**Supplemental Digital Content Table 1**: Variables considered as potential confounders and adjusted in analyses

|  |  |
| --- | --- |
| **Outcome** | **Models are adjusted for a** |
| All outcomes | Baseline values of the outcome, age (years), gender (men/women) and the following if significant at p<0.2 (backward elimination):  Physical Quality of Life (QoL) score, Mental Quality of Life (QoL) score, Total Fat & Fibre Behaviour Questionnaire (FFBQ) Index score, Fatigue score, ethnicity (Caucasian/other), married/living together (yes/no), completed post-school education (yes/no), currently smoke (yes/no), lower back problems (no/yes/affects activity)b, upper extremity problems (no/yes/affects activity)b, lower extremity problems (no/yes/affects activity)b, weekly headaches (yes/no) weekly difficulties with sleeping or waking (yes/no), job control (high [6 to 10] / low [1 to 5]), productivity (high [≥ median of 7.4] /low [<7.4]), mental demands (high [≥median of 16.7]/low [<16.7]), overall sitting (h/16 h) and, overall MVPA stepping (h/16 h) |
| All outcomes except body composition | Body Mass Index (BMI; kg/m2) if p<0.2 |
| Weight, kg | Age (linear and square term), gender, MVPA stepping (log), post-school education, lower back problem, lower extremity problems |
| Fat mass, kg and Fat, % body weight | Age, gender, physical QoL (linear and square term), FFBQ score, Caucasian ethnicity, post-school education, lower back problems, lower extremity problems |
| Waist circumference, cm | Age, gender, FFBQ score (linear and square term), sitting, MVPA stepping, post-school education, current smoking, weekly sleep problems, weekly headaches |
| Triglycerides (log), mmol/L | Age, gender, physical QoL (log), mental QoL (log), post school education, current smoking |
| HDL (log), mmol/L | Age, gender, baseline sitting (linear and square term), FFBQ score (linear and square term), fatigue, lower extremity problems, weekly sleep problems, productivity |
| LDL (log), mmol/L | Age (linear and square term), gender, sitting (linear and square term), weekly headaches |
| Total/HDL cholesterol (log) | Age, gender, sitting (linear and square term, post school education, current smoking, weekly headaches |
| Systolic blood pressure (log), mmHg | Age, gender, fatigue score, BMI (log), sitting (linear and square term), MVPA stepping (log), post-school education, upper extremity problem |
| Diastolic blood pressure (log), mmHg | Age, gender, physical QoL, fatigue score, BMI (log), sitting, MVPA stepping (log), lower extremity problems, post-school education, weekly sleep problems |
| Glucose (log), mmol/L | Age, gender, BMI (log), married/living together (yes/no), current smoking, lower extremity problems, weekly headaches |
| Insulin (log), µU/mL | Age (log), gender, mental QoL (log), BMI (log), sitting (linear and square term) |
| HOMA2-%β (log) | Age (log), gender, BMI (log), marital status, lower back problems, lower extremity problems, mental demands |
| HOMA2-%S | Age, gender, sitting (linear and square term), lower back problems, weekly sleep problems, mental demands |
| Overall Cardiometabolic Risk Score | Age, gender, physical QoL (log), BMI (log),post-school education, upper extremity problems, job control |

a Models adjusted for baseline values of the outcome, age and gender regardless of significance and other potential confounders (all baseline values only) that were retained as significant at p<0.2 in a backward elimination. Continuous independent variables were adjusted for as either a linear term, a linear and a square term or the log of the variable depending on the association with the outcome and the model checks.

b Problems in the lower back, upper extremities (neck, shoulders, elbows, wrists/hands) and lower extremities (hips, knees, ankles) were assessed over the “last three months” prior to baseline and were classed as no/yesd/affects activity. No = no problem in last three months. Yes = problem in last three months but that does not interfere with daily activities. Affects activity = problem present that interferes with performing regular activities.

**Supplemental Digital Content Table 2**: Odds of missing data (logistic regression) in 136 intervention (Int) and 95 control (C) participants a

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Cardio-metabolic Risk Score** | | **Lipids and body composition models** | | **Blood pressure models** | | **Glucose model b** | | **Insulin model c** | | **HOMA models** | |
|  | **OR (95% CI)** | **p** | **OR (95% CI)** | **p** | **OR (95% CI)** | **p** | **OR (95% CI)** | **p** | **OR (95% CI)** | **p** | **OR (95% CI)** | **p** |
| Missing (Int) | 54 (40%) |  | 46 (34%) |  | 50 (37%) |  | 33 (24%) |  | 49 (36%) |  | 48 (35%) |  |
| Missing (C) | 43 (45%) |  | 38 (40%) |  | 36 (38%) |  | 35 (37%) |  | 39 (41%) |  | 42 (44%) |  |
| Intervention group (Y/N) | 0.80 (0.35, 1.80) | .555 | 0.77 (0.28, 1.28) | .283 | 0.95 (0.41, 2.23) | .904 | 0.55 (0.26, 1.15) | .103 | 0.81 (0.36, 1.82) | .582 | 0.69 (0.29, 1.63) | .367 |
| Age (years) | 1.02  (0.98, 1.06) | .419 | 1.00 (0.96, 1.05) | .886 | 1.02 (0.97, 1.06) | .450 | 1.01 (0.97, 1.06) | .515 | 1.01 (0.98, 1.05) | .427 | 1.02 (0.98, 1.05) | .373 |
| Female (Y/N) | 1.36 (0.74, 2.47) | .294 | 1.37 (0.80, 2.34) | .231 | 1.44 (0.78, 2.65) | .217 | 1.28 (0.67, 2.43) | .425 | 1.17 (0.64, 2.15) | .593 | 1.13 (0.64, 1.98) | .646 |
| Physical QoL score | 0.96 (0.68, 1.34) | .787 | 0.97 (0.66, 1.43) | .874 | 0.95 (0.66, 1.37) | .770 | 0.96 (0.69, 1.33) | .770 | 1.11 (0.74, 1.66) | .581 | 1.12 (0.76, 1.65) | .540 |
| Mental QoL score | 0.90 (0.62, 1.31) | .566 | 1.04 (0.66, 1.61) | .869 | 1.06 (0.69, 1.62) | .770 | 0.80 (0.54, 1.17) | .227 | **0.70 (0.50, 0.67** | **.034** | **0.66 (0.47, 0.94)** | **.023** |
| FFBQ score | 1.60 (0.74, 3.34) | .208 | 1.86 (0.95, 3.65) | .067 | 1.41 (0.73, 2.72) | .284 | 1.70 (0.86, 3.34) | .118 | 1.36 (0.75, 2.48) | .289 | 1.34 (0.75, 2.37) | .295 |
| Fatigue score | 1.00 (0.95, 1.05) | .842 | 1.00 (0.94, 1.05) | .915 | 1.01 (0.76, 1.07) | .642 | 0.98 (0.92, 1.04) | .470 | 0.99 (0.93, 1.04) | .563 | 0.98 (0.93, 1.03) | .368 |
| BMI (log), kg/m2 | 2.57 (0.85, 7.80) | .089 | 1.71 (0.52, 5.57) | .347 | 1.82 (0.55, 6.00) | .296 | 2.40 (0.35, 16.71) | .347 | 3.47 (0.99, 12.09) | .051 | **3.81 (1.14, 12.72)** | **.032** |
| TV viewing (log) h/day | 1.05 (0.69, 1.60) | .799 | 0.91 (0.62, 1.35) | .629 | 1.05 (0.73, 1.51) | .777 | 0.91 (0.56, 1.48) | .696 | 1.03 (0.68, 1.57) | .868 | 1.03 (0.67, 1.57) | .888 |
| Caucasian (Y/N) | 0.69 (0.28, 1.72) | .402 | 0.71 (0.28, 1.78) | .437 | 0.60 (0.22, 1.64) | .289 | 0.66 (0.29, 1.52) | .305 | 0.63 (0.34, 1.15) | .120 | 0.66 (0.36, 1.21) | .163 |
| Married/living together (Y/N) | 1.25 (0.68, 2.32) | .443 | 1.46 (0.76, 2.80) | .237 | 1.18 (0.66, 2.12) | .546 | 1.62 (0.84, 3.13) | .139 | 1.37 (0.72, 2.59) | .310 | 1.33 (0.70, 2.49) | .353 |
| Post school education (Y/N) | 0.69 (0.30, 1.58) | .353 | 0.56 (0.26, 1.20) | .123 | 0.77 90.34, 1.71) | .484 | 0.81 (0.42, 1.56) | .509 | **0.41 (0.21, 0.80)** | **.013** | **0.48 (0.24, 0.95)** | **.037** |
| Currently smoke (Y/N) | 1.26 (0.68, 2.34) | .441 | 1.18 (0.58, 2.41) | .621 | 1.13 (0.51, 2.47) | .748 | 1.57 (0.96, 2.57) | .067 | 1.37 (0.86, 2.19) | .168 | **1.31 (0.92, 1.87)** | **.125** |
| Lower back |  | .580 |  |  |  |  |  |  |  |  |  |  |
| No problem | Ref |  |  | *.443* |  | *.653* |  | *.787* |  | *.794* |  | *.890* |
| Asymptomatic | 1.29 (0.63, 2.63) | .458 | 1.15 (0.54, 2.41) | .699 | 1.12 (0.57, 2.20) | .726 | 1.07 ( 0.50, 2.31) | .843 | 1.15 (0.61, 2.16) | .634 | 1.15 (0.62, 2.14) | .628 |
| Symptomatic | 1.64 (0.63, 4.58) | .289 | 1.61 (0.68, 3.79) | .254 | 1.51 (0.60, 3.79) | .353 | 1.37 (0.53, 3.51) | .484 | 0.87 (0.41, 1.85) | .698 | 1.08 (0.47, 2.48) | .835 |
| Upper extremities |  | *.351* |  | *.421* |  | *.568* |  | *.099* |  | *.428* |  | *.295* |
| No problem | ref |  |  |  |  |  |  |  |  |  |  |  |
| Asymptomatic | 0.60 (0.29, 1.24) | .153 | 0.66 (0.33, 1.31) | .210 | 0.79 (0.38, 1.62) | .484 | 0.53 (0.26, 1.08) | .075 | 0.94 (0.43, 2.05) | .869 | 0.84 (0.39, 1.78) | .616 |
| Symptomatic | 0.77 (0.33, 1.80) | .517 | 0.90 (0.41, 1.99) | .779 | 1.11 90.45, 2.74) | .814 | 1.04 (0.47, 2.29) | .922 | 1.36 (0.58, 3.21) | .452 | 1.32 (0.56, 3.10) | .562 |
| Lower extremities |  | *.854* |  | *.771* |  | *.726* |  | *.227* |  | *.271* |  | *.162* |
| No problem |  |  |  |  |  |  |  |  |  |  |  |  |
| Asymptomatic | 0.97 (0.53, 1.79) | .914 | 0.96 (0.58, 1.58) | .868 | 0.80 (0.44, 1.15) | .428 | 1.46 (0.70, 3.03) | .287 | 1.57 (0.71, 3.47) | .246 | 1.57 (0.71, 3.46) | .243 |
| Symptomatic | 1.13 (0.55, 2.32) | .716 | 1.17 (0.66, 2.08) | .560 | 0.87 (0.48, 1.57) | .623 | 2.02 (0.91, 4.46) | .078 | 1.89 (0.87, 4.14) | .102 | 2.33 (0.99, 5.45) | .052 |
| Weekly sleep problems (Y/N) | 0.66 (0.34, 1.27) | .197 | 0.77 (0.34, 1.72) | .490 | 0.83 (0.41, 1.69) | .587 | 0.78 (0.35, 1.75) | .515 | 0.67 (0.37, 1.21) | .164 | 0.72 (0.40, 1.33) | .269 |
| Weekly headaches (Y/N) | 0.80 (0.32, 2.02) | .612 | 0.70 (0.25, 1.96) | .464 | 0.83 (0.31, 2.26) | .687 | 0.80 (0.22, 2.89) | .711 | 0.51 (0.14, 1.86) | .280 | 0.61 (0.18, 2.12) | .409 |
| Sitting (log) h/16-h day | 1.63 (0.27, 9.88) | .567 | **5.72 (1.31, 25.09)** | **.024** | 1.73 (0.28, 10.67) | .525 | 2.50 (0.23, 27.67) | .424 | 3.11 (0.16, 62.24) | .429 | 2.40 (0.12, 46.56) | .535 |
| MVPA stepping (log) min/16-h | 0.82 (0.35, 1.94) | .623 | 0.70 (0.28, 1.72) | .408 | 0.86 (0.32, 2.29) | .746 | 0.71 (0.25, 1.99) | .481 | 0.66 (0.23, 1.92) | .416 | 0.64 (0.22, 1.82) | .369 |
| Job control (High/Low) | 0.66 (0.37, 1.16) | .134 | 0.73 (0.44, 1.19) | .186 | **0.56 (0.32, 0.98)** | **.043** | 0.77 (0.43, 1.67) | .340 | 1.07 (0.64, 1.80) | .786 | 1.05 (0.63, 1.78) | .828 |
| Productivity High/Low) | 0.80 (0.42, 1.53) | .472 | 0.82 (0.49, 1.36) | .406 | 0.59 (0.35, 1.00) | **.049** | 1.04 (0.52, 2.07) | .908 | 1.32 (0.84, 2.08) | .205 | 1.55 (0.90, 2.65) | .104 |
| Mental demands High/Low) | 1.44 (0.77, 2.69) | .231 | 1.50 (0.76, 2.98) | .223 | 1.65 (0.89, 3.05) | .101 | **1.85 (1.09, 3.13)** | **.026** | 1.54 (0.93, 2.54) | .088 | 1.55 (0.93, 2.61) | .089 |

Table presents odds ratio (OR) with 95% confidence interval (CI) and p-value from logistic regression. All yes/no (Y/N) variables compare yes versus no and high/low variables compare high versus low.

a Participants are considered to have missing data if data are missing for any of the outcomes at any timepoint, or for any of the covariates used in models for these outcomes.

b Also tested baseline insulin (µU/mL), OR = 1.02 (95% CI: 0.99, 1.06), p=0.168

c Also tested baseline glucose (mmol/L), OR = 1.11 (95% CI: 0.90, 1.38), p=0.304

**Supplemental Digital Content Table 3**: Changes from baseline in glucose metabolism, and differences between intervention and control groups, adjusting for confounders (completers analysis) a

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Outcome** | **Time** | **Intervention (n=136)** | |  | **Control (n=95)** | |  | **Intervention - Control** | | **p** | |
| **n** | **Adjusted mean change (95% CI) b** |  | **n** | **Adjusted mean change**  **(95% CI) b** |  | **Difference**  **(95% CI) c** | **p** | | **3M v12M** |
| Clustered cardiometabolic Risk score | 3M | 119 | -0.03 (-0.10, 0.05) |  | 71 | 0.03 (-0.06, 0.11) |  | -0.05 (-0.16, 0.06) | 0.369 | | 0.386 |
| *Baseline = -0.02* | 12M | 84 | 0.02 (-0.07, 0.12) |  | 57 | 0.13 (0.02, 0.25)\* |  | -0.11 (-0.26, 0.04) | 0.160 | |
| Fasting glucose d, mmol/L | 3M | 123 | 0.05 (-0.06, 0.17) |  | 79 | 0.10 (-0.04, 0.24) |  | -0.05 (-0.23, 0.13) | 0.597 | | **0.034** |
| *Baseline = 4.92* | 12M | 106 | 0.14 (-0.03, 0.30)^ |  | 62 | 0.46 (0.24, 0.67)\*\*\* |  | **-0.32 (-0.59, -0.05)** | **0.019** | |
| Fasting insulin d, µU/mL | 3M | 105 | 0.84 (-0.64, 2.32) |  | 75 | -0.40 (-1.82, 1.02) |  | 1.24 (-0.82, 3.30) | 0.240 | | **0.027** |
| *Baseline = 7.32* | 12M | 90 | 1.08 (-0.40, 2.55) |  | 63 | 1.38 (-0.36, 3.12) |  | -0.30 (-2.59, 1.99) | 0.797 | |
| HOMA2-%β d | 3M | 107 | 5.53 (-2.51, 13.57) |  | 68 | -1.92 (-10.52, 6.67) |  | 7.45 (-4.36, 19.27) | 0.217 | | 0.456 |
| *Baseline =87.07* | 12M | 91 | 4.55 (-4.02, 13.12) |  | 60 | -5.89 (-14.82, 3.04) |  | 10.44 (-1.98, 22.86) | 0.100 | |
| HOMA2-%S | 3M | 106 | -12.48 (-29.60, 4.64) |  | 68 | -4.48 (-23.97, 15.01) |  | -8.00 (-34.08, 18.07) | 0.548 | | **0.028** |
| *Baseline =140.18* | 12M | 91 | -15.26 (-33.15, 2.63)\* |  | 60 | -27.47 (-48.10, -6.85)\*\* |  | 12.22 (-15.22, 39.65) | 0.383 | |

^ p<0.1 (change from baseline) \* p<0.05 change from baseline \*\* p<0.01 change from baseline \*\*\* p<0.001 change from baseline

a all adjusted means are estimated from marginal means, with baseline values of the outcome and all confounders set to the overall mean, with the means backtransformed to original units for transformed outcomes.

b changes are estimated from marginal means for predicted mean – mean baseline value; differences between groups are estimated from marginal means at three months and 12 months

b estimated from pairwise comparisons and contrasts of marginal means at mean values of baseline levels and all covariates (at 3-months and at 12-months)

c outcome modelled as log of outcome; results in tables are presented back-transformed to original units

**Supplemental Digital Content Table 4**: Changes from baseline in body composition, lipids, and blood pressure, and differences between intervention and control groups, adjusting for confounders (completers analysis) a

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Outcome** | **Assumed**  **baseline (n=231)** |  | **Intervention (n=136)** | | |  | **Control (n=95)** | | |  | **Intervention - Control** | | |
|  | **n** |  | **Adjusted mean change (95% CI)b** |  | **n** |  | **Adjusted mean change (95% CI)b** |  | **Difference**  **(95% CI) c** |  | **p** |
| Weight, kg | 80.0 |  | 125 |  | 0.52 (-0.07, 1.11)^ |  | 87 |  | 0.44 (-0.28, 1.17) |  | 0.08 (-0.87, 1.02) |  | 0.876 |
| Fat mass, kg | 26.7 |  | 122 |  | -0.11 (-0.65, 0.43) |  | 84 |  | 0.19 (-0.46, 0.84) |  | -0.30 (-1.15, 0.55) |  | 0.489 |
| Fat mass, % of bodyweight | 32.9 |  | 122 |  | -0.15 (-0.89, 0.59) |  | 83 |  | 0.11 (-0.71, 0.93) |  | -0.26 (-1.36, 0.85) |  | 0.648 |
| Waist circumference, cm | 93.4 |  | 123 |  | 0.24 (-1.00, 1.48) |  | 83 |  | 1.21 (-0.20, 2.61)^ |  | -0.97 (-2.85, 0.92) |  | 0.315 |
| Triglyceridesd, mmol/L | 1.20 |  | 123 |  | -0.02 (-0.10, 0.07) |  | 85 |  | 0.02 (-0.07, 0.12) |  | -0.04 (-0.17, 0.09) |  | 0.543 |
| HDL cholesterold, mmol/L | 1.47 |  | 122 |  | 0.01 (-0.04, 0.06) |  | 85 |  | 0.01 (-0.05, 0.07) |  | 0.00 (-0.07, 0.08) |  | 0.961 |
| LDL cholesterold, mmol/L | 3.12 |  | 125 |  | -0.07 (-0.22, 0.07) |  | 87 |  | -0.09 (-0.25, 0.07) |  | 0.02 (-0.20, 0.23) |  | 0.869 |
| Total/HDLd | 3.62 |  | 125 |  | -0.09 (-0.23, 0.05) |  | 87 |  | -0.07 (-0.23, 0.08) |  | -0.02 (-0.23, 0.19) |  | 0.878 |
| Systolic BPd, mmHg | 125.6 |  | 123 |  | -0.85 (-3.05, 1.34) |  | 85 |  | 0.37 (-2.17, 2.90) |  | -1.22 (-4.61, 2.17) |  | 0.482 |
| Diastolic BPd, mmHg | 77.3 |  | 120 |  | 0.17 (-1.72, 2.06) |  | 83 |  | 0.85 (-1.31, 3.01) |  | -0.68 (-3.57, 2.20) |  | 0.643 |

^ p<0.1 (change from baseline)

a all adjusted means are estimated from marginal means, with baseline values of the outcome and all confounders set to the overall mean, with the means backtransformed to original units for transformed outcomes.

b changes are estimated from marginal means for predicted mean – mean baseline value; differences between groups are estimated from marginal means overall (i.e., across both 3- and 12- month follow ups combined)

c estimated from pairwise comparisons and contrasts of marginal means at mean values of baseline levels and all covariates (overall)

d outcome modelled as log of outcome; results in tables are presented back-transformed to original units

**Supplemental Digital Content Table 5**: Worksite clustering at baseline (n=14 clusters; n=231 Stand Up Victoria participants)a

|  |  |  |
| --- | --- | --- |
| O**utcome** | **Intra-cluster correlation (95% CI)** | **n/cluster, mean (min, max)** |
| Weight, kg | 0.021 (0.001, 0.253) | 16.5 (5, 38) |
| Body Fat, kg | <0.001 (<0.001, <0.001) | 16.4 (5, 38) |
| Body Fat, % | <0.001 (<0.001, <0.001) | 16.4 (5, 37) |
| Waist circumference, cm | <0.001 (<0.001, <0.001) | 16.5 (5, 38) |
| Triglycerides, mmol/L | <0.001 (<0.001, <0.001) | 16.5 (5, 38) |
| HDL Cholesterol, mmol/L | <0.001 (<0.001, <0.001) | 16.5 (5, 38) |
| LDL cholesterol, mmol/L | 0.065 (0.013, 0.273) | 16.4 (5, 37) |
| Total/HDL cholesterol | 0.020 (0.001, 0.382) | 16.5 (5, 38) |
| Systolic Blood Pressure, mmHg | 0.044 (0.007, 0.226) | 16.4 (5, 38) |
| Diastolic Blood Pressure, mmHg | 0.038 (0.005, 0.251) | 16.4 (5, 38) |
| Fasting Glucose, mmol/L\* | 0.007 (<0.001, 0.973) | 16.5 (5, 38) |
| Fasting Insulin, µU/mL | 0.023 (0.001, 0.318) | 15.4 (5, 38) |
| HOMA2-%β\* | 0.101 (0.026, 0.317) | 15.4 (5, 38) |
| HOMA2-%S\* | 0.031 (0.003, 0.272) | 15.4 (5, 38) |
| Clustered cardiometabolic risk score | <0.001 (<0.001, <0.001) | 16.4 (5,38) |

a calculated in STATA from random intercept models, REML estimation.