

## Supplementary material (sensitivity analyses S1-S3)

### S1 Verification of the primary models results in those with less than 5 missing pain ratings over the 12-month period.

Table S1. Association between percent sitting time at work and neck-shoulder pain intensity (scale 0-10) in the Dphacto study population

	Estimate	SE	p	95%CI	
				Lower	Upper
<b>Model 1 (n=625)</b>					
Intercept	2.813	0.189	<b>&lt;0.001</b>	2.442	3.185
Time	-0.016	0.010	0.12	-0.036	0.004
Sitting	0.002	0.005	0.66	-0.008	0.012
Interaction (sitting×time)	-0.001	0.000	<b>0.01</b>	-0.001	0.000
<b>Model 2 (n=610)</b>					
Intercept	0.881	0.730	0.23	-0.553	2.316
Time	-0.014	0.010	0.17	-0.035	0.006
Sitting	0.005	0.005	0.33	-0.005	0.015
Interaction (sitting×time)	-0.001	0.000	<b>0.01</b>	-0.001	0.000
<b>Model 3 (n=595)</b>					
Intercept	2.529	1.127	0.03	0.315	4.743
Time	-0.015	0.011	0.16	-0.036	0.006
Sitting	0.013	0.007	0.05	0.000	0.026
Interaction (sitting×time)	-0.001	0.000	<b>0.01</b>	-0.001	0.000

*Model 1: Unadjusted*

*Model 2: Adjusted for gender, age, and BMI*

*Model 3: Adjusted for the covariates in model 2 + occupational sector, lifting/carrying time at work, sitting time at leisure, physical activity at work and leisure, upper arm elevation >60° at work*

## S2 Verification of the primary models results using sitting time in absolute values

Table S2. Association between absolute sitting time (h/day) at work and neck-shoulder pain intensity (scale 0-10) in the Dphacto study population

	Estimate	SE	p	95%CI	
				Lower	Upper
<b>Model 1 (n=625)</b>					
Intercept	2.983	0.168	<b>&lt;0.01</b>	2.653	3.313
Time	-0.023	0.010	<b>0.02</b>	-0.042	-0.004
Sitting	0.000	0.057	1.00	-0.113	0.112
Interaction (sitting×time)	-0.007	0.003	<b>0.03</b>	-0.013	0.000
<b>Model 2 (n=610)</b>					
Intercept	1.298	0.693	0.06	-0.063	2.659
Time	-0.022	0.010	<b>0.03</b>	-0.041	-0.003
Sitting	0.027	0.058	0.64	-0.087	0.140
Interaction (sitting×time)	-0.007	0.003	<b>0.03</b>	-0.013	-0.001
<b>Model 3 (n=595)</b>					
Intercept	2.785	1.038	<b>0.01</b>	0.748	4.823
Time	-0.022	0.010	<b>0.02</b>	-0.041	-0.003
Sitting	0.119	0.073	0.10	-0.024	0.262
Interaction (sitting×time)	-0.007	0.003	<b>0.04</b>	-0.013	0.000

*Model 1: Unadjusted*

*Model 2: Adjusted for gender, age, and BMI*

*Model 3: Adjusted for the covariates in model 2 + occupational sector, lifting/carrying time at work, sitting time at leisure, physical activity at work and leisure, upper arm elevation >60° at work*

### S3 Sensitivity analysis of the primary adjusted model with additional adjustments for covariates

Table S3. Association between percent sitting time at work and neck-shoulder pain intensity (scale 0-10), with additional adjustments for covariates added separately to the primary adjusted model 3.

	Estimate	SE	p	95%CI	
				Lower	Upper
Baseline pain intensity (n=595)					
Intercept	-0.044	0.702	0.95	-1.423	1.334
Time	-0.019	0.011	0.08	-0.039	0.002
Sitting	0.009	0.004	<b>0.04</b>	0.000	0.017
Interaction (sitting×time)	-0.001	0.000	<b>0.03</b>	-0.001	0.000
Psychosocial factors (n=412) <sup>a</sup>					
Intercept	3.977	1.362	<b>&lt;0.01</b>	1.300	6.655
Time	-0.009	0.013	0.48	-0.035	0.017
Sitting	0.015	0.008	<b>0.05</b>	0.000	0.030
Interaction (sitting×time)	-0.001	0.000	<b>0.02</b>	-0.001	0.000
Pain medication (n=592) <sup>b</sup>					
Intercept	4.614	1.118	<b>0.00</b>	2.419	6.809
Time	-0.019	0.010	0.07	-0.039	0.002
Sitting	0.011	0.006	0.06	-0.001	0.023
Interaction (sitting×time)	-0.001	0.000	<b>0.02</b>	-0.001	0.000
Change in physical work tasks (n=509) <sup>c</sup>					
Intercept	2.184	1.135	<b>0.05</b>	-0.046	4.415
Time	-0.023	0.011	<b>0.04</b>	-0.045	-0.002
Sitting	0.011	0.007	0.10	-0.002	0.024
Interaction (sitting×time)	-0.001	0.000	<b>0.05</b>	-0.001	0.000

Note: all four models are also adjusted for the covariates in model 3: gender, age, BMI, occupational sector, lifting/carrying time at work, sitting time at leisure, physical activity at work and leisure, upper arm elevation >60° at work

<sup>a</sup>Influence at work and social support at work

<sup>b</sup>Categorical variable with “never” as the reference category

<sup>c</sup>Categorical variable (yes/no) with “no change” as the reference category