.5) | 0.5581 |
| **Cholesterol** | 187 | 178.5 (25.3) | 177.0 (25.9) | 179.3 (24.9) | 0.1513 |
| **LDL** | 187 | 99.7 (20.5) | 98.3 (20.9) | 100.5 (20.2) | 0.0936 |
| **HDL** | 187 | 47.6 (10.7) | 47.6 (10.8) | 47.6 (10.7) | 0.9556 |
| **Creatinine** | 191 | 1.0 (0.2) | 1.0 (0.2) | 1.0 (0.2) | 0.5327 |
| **BMI** | 198 | 28.3 (4.3) | 28.0 (4.1) | 28.5 (4.3) | **0.0391** |
| **Non-Functional ADL** | 0 | 374 (31%) | 108 (27%) | 266 (33%) | 0.0673 |
| **Medication Use** **Hypoglycemic Only** **Hypoglycemic + Insulin** **Insulin Only** **None** | 187 | 187819 (80%)142 (14%)9 (1%)56 (5%) | 23291 (78%)51 (14%)7 (2%)23 (6%) | 164528 (81%)91 (14%)2 (<1%)33 (5%) | 0.0584 |