

Supplementary Materials



Evaluating Short-Term Musculoskeletal Pain Changes in Desk-Based Workers Receiving a Workplace Sitting-Reduction Intervention

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Supplemental Table S1. Participant flow chart.

| | Baseline (<i>n</i> = 135) | 3 months (<i>n</i> = 110) |
|--------------------------------------|----------------------------|----------------------------|
| Neck pain | 56 (41.5%) | 45 (40.9%) |
| Upper extremity pain | 62 (45.9%) | 45 (40.9%) |
| Upper back pain | 39 (28.9%) | 24 (21.8%) |
| Lower back pain | 54 (40.0%) | 41 (37.3%) |
| Lower extremity pain | 57 (42.2%) | 49 (44.5%) |
| Number of areas with pain (/5), n(%) | | |
| 0 | 28 (20.7%) | 26 (23.6%) |
| 1 | 30 (22.2%) | 27 (24.5%) |
| 2 | 28 (20.7%) | 18 (16.4%) |
| 3 | 21 (15.6%) | 24 (21.8%) |
| 4 | 21 (15.6%) | 6 (5.5%) |
| 5 | 7 (5.2%) | 9 (8.2%) |

Supplemental Table S2. Prevalence of pain at baseline and three months in all Stand Up Lendlease participants.

Total pain (0-9), per unit

MVPA, per 10 min/16h day

Work sitting, per h/10h workday

Work prolonged sitting, per h/10h workday

| Characteristic | п | Odds Ratio (95% CI) | р |
|--|-----|---------------------|-------|
| Intervention arm (ORG + Tracker vs ORG) | 153 | 1.52 (0.66, 3.53) | 0.305 |
| Age, per 10 years | 143 | 1.08 (0.65, 1.78) | 0.754 |
| Sex (female vs male) | 153 | 0.53 (0.26, 1.05) | 0.065 |
| Body mass index, kg/m ² | 118 | 1.02 (0.87, 1.19) | |
| Job category | 153 | | 0.061 |
| Senior leader/team leader | 25 | 1 (ref) | |
| Other managerial | 80 | 1.34 (0.36, 4.94) | 0.643 |
| General staff | 48 | 0.38 (0.08, 1.87) | 0.216 |
| Weekday work hours, h/workday | 149 | 1.45 (0.92, 2.27) | 0.101 |
| Education (university vs <university)< td=""><td>144</td><td>1.15 (0.44, 2.99)</td><td>0.760</td></university)<> | 144 | 1.15 (0.44, 2.99) | 0.760 |
| Currently smoke (yes vs no) | 135 | 1.82 (0.55, 6.03) | 0.302 |
| Sitting knowledge (1-5), per unit | 134 | 0.50 (0.26, 0.95) | 0.037 |
| Physical quality of life (0-100), per 10 units | 128 | 0.87 (0.57, 1.32) | 0.495 |
| Mental quality of life (0-100), per 10 units | 128 | 1.14 (0.88, 1.47) | 0.311 |
| Stress (1-10), per unit | 131 | 1.03 (0.91, 1.17) | 0.590 |
| Job performance (1-10), per unit | 131 | 1.05 (0.66, 1.64) | 0.839 |
| Job control (1-10), per unit | 129 | 1.21 (1.00, 1.47) | 0.049 |
| Supervisor relations (1-10), per unit | 131 | 1.02 (0.79, 1.30) | 0.898 |
| Work satisfaction (1-10), per unit | 131 | 1.12 (0.73, 1.72) | 0.570 |
| | | | |

135

146

146

149

0.71 (0.49, 1.03)

0.78 (0.55, 1.12)

0.85 (0.62, 1.16)

1.03 (0.90, 1.18)

Supplemental Table S3. The odds of missing data on three-month pain and activity changes by baseline characteristics in all Stand Up Lendlease participants at baseline.

Table presents odds ratio (OR) and 95% confidence interval (CI) from logistic regression models, using linearized variance estimation ('survey commands') to correct for clustering. MVPA = moderate-vigorous physical activity.

0.069

0.162

0.284

0.627

| Model | Adjusts for | b (95% CI) | р |
|------------------------------------|---|----------------------|-------|
| A. 'Unadjusted' a | - | -0.84 (-1.43, -0.25) | 0.005 |
| B. Minimally | age, sex (male/female), BMI category | -0.84 (-1.44, -0.23) | 0.007 |
| adjusted ^a | (normal/underweight, overweight/obese, missing) | | |
| C. Confounder | age, sex, BMI category (normal/underweight, | -0.81 (-1.44, -0.18) | 0.012 |
| adjusted ^a | overweight/obese, missing), weekday work hours, | | |
| | full time equivalency (1.0 / <1.0), physical quality | | |
| | of life, mental quality of life | | |
| D. Further adjusted ^{a,b} | age, sex, BMI category (normal/underweight, | -0.75 (-1.37, -0.13) | 0.017 |
| | overweight/obese, missing), MVPA, mental quality | | |
| | of life, physical quality of life, job control score, | | |
| | work satisfaction score, desired sitting (over | | |
| | half/under half), current smoker (yes/no) | | |

Supplemental Table S4. Associations of sitting time reductions (h/10 h at work) with changes in lower back pain scores (completer analyses).

^a All estimates are from mixed models that adjust for clustering (random intercept), and intervention arm (fixed effect).

^b Adjusted for age, sex, BMI category and variables significant at p<0.2 out of potential confounders (MVPA, mental quality of life, physical quality of life, weekday work hours, full time equivalency [1.0/<1.0]) and potential influencers of uptake of the behavioural messages (education, current smoker [yes/no], job control score, work satisfaction score, preferred time spent sitting at work [over/under 50%], current smoker [yes/no], job performance score, supervisor relations score, work satisfaction score, sitting knowledge score, and stress.



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