Review
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Interventions to reduce sedentary behavior and increase physical activity during productive work: a systematic review [1]

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1 Supplementary tables A-E

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Table A. List of all full-text articles assessed for eligibility

1		2005	Summaries for patients. An intervention program to decrease the duration and cost of work disability related to musculoskeletal disorders	Annals of Internal Medicine
2		2003	Employers in the United States promote healthy lifestyles in order to reduce health care expenditures	Rev Panam Salud Publica/Pan American Journal of Public Health
3	Abenhaim et al.	2000	The role of activity in the therapeutic management of back pain: Report of the International Paris Task Force on Back Pain	Spine
4*	Adams & White	2002	A systematic approach to the development and evaluation of an intervention promoting stair use	Health Education Journal

5	Addley et al.	2001	Creating healthy workplaces in Northern Ireland: Evaluation of a lifestyle and physical activity assessment programme	Occupational Medicine
6	Aira et al.	2013	Reducing risk behaviors linked to non-communicable diseases in Mongolia: A randomized controlled trial.	American Journal of Public Health
7	Aittasalo & Miilunpalo	2006	Offering physical activity counselling in occupational health care - Does I reach the target group?	Occupational Medicine
8*	Aittasalo et al.	2012	Promoting walking among office employees - evaluation of a randomized controlled intervention with pedometers and e-mail messages	BMC Public Health
9	Aldana et al.	2006	A worksite diabetes prevention program: two-year impact on employee health	Journal of the American Association of Occupational Health Nurses.
10	Aldana et al.	2005	The effects of a worksite chronic disease prevention program	Journal of Occupational and Environmental Medicine
11	Alderman et al.	2013	Cognitive Function During Low Intensity Walking: A Test of the Treadmill Workstation	Journal of Physical Activity and Health
12*	Alkhajah et al.	2012	Sit–Stand Workstations; A Pilot Intervention to Reduce Office Sitting Time	American Journal of Preventive Medicine
13	Anderson et al.	2009	The Effectiveness of Worksite Nutrition and Physical Activity Interventions for Controlling Employee Overweight and Obesity. A Systematic Review	American Journal of Preventive Medicine
14*	Auweele et al.	2005	Promoting stair use among female employees: The effects of a health sign followed by an E-mail	Journal of Sport and Exercise Psychology

15	Balasubramanian et al.	2008	Comparing Stationary Standing With an Intermittent Walking Posture During Assembly Operations	Human Factors and Ergonomics in Manufacturing
16	Barr-Anderson et al.	2011	Integration of short bouts of physical activity into organizational routine: A systematic review of the literature	American Journal of Preventive Medicine
17	Beers et al.	2008	Increasing passive energy expenditure during clerical work	European Journal of Applied Physiology
18	Bellicha et al.	2015	Stair-use interventions in worksites and public settings - a systematic review of effectiveness and external validity	Preventive Medicine
19*	Ben-ner et al.	2014	Treadmill Workstations: The Effects of Walking while Working on Physical Activity and Work Performance	PLoS One
20	Benedict & Arterburn	2008	Worksite-based weight loss programs: A systematic review of recent literatur	American Journal of Health Promotion
21	Beresford et al.	2010	Environmental assessment at worksites after a multilevel intervention to promote activity and changes in eating: The PACE Project	Journal of Occupational and Environmental Medicine
22	Bernaards et al.	2006	The (cost-)effectiveness of a lifestyle physical activity intervention in addition to a work style intervention on the recovery from neck and upper limb symptoms in computer workers	BMC Musculoskeletal Disorders
23	Bernaards et al.	2008	Improving work style behavior in computer workers with neck and upper limb symptoms	Journal of Occupational Rehabilitation
24	Bigos et al.	2009	High-quality controlled trials on preventing episodes of back problems: systematic literature review in working-age adults	Spine Journal

25	Blair Irvine et al.	2011	Get moving: A web site that increases physical activity of sedentary employees	American Journal of Health Promotion
26	Blangsted et al.	2008	One-year randomized controlled trial with different physical-activity programs to reduce musculoskeletal symptoms in the neck and shoulders among office workers	Scandinavian Journal of Work, Environment and Health
27	Blue & Conrad	1995	Adherence to worksite exercise programs: An integrative review of recent research	Journal of the American Association of Occupational Health Nurses
28	Bort-Roig et al.	2014	Uptake and factors that influence the use of 'sit less, move more' occupational intervention strategies in Spanish office employees	International Journal of Behavioral Nutrition and Physical Activity
29	Bort-Roig et al.	2014	Measuring and influencing physical activity with smartphone technology; a systematic review	Sport Medicine
30	Brown et al.	2009	Stand up, sit down, keep moving: Turning circles in physical activity research?	British Journal of Sports Medicine
31	Buckley et al.	2014	Standing-based office work shows encouraging signs of attenuating post-prandial glycaemic excursion	Occupational and Environmental Medicine
32	Burton et al.	2008	It just doesn't speak to me: Mid-aged men's reactions to '10,000 Steps a Day'	Health Promotion Journal of Australia
33*	Carr et al.	2012	Feasibility of a portable pedal exercise machine for reducing sedentary time in the workplace	British Journal of Sports Medicine
34*	Carr et al.	2013	Multicomponent intervention to reduce daily sedentary time; a randomised controlled trial	BMJ Open

35	Castillo-Retamal & Hinckson	2011	Measuring physical activity and sedentary behaviour at work: a review	Work
36	Chau et al.	2010	Are workplace interventions to reduce sitting effective? A systematic review	Preventive Medicine
37*	Chau et al.	2014	The effectiveness of sit-stand workstations for changing office workers' sitting time: results from the Stand@Work randomized controlled trial pilot	International Journal of Behavioral Nutrition and Physical Activity
38	Christensen et al.	2011	Diet, physical exercise and cognitive behavioral training as a combined workplace based intervention to reduce body weight and increase physical capacity in health care workers -RCT	BMC Public Health
39	Cifuentes et al.	2015	Facilitators and Barriers to Using Treadmill workstations Under Real Working Conditions: A Qualitative Study in Female Office Workers	American Journal of Health Promotion
40	Coffeng et al.	2014	Effectiveness of a Combined Social and Physical Environmental Intervention on Presenteeism, Absenteeism, Work Performance, and Work Engagement in Office Employees	Journal of Occupational and Environmental Medicine
41	Cole et al.	1998	Using "stages of behavioral change" constructs to measure the short-term effects of a worksite-based intervention to increase moderate physical activity	Psychology Rep
42	Commissaris et al.	2014	Effects of a standing and three dynamic workstations on computer task performance and cognitive function tests	Applied Ergonomics
43	Conn et al.	2009	Meta-Analysis of Workplace Physical Activity Interventions	American Journal of Preventive Medicine
44	Conrad & Blue	1995	Physical fitness and employee absenteeism. Measurement considerations for programs	Journal of the American Association of Occupational Health Nurses

45	Cooley & Pedersen	2013	A pilot study of increasing non-purposeful movement breaks at work as a means of reducing prolonged sitting	Journal of Environmental and Public Health
46	Cooley et al.	2014	Assessment of the Impact of a Workplace Intervention to Reduce Prolonged Occupational Sitting Time	Qualitative Health Research
47	Cox et al.	2011	Metabolic cost and speech quality while using an active workstation	Journal of Physical Activity and Health
48	Craig et al.	2002	Exploring the effect of the environment on physical activity: A study examining walking to work	American Journal of Preventive Medicine
49	Croteau	2004	A Preliminary Study on the Impact of a Pedometer-based Intervention on Daily Steps	American Journal of Health Promotion
50	Croteau	2004	Strategies used to increase lifestyle physical activity in a pedometer-based intervention	Journal of Allied Health
51*	Davis & Kotowski	2014	Postural Variability: An Effective Way to Reduce Musculoskeletal Discomfort in Office Work	Human Factors
52*	De Cocker et al.	2010	The effect of a multi-strategy workplace physical activity intervention promoting pedometer use and step count increase	Health Education Research
53	De Kraker et al.	2005	The effect of a campaign to stimulate walking during lunch break on the physical activity behavior of employees	Geneeskunde en Sport
54	DeJoy et al.	2012	Process Evaluation Results From an Environmentally Focused Worksite Weight Management Study	Health Education and Behavior

55	Dishman et al.	2010	Dose relations between goal setting, theory-based correlates of goal setting and increases in physical activity during a workplace trial	Health Education Research
56	Dodson et al.	2008	Worksite policies and environments supporting physical activity in midwestern communities	American Journal of Health Promotion
57	Dong et al.	2004	Activities contributing to total energy expenditure in the United States: Results from the NHAPS study	International Journal of Behavioral Nutrition and Physical Activity
58	Drury et al.	2008	Posture and performance: sitting vs. Standing for security screening	Ergonomics
59	Dunn et al.	2013	Delivering a behavior-change weight management program to teachers and state employees in North Carolina	American Journal of Health Promotion
60*	Dutta et al.	2014	Using Sit-Stand Workstations to Decrease Sedentary Time in Office Workers: A Randomized Crossover Trial	International Journal of Environmental Research Public Health
61	Duvivier et al.	2013	Minimal Intensity Physical Activity (Standing and Walking) of Longer Duration Improves Insulin Action and Plasma Lipids More than Shorter Periods of Moderate to Vigorous Exercise (Cycling) in Sedentary Subjects When Energy Expenditure Is Comparable	PLoS One
62	Ebara et al.	2008	Effects of Adjustable Sit-stand VDT Workstations on Workers' Musculoskeletal Discomfort, Alertness and Performance	Industrial Health
63	Elmer & Martin	2014	A cycling workstation to facilitate physical activity in office settings	Applied Ergonomics
64*	Evans et al.	2012	Point-of-choice prompts to reduce sitting time at work: A randomized trial	American Journal of Preventive Medicine

65*	Eves et al.	2012	A multi-component stair climbing promotional campaign targeting calorific expenditure for worksites; A quasi-experimental study testing effects on behavior attitude and intention	BMC Public Health
66*	Faghri et al.	2008	E-technology and pedometer walking program to increase physical activity at work	Journal of Primary Prevention
67	Farag et al.	2010	Evaluation of a community based participatory physical activity promotion project: Effect on cardiovascular disease risk profiles of school employees school employees	BMC Public Health
68	Fidler et al.	2008	Feasibility of Using a Walking Workstation During CT Image Interpretation	Journal of American College of Radiologists
69	Funk et al.	2012	Effect of Walking Speed on Typing Performance Using an Active Workstation	Perceptual and Motor Skills: Exercise and Sport
70	Gates et al.	2006	Changing the work environment to promote wellness: a focus group study	Journal of the American Association of Occupational Health Nurses
71*	Gilson et al.	2007	Walking towards health in a university community: A feasibility study	Preventive Medicine
72	Gilson et al.	2008	Experiences of route and task-based walking in a university community: Qualitative perspectives in a randomized control trial	Journal of Physical Activity and Health
73*	Gilson et al.	2009	Do walking strategies to increase physical activity reduce reported sitting in workplaces: A randomized control trial	International Journal of Behavioral Nutrition and Physical Activity
74*	Gilson et al.	2012	Does the use of standing 'hot' desks change sedentary work time in an open plan office?	Preventive Medicine

75	Gilson et al.	2013	Walk@Work: An automated intervention to increase walking in university employees not achieving 10,000 daily steps	Preventive Medicine
76	Goldgruber & Ahrens	2010	Effectiveness of workplace health promotion and primary prevention interventions: A review	Journal of Public Health
77*	Gorman et al.	2013	Does an 'Activity-Permissive' Workplace Change Office Workers' Sitting and Activity Time?	PLoS One
78	Groeneveld et al.	2010	Lifestyle-focused interventions at the workplace to reduce the risk of cardiovascular disease - A systematic review	Scandinavian Journal of Work, Environment and Health
79*	Grunseit et al.	2013	"Thinking on your feet": A qualitative evaluation of sit-stand desks in an Australian workplace	BMC Public Health
80	Haines et al.	2007	A pilot intervention to promote walking and wellness and to improve the health of college faculty and staff.	Journal of American College Health
81	Hasegawaa et al.	2001	Effects of a sit–stand schedule on a light repetitive task	International Journal of Industrial Ergonomics
82	Hammond et al.	2000	The Centers for Disease Control and Prevention director's physical activity challenge: An evaluation of a worksite health promotion intervention	American Journal of Health Promotion
83*	Healy et al.	2013	Reducing sitting time in office workers: Short-term efficacy of a multicomponent intervention	Preventive Medicine
84	Hewitt et al.	2008	The effects of a graduated aerobic exercise programme on cardiovascular disease risk factors in the NHS workplace: A randomised controlled trial	Journal of Occupational Medicine and Toxicology

85	Holtermann et al.	2011	The health paradox of occupational and leisure-time physical activity	BJSM Online
86	Hopkins et al.	2012	Implementing organizational physical activity and healthy eating strategies on paid time: Process evaluation of the UCLA WORKING pilot study	Health Education Research
87	Hunter et al.	2013	Physical activity loyalty cards for behavior change: A quasi-experimental study.	American Journal of Preventive Medicine
88	Husemann et al.	2009	Comparisons of Musculoskeletal Complaints and Data Entry Between a Sitting and a Sit-Stand Workstation Paradigm	Human Factors
89	Hutchinson & Wilson	2012	Improving nutrition and physical activity in the workplace: A meta-analysis of intervention studies	Health Promotion International
90	Ishii et al.	2007	Effect of a physical activity improvement program using the transtheoretical model at a small-scale company	Kurume Medical Journal
91	John et al.	2009	Effect of Using a Treadmill Workstation on Performance of Simulated Office Work Tasks	Journal of Physical Activity and Health
92*	John et al.	2011	Treadmill Workstations: A Worksite Physical Activity lntervention in Overweight and Obese Office Workers	Journal of Physical Activity and Health
93	Kahn-Marshall & Gallant	2012	Making Healthy Behaviors the Easy Choice for Employees: A Review of the Literature on Environmental and Policy Changes in Worksite Health Promotion	Health Education and Behavior
94	Karakolis & Callaghan	2014	The impact of sit-stand office workstations on worker discomfort and productivity: a review	Applied Ergonomics

95*	Kerr et al.	2004	Increasing Stair Use in a Worksite Through Environmental Changes	American Journal of Health Promotion
96	King	1991	Community intervention for promotion of physical activity and fitness	Exercise and Sport Sciences Reviews
97*	Koepp et al.	2013	Treadmill desks: A 1-year prospective trial	Obesity
98*	Kwak et al.	2007	A poster-based intervention to promote stair use in blue and white-collar worksites	Preventive Medicine
99*	Kwak et al.	2009	Behavioral and cognitive effects of a worksite-based weight gain prevention program: The NHF-NRG in balance-project	Journal of Occupational and Environmental Medicine
100	Laestadius et al.	2009	The Proactive Approach—Is It Worthwhile? A Prospective Controlled Ergonomic Intervention Study in Office Workers	Journal of Occupational Environmental Medicine
101	Lara et al.	2008	Pausa para tu Salud: Reduction of Weight and Waistlines by Integrating Exercise Breaks into Workplace Organizational Routine	Prevention of Chronic Disease
102	Lauzon et al.	2008	Participant experiences in a workplace pedometer based physical activity program	Journal of Physical Activity and Health
103	Levine & Miller	2007	The energy expenditure of using a "walk-and-work" desk for office workers with obesity	British Journal of Sports Med
104	Lewis & Eves	2011	Specific effects of a calorie-based intervention on stair climbing in overweight commuters	Annals of Behavioral Medicine
105	Linde et al.	2012	Healthworks: Results of a multi-component group-randomized worksite environmental intervention trial for weight gain prevention	International Journal of Behavioral Nutrition and Physical Activity

106	Linnan & Marcus	2001	Worksite-based physical activity programs and older adults: Current status and priorities for the future	Journal of Aging and Physical Activity
107	Lu et al.	2008	Effects of an incentive-based online physical activity intervention on health care costs	Journal of Occupational and Environmental Medicine
108	MacEwen et al.	2015	A systematic review of standing and treadmill desks in the workplace	Preventive Medicine
109	Mair et al.	2014	Benefits of a worksite or home-based bench stepping intervention for sedentary middle-aged adults – a pilot study	Clinical Physiology and Functional Imaging
110	Manini et al.	2014	Interventions to reduce sedentary behavior	Medicine and Science in Sports and Exercise
111	Marshall et al.	2003	Print versus website physical activity programs: A randomized trial	American Journal of Preventive Medicine
112	Matson-Koffman et al.	2005	A site-specific literature review of policy and environmental interventions that promote physical activity and nutrition for cardiovascular health: What works?	American Journal of Health Promotion
113	McAlpine et al.	2007	An office-place stepping device to promote workplace physical activity	British Journal of Sports Med
114	McCoy et al.	2014	Health Promotion in Small Business; A Systematic Review of Factors Influencing Adoption and Effectiveness of Worksite Wellness Programs	Journal of Occupational and Environmental Medicine
115*	Meyer et al.	2010	Stairs instead of elevators at workplace: Cardioprotective effects of a pragmatic intervention	European Journal of Cardiovascular Prevention and Rehabilitation
116	Miller & Brown	2004	Steps and Sitting in a Working Population	International Journal of Behavioral Medicine

117	Moy et al.	2006	The results of a worksite health promotion programme in Kuala Lumpur, Malaysia	Health Promotion International
118	Naito et al.	2008	Effect of a 4-year workplace based physical activity intervention program on the blood lipid profiles of participating employees: The high-risk and population strategy for occupational health promotion (HIPOP-OHP) study	Atherosclerosis
119*	Neuhaus et al.	2014	Workplace Sitting and Height- Adjustable Workstations; A Randomized Controlled Trial	American Journal of Preventive Medicine
120	Nicoll & Zimring	2009	Effect of Innovative Building Design on Physical Activity	Journal of Public Health Policy
121	Odeen et al.	2013	Systematic review of active workplace interventions to reduce sickness absence	Occupational Medicine
122	Ohlinger et al.	2011	The Effect of Active Workstation Use on Measures of Cognition, Attention, and Motor Skill	Journal of Physical Activity and Health
123	Olander & Eves	2011	Elevator availability and its impact on stair use in a workplace	Journal of Environmental Psychology
124*	Olander & Eves	2011	Effectiveness and cost of two stair-climbing interventions - Less is more	American Journal of Health Promotion
125*	Opdenacker & Boen	2008	Effectiveness of face-to-face versus telephone support in increasing physical activity and mental health among university employees	Journal of Physical Activity and Health
126	Parker	2014	Beyond Motivation: Job and work Design for Development, Health, Ambidexterity, and More	Annual Review of Psychology
127*	Parry et al.	2013	Participatory Workplace Interventions Can Reduce Sedentary Time for Office Workers—A Randomised Controlled Trial	PLoS One

128	Pedersen et al.	2009	The effect of worksite physical activity intervention on physical capacity, health, and productivity: A 1-year randomized controlled trial	Journal of Occupational and Environmental Medicine
129	Pedersen et al.	2013	An e-health intervention designed to increase workday energy expenditure by reducing prolonged occupational sitting habits	Work
130	Perkiö-Mäkelä	1999	Influence of exercise-focused group activities on the physical activity, functional capacity, and work ability of female farmers--a three-year follow-Up	International journal of occupational safety and ergonomics : JOSE
131	Perkiö-Mäkelä et al.	1999	Activities supporting work ability as a part of farmers' occupational health services	Journal of Occupational Rehabilitation
132	Perkiö-Mäkelä	2001	Exercise and ergonomics-focused group counseling among female farmers	Occupational Ergonomics
133	Peterman et al.	2012	Factors affecting the increased energy expenditure during passive cycling	European Journal of Applied Physiology
134	Plotnikoff et al.	2005	Efficacy of an e-mail intervention for the promotion of physical activity and nutrition behavior in the workplace context	American Journal of Health Promotion
135	Plotnikoff et al.	2007	The efficacy of stage matched and standard public health materials for promoting physical activity in the workplace: The Physical Activity Workplace Study (PAWS)	American Journal of Health Promotion
136	Plotnikoff et al.	2010	A test of cognitive mediation in a 12-month physical activity workplace intervention: Does it explain behaviour change in women?	International Journal of Behavioral Nutrition and Physical Activity
137	Plotnikoff & Karunamuni	2011	Steps towards permanently increasing physical activity in the population	Current Opinion in Psychiatry

138	Prestwich et al.	2012	Randomized controlled trial of collaborative implementation intentions targeting working adults' physical activity	Health Psychology
139	Pronk	2009	Physical activity promotion in business and industry: Evidence, context, and recommendations for a national plan	Journal of Physical Activity and Health
140*	Pronk et al.	2012	Reducing Occupational Sitting Time and Improving Worker Health: The Take-a-Stand Project, 2011	Prevention of Chronic Disease
141	Proper et al.	2003	Effect of individual counseling on physical activity fitness and health: A randomized controlled trial in a workplace setting	American Journal of Preventive Medicine
142	Purath et al.	2004	A brief intervention to increase physical activity in sedentary working women	Canadian Journal of Nursing Research
143	Reijonsaari et al.	2012	The effectiveness of physical activity monitoring and distance counseling in an occupational setting - results from a randomized controlled trial (coact)	BMC Public Health
144	Rezende et al.	2014	Sedentary behavior and health outcomes: an overview of systematic reviews	PLoS One
145	Robertson et al.	2013	Office ergonomics training and a sit-stand workstation: Effects on musculoskeletal and visual symptoms and performance of office workers	Applied Ergonomics
146	Robroek et al.	2007	The (cost-)effectiveness of an individually tailored long-term worksite health promotion programme on physical activity and nutrition: Design of a pragmatic cluster randomised controlled trial	BMC Public Health
147	Robroek et al.	2009	Determinants of participation in worksite health promotion programmes: A systematic review	International Journal of Behavioral Nutrition and Physical Activity

148	Robroek et al.	2012	Cost-effectiveness of a long-term Internet-delivered worksite health promotion programme on physical activity and nutrition: A cluster randomized controlled trial	Health Education Research
149	Roelofs & Straker	2002	The experience of musculoskeletal discomfort amongst bank tellers who just sit, just stand or sit and stand at work	Ergonomics South Africa
150	Rongen et al.	2013	Workplace health promotion: a meta-analysis of effectiveness	American Journal of Preventive Medicine
151	Sammito	2013	Obesity intervention during a work health promotion: The obesity intervention program of the German military forces	Journal of Occupational and Environmental Medicine
152	Schult et al.	2013	Sitting on stability balls; biomechanics evaluation in a workplace setting	Journal of Occupational and Environmental Hygiene
153*	Schumacher et al.	2013	Boosting workplace stair utilization: A study of incremental reinforcement	Rehabilitation Psychology
154*	Schuna et al.	2014	Evaluation of a workplace treadmill desk intervention; a randomized controlled trial	Journal of Occupational and Environmental Medicine
155	Shresta et al.	2015	Workplace interventions for reducing sitting at work	Cochrane Database Systematic Reviews
156	Siddiqui & Shahid	2012	Promoting healthy workplaces - Health pledges initiative at North Kirklees Primary Care Trust, NHS, England	Journal of the Pakistan Medical Association
157	Sørensen & Holman	2014	A participative intervention to improve employee well-being in knowledge work jobs; a mixed-methods evaluation study	Work & Stress
158	Spittaels et al.	2007	Effectiveness of an online computer-tailored physical activity intervention in a real-life setting	Health Education Research

159	Straker et al.	2009	The effects of walking and cycling computer workstations on keyboard and mouse performance	Human Factors
160	Straker et al.	2013	Sit-stand desks in call centres: Associations of use and ergonomics awareness with sedentary behavior	Applied Ergonomics
161	Sun et al.	2013	Effectiveness of a workplace-based intervention program to promote mental health among employees in privately owned enterprises in China	Population Health Management
162*	Swartz et al.	2014	Prompts to disrupt sitting time and increase physical activity at work, 2011-2012	Prevention of Chronic Disease
163*	Swenson & Siegel	2013	Increasing Stair Use in an Office Worksite Through an Interactive Environmental Intervention	American Journal of Health Promotion
164	Task Force on Community Preventive Services	2009	A Recommendation to Improve Employee Weight Status Through Worksite Health Promotion Programs targeting Nutrition, Physical Activity, or Both	American Journal of Preventive Medicine
165	Terry et al.	2011	Effectiveness of a worksite telephone-based weight management program	American Journal of Health Promotion
166*	Thompson et al.	2008	Feasibility of a walking workstation to increase daily walking	British Journal of Sports Med
167*	Thompson & Levine	2011	Productivity of transcriptionists using treadmill desk	Work
168*	Thompson et al.	2014	Increasing physician activity with treadmill desks	Work

169	Thorndike et al.	2011	Participation and cardiovascular risk reduction in a voluntary worksite nutrition and physical activity program	Preventive Medicine
170*	Titze et al.	2001	A worksite intervention module encouraging the use of stairs: Results and evaluation issues	Sozial- und Präventivmedizin
171	Titze et al.	2001	Effects of a lifestyle physical activity intervention on stages of change and energy expenditure in sedentary employees	Psychology of Sport and Exercise
172	To et al.	2013	Workplace physical activity interventions: A systematic review	American Journal of Health Promotion
173	Torbeyns et al.	2014	Active workstations to fight sedentary behavior	Sports Medicine
174	Touger-Decker et al.	2010	Workplace weight loss program; Comparing live and internet methods	Journal of Occupational and Environmental Medicine
175	Tudor-Locke et al.	2014	Changing the way we work: elevating energy expenditure with workstation alternatives	International Journal of Obesity
176	Tudor-Locke et al.	2014	Implementation and adherence issues in a workplace treadmill desk intervention	Applied Physiology, Nutrition, and Metabolism
177	Tveito TH, Eriksen HR.	2009	Integrated health programme: A workplace randomized controlled trial	Journal of Advanced Nursing
178	Van Berkel et al.	2014	Effectiveness of a worksite mindfulness-based multi-component intervention on lifestyle behaviors	International Journal of Behavioral Nutrition and Physical Activity
179	van Dongen et al.	2012	A systematic review of the cost-effectiveness of worksite physical activity and/or nutrition program	Scandinavian Journal of Work, Environment and Health

180*	van Nieuw-Amerongen et al.	2011	The use of prompts, increased accessibility, visibility, and aesthetics of the stairwell to promote stair use in a university building	Environmental Behavior
181	Verweij et al.	2012	The application of an occupational health guideline reduces sedentary behaviour and increases fruit intake at work: Results from an RCT	Occupational Environmental Medicine
182	Von Thiele Schwarz & Hasson	2012	Effects of worksite health interventions involving reduced work hours and physical exercise on sickness absence costs	Journal of Occupational and Environmental Medicine
183	Vuillemin et al.	2011	Worksite physical activity interventions and obesity: A review of European studies (the HOPE project)	Obesity Facts
184	Warren et al.	2010	Small steps are easier together: A goal based ecological intervention to increase walking by women in rural worksites	Preventive Medicine
185	White & Ransdell	2003	Worksite intervention model for facilitating changes in physical activity, fitness, and psychological parameters	Perception and Motor Skills
186	Wilks et al.	2006	The introduction of sit–stand worktables; aspects of attitudes, compliance and satisfaction	Applied Ergonomics
187	Wong et al.	2012	The Effects of Workplace Physical Activity Interventions in Men: A Systematic Review	American Journal of Men's Health
188	Yap et al.	2009	The effect of tailored E-mails in the workplace. Part I. Stage movement toward increased physical activity level	Journal of the American Association of Occupational Health Nurses
189	Yap et al.	2009	The effect of tailored e-mails in the workplace. Part II. Increasing overall physical activity	Journal of the American Association of Occupational Health Nurses

190	Zinn et al.	2012	A "small-changes" workplace weight loss and maintenance program: Examination of weight and health outcomes	Journal of Occupational and Environmental Medicine
191	Zinn et al.	2012	Efficacy of a "small-changes" workplace weight loss initiative on weight and productivity outcomes	Journal of Occupational and Environmental Medicine

* articles considered eligible for the review

Table B. Data extraction from studies included in the review

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
Alternative workstation interventions								
Alkhajah (2012)(39)	Office workers IG: N=18 (17F, 1M) Age= 34 (9) BMI= 23 (3) CG: N=14 (12F, 2M) Age= 40 (7) BMI= 22 (3)	CCT, 3 months	I: Sit-stand workstation at office, verbal instructions on its use and on correct posture for sitting and standing and importance of regular postural change throughout the day. C: No change in workplace, instruction to continue usual behaviour.	X	X	X	X	SB and PA: Objectively measured time spent sitting, standing, and stepping at the workplace for 7 days (activPAL3 activity monitor). WP: Self-reported work performance. MPO: Fasting total cholesterol, HDL, triglycerides, and glucose levels.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
Ben-Ner (2014)(40)	Sedentary workers from a national financial services company N=43 (67%F in I1, 81%F in I2, 73%F in C) Age and BMI not mentioned	Randomized cross-over design, 1 year	I: availability of a treadmill workstation with group I1 receiving the treadmill 29 weeks before group I2; group I1 used the treadmill during 52 weeks, group I2 during 23 weeks, no additional training, information, feedback or motivational aspects. C: only receipt of weekly surveys.	X	X	X		SB and PA: Total daily activity caloric expenditure, averaged over a week; time (in min) spend sedentary (sitting or walking at a speed <1mph), in light activities (speed 1–2 mph) and active activities (speed >2mph) (Actical accelerometer). WP: Self-reported by employees: overall performance for the week preceding the survey (1 item, 0-10 scale); quality of performance of past two days (1 item, 5-point Likert scale); quantity of performance of past two days (1 item, 5-point Likert scale); quality of interactions with co-workers of past two days (1 item, 5-point Likert scale). WP: Scored by supervisors on the same four dimensions using items that were nearly identical to those asked of Employees.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
Carr (2012)(41)	Office workers N=18 (16F, 2M) Age= 40 (10) BMI= 27 (5)	Cohort, 4 weeks	I: Individual portable pedal machines with bio-feedback introduced at workplace.	X	X	X		SB and PA: Self-reported time sitting, standing, walking while at work (7-day PA recall questionnaire). WP: Self-reported work productivity and work quality (5-point Likert scale).
Carr (2013)(42)	Office workers IG: N=23 (20F, 3M), Age= 43 (9), BMI= 32 (5) CG: N=17 (16F, 1M), Age= 48 (10), BMI= 33 (5)	RCT, 12 weeks	I: Individual portable pedal machine with feedback, access to motivational website with tips and email reminders, pedometer to use in conjunction with a virtual competition on the website.	X	X		X	SB and PA: Objectively measured ST, and low, moderate and vigorous PA for 7 days during all waking hours (Stepwatch). MPO: HR, weight, BP, % body fat, cardiorespiratory fitness and fasting lipids.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
			C: Participants were asked to maintain current behaviour.					
Chau (2014)(43)	Sedentary staff from a non-government health agency N=42 (36F, 6M) Age= 38 (11) BMI: <18.5: N=5 18.5-24.9: N=20 25-29.9: N=20 ≥30: N=5	Randomized cross-over design, 4 weeks	I: individual sit-stand workstation, brief training on how to use it, advice to increase standing time gradually. I was a voluntary part of a workplace wellness program. C: no sit-stand workstation, training or advice.	**X**	**X**			SB and PA: Sitting, standing and stepping time at work (ActivPAL), self-reported time spent sitting, standing, walking and doing more physically demanding tasks at work (OSPAQ), self-reported domain-specific sitting over the whole day (Workforce Sitting Questionnaire: WSQ).

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
Davis (2014)(44)	Call centre operators N=37 (29F, 8M) 18 full-time workers: Age= 37 (12) BMI= 27 (6) 19 part-time workers: Age= 34 (9) BMI= 26 (5)	CCT, 4 weeks in each of 4 conditions	I1: Individual sit-stand workstation with software prompting subjects to make a postural change (stand up and move around or adjust the sit-stand table) every 30 minutes. I2: Individual sit-stand workstation. I3: Conventional workstation with software prompting subjects to make a postural change	X	X	X		SB and PA: Video-based assessment by researcher of: total and %sitting time, total and %standing time, no. of times switching between sitting/standing, all during every work shift in the 2-weeks assessment period. WP: No. of calls/h; no. of calls picked up/h, hold time; %time not available for calls, all during every work shift in the 2-weeks assessment period (custom call centre software). WP: No. of keystrokes, no. of mouse clicks, time of computer use, all during every work shift in the 2-weeks assessment period (WorkPace software).

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
			(stand up and move around) every 30 minutes. C: Conventional workstation.					
Dutta (2014)(45)	Sedentary office workers N=28 (19F, 9M) Age= 40 BMI= 26 (5)	Randomized cross-over design, 4 weeks	I: Individual sit-stand workstation, plus target to stand for 50% of workday at end of intervention period, ergonomic evaluation on proper standing/sitting height, weekly email reminder on study goal.	**X**	**X**	**X**		SB and PA: Sitting time at work and overall (Modular Signal Recorder 145); self-reported time spent sitting, standing, walking and doing more physically demanding tasks at work (OSPAQ); activity units per hour of sedentary [0-1.5 MET] activities (Gruve accelerometer). WP: Self-reported productivity once a week (Work Productivity and Activity Impairment Questionnaire; WPAIQ).

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
			C: performing usual work habits, measurements same as I, ergonomic evaluation on proper sitting height.					
Gilson (2012)(46)	Office workers N=11 (7F, 4M) Age= 47 (10) BMI= 26 (4)	Cohort, 1 week	I: Four height adjustable desks were fitted into the centre of the open plan office space, and employees were encouraged to use them by the researchers who explained the benefits of reducing ST.	**X**	**X**			SB and PA: Objectively measured time spent in sedentary (<1.6 METs), low (1.6-3 METs) and moderate (>3 METs) levels of PA for two consecutive working weeks calculated during work hours (armband accelerometer SenseWear™Pro2).
Gorman (2013)(47)	Office workers from an academic physical	Cohort, average pre-	I: activity-permissive physical environment:	**X**	**X**	**X**	**X**	SB and PA: stepping, standing and sitting time (total, and time accumulated in bouts ≥30 minutes [prolonged]) and

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				SB	PA	WP	MPO	
	activity research centre N=24 (18F, 6M) Age= 35 (8)	post period 4 months (range 3-6)	internal glass enclosed staircase, height-adjustable workstations, standing-option in meeting rooms and common areas, centralized supplies/ printing, office layout that promoted vertical integration.					no. of sit-to-stand transitions at the workplace during 7 days both pre and post intervention (ActivPAL activity monitor). WP: Self-rated work performance (9-item, 10-point scale) and job satisfaction (1-item, 5-point Likert scale) once, both pre and post intervention. Self-rated productivity (1-item, 5-point Likert scale) once, post intervention only. MPO: Weight, % body fat, plasma glucose, lipid profile and C-reactive protein, and serum insulin at first day of each study phase.
Grunseit (2013)(48)	Office workers N=17 (9F, 8M)	Cohort, 3 months	I: Sit-stand desks (mechanical and electrical) were introduced at the work-	**X**	**X**			SB and PA: Self-reported proportion of time spent sitting, standing, walking and doing more physically demanding tasks at work on a typical day in the last 7 days (OSPAQ).

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				SB	PA	WP	MPO	
	Age: median= 46 (range: 27-59) BMI= NA		site, and employees were given some information on how to use them and their potential benefits at the start of the intervention period.					
Healy (2013)(49)	Office workers (employees of government agency) IG: N=22 CG: N=21 Age= 43 (10) BMI= 27 (5)	CCT, 4 weeks	I: A sit-stand desk was provided for the duration of the study, along with instructions and ergonomic guidelines, and access to a personalized 'health coach' with weekly consultations on feedback, goal-setting	**X**	**X**	**X**	**X**	SB and PA: Objectively measured time spent sitting at the workplace in min/day, prolonged sitting (ST accumulated in bouts ≥30 min), standing, and moving for 7 days (activPAL3 activity monitor). WP: Self-reported work performance, absenteeism and presenteeism.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
			and encouragement aimed at "Stand Up", "Sit Less" and "Move More". C: Participants were asked to continue current behaviour.					MPO: Weight, fat mass, fat free mass, BP, waist and hip circumference, and fasting plasma glucose, cholesterol and triglycerides.
John (2011)(50)	University employees N=12 (7F, 5M) Age= 46 (9) BMI= 34 (5)	Cohort, 9 months	I: Treadmill workstations introduced at participants' offices.	**X**	**X**		**X**	PA: Objectively measured no. of steps/day, total time spent walking, standing, sitting/lying for 2 days during waking hours (ActivPAL activity monitor). MPO: Weight, waist and hip circumferences, % body fat, resting HR and BP, serum lipid profile, caloric intake.
Koepp (2013)(51)	Office workers (financial services cooperation)	Cohort, 1 year	I: Access to personal, height adjustable	**X**	**X**	**X**	**X**	SB and PA: Objectively measured sedentary time (zero PA), and time in low-, moderate-, high-intensity during waking hours (belt-worn accelerometer, Actical). Energy

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
	N=36 (25F, 11M) Age= 42 (10) BMI= 29 (7)		treadmill that could be used with a chair as well.					expenditure while lying, sitting and walking (1, 2, 3 mph, with indirect calorimetry). WP: Self-reported, by subject and supervisor, overall performance, quality of work, quantity of work, and quality of interactions with co-workers (every week (one week recall period) and every 3 months (4 months recall period). MPO: BP, height, weight, body composition, glucose, lipids, thyroid stimulating hormone, haemoglobin (from venous blood samples).
Neuhaus (2014)(30)	Office workers from administrative units of a university N=44 (37F, 7M)	CCT, 13 weeks	I1: multi-component intervention, i.e. height-adjustable workstation, plus organizational-level support (management	**X**	**X**	**X**		SB and PA: Sitting time, prolonged sitting time (time accumulated in sitting bouts ≥30 minutes), standing time, stepping time, no. of steps, MET minutes of moderate-to-vigorous physical activity (MVPA) at ≥4 METs (≥120

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				SB	PA	WP	MPO	
	Age= 43 (12) BMI= 26 (5)		consultation, staff education, manager e-mails to staff) and individual-level support (face-to-face coaching, telephone support). I2: height-adjustable workstation. C: usual practice.					steps per minute) per 8-hr workday; no. of sit-to-stand transitions per hours of workplace sitting (activPAL3). WP: work efficiency (last week; one question, scale 1-10); absenteeism (last 3 months; one question); presenteeism (last 3 months; one question).
Parry (2013)(52)	University employees IG: N=19 CG: N=14 (50F, 12M)	RCT, 12 weeks	I: Access to treadmill and bicycle ergometer + standing or exercises during work; walk-and-talk meetings; walk to	**X**	**X**		**X**	SB and PA: Objectively measured total ST and sustained ST, time in low-intensity PA and in moderate-vigorous PA, frequency of breaks in ST during work hours and overall (ActiGraph GT3X worn on right hip).

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				SB	PA	WP	MPO	
	Age= 44 (6) BMI= 28 (6)		colleague instead of e-mailing; promote incidental activity at the workplace. C: Office ergonomics: active sitting (chair bound), taking breaks from sitting, standing meetings, use of products that invite active sitting.					MPO: Weight.
Pronk (2012)(53)	Office workers (health promotion department) IG: N= 24 (23F, 1M)	CCT, 4 weeks	I: Access to individual sit-stand device (Workfit S or C); supported by management.	**X**	**X**			SB and PA: assessed at work by an experience-sampling method (ESM), i.e. 3 times per day at random times a text message was sent to the participants cell phone asking whether they were sitting (0), standing (1) or walking (2) at that time, these scores were processed to average ESM-

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				SB	PA	WP	MPO	
	CG: N= 10 (8F, 2M) Age= 38 (11) BMI= 23 (3)		C: No information about their activities or instructions. Part of a comprehensive, multi component corporate health and well-being program: access to PA resources, financial incentives to participate in PA, supported by policies and protocols.					score, self-reported ST per day at work, self-reported time spent in PA.
Schuna (2014)(54)	Overweight/obese office workers with desk-based jobs	RCT, 12 weeks	I: Electronically controlled height adjustable workstation, with speed-adjustable	**X**	**X**		**X**	SB and PA: Steps/day, steps/min, light and moderate-vigorous physical activity, sedentary time/hour, average length of sedentary periods, frequency of transitions from sedentary to non-sedentary behaviour (number per hour) –

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				SB	PA	WP	MPO	
	N= 41 (baseline) (40F, 1M) IG: N= 21 (baseline), N= 15 (follow up) CG: N= 20 (baseline) N= 16 (follow-up) Age = 40 (10) BMI = 36 (8)		low-speed treadmill were provided on a sharable basis. Participants were asked to schedule use of the treadmill-workstation on a common calendar, such that they could use the treadmill twice/day for up to 45 minutes/session (i.e. 90 minutes/day). C: Maintain normal working at regular workstations					all computed from data of ActiGraph accelerometer worn on right hip for 24 hr/day on for at least 4 working days at baseline and at follow-up MPO: body weight, % body fat, BMI calculated, at baseline and follow-up.

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				SB	PA	WP	MPO	
Thompson (2011)(55)	Medical transcriptionists N=12 (12F) Age= NA BMI= NA	Cohort, 1 day	I: Walking on a treadmill workstation (1 mile/hour).	X	X	X		SB and PA: Day of performing transcriptionist's work while sitting versus performing work while walking (8h each, in two 4h sessions with a 5 min break each hour). Energy expenditure estimated from accelerometer data (Actical) and indirect calorimetry. WP: no. of errors, time to complete one transcription and time to complete whole tape assessed by expert and self-reported productivity (5-point Likert scale).
Thompson (2008)(56)	Employees from hospital N= 8 (8F) Age= NA BMI= NA	Cohort, 2 weeks	I: Access to treadmill workstation.		X	X		PA: Daily steps during work hours (StepWatch). Estimate of extra energy expenditure above BMR based on data of activity monitor. WP: Self-reported productivity (5-point Likert scale)

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				SB	PA	WP	MPO	
Thompson (2014)(57)	Sedentary physicians N=20 at baseline N=17 at follow-up (M=14, F=3) Age = 48 (8)	Randomized cross-over trial: 12 weeks control followed by 12 weeks intervention for half the group; 12 weeks control followed by 12 weeks	I: Treadmill desks with counselling and feedback about behaviours provided for 8 participants for 12 weeks, followed by 12 weeks of C without treadmill desks or counselling. Group of 9 others received same interventions in the opposite order of C first for 12 weeks followed by 12 weeks of I.		**X**		**X**	Accelerometer data converted into calories expended in movements/day, body composition (BMI, waist circumference, weight and body fat), fasting lipid profile, glucose and insulin, blood pressure.

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				SB	PA	WP	MPO	
		intervention for the other half of the group						
Interventions promoting stair use								
Adams (2002)(58)	All users of a building of a medical school (students, staff and visitors) N= NA 1750-1773 observations	ITS, 4 weeks	I: Posters outside and inside elevators and stairwells.		**X**			PA: Observer recorded stair use made at 5 consecutive workdays for 1¾ hours during term time, at baseline and at each follow-up.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
	Age= NA BMI= NA							
Auweele (2005)(59)	Office workers (employees in administrative building) N=135 (131F, 4 M) 755-823 observations Age= NA BMI= NA	ITS, 2 weeks (I1 one week, I2 one week)	I1: Health sign on easel beside elevator and stairs on each floor. I2: I1 in combination with worksite's doctor sending a short email to all employees about the health benefit of regular daily activities such as taking the stairs.		**X**			PA: Observations of stair use made on Tuesdays, Wednesdays and Thursdays of each observation week by researchers posing as trainees and seated at the entrance to the stairway on each floor.

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				SB	PA	WP	MPO	
Eves (2012)(60)	1700 Office workers (in city council building and water supply company) 28,854 ascents were counted Age= NA BMI= NA	ITS, 3 weeks	I1: Stair-climbing intervention; posters with 'extended message targeting attitude' were placed at the foyer and halfway up each flight of stairs, and an arrow pointing to the direction of stairs was placed as a 'point of choice prompt' at the entrance of the elevators. I2: I1 and in addition, messages were also		**X**			PA: Employees entering and exiting the ground floor lift(s) and stairwell were recorded by unobtrusive automatic counters.

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				SB	PA	WP	MPO	
			placed at the stair rises on each floor.					
Kerr (2004)(61)	554 Office workers (employees of National Center for Chronic Disease Prevention and Health Promotion) + 110 additional people in the same office building N=554 (411F, 143M)	ITS, 4 months	I: Four-stage change of stairwell in building of 5 stories (4 stairs of 24 steps each): 1) carpet and paint 5 weeks, +2) art work 9 months, +3) motivational signs 25 months, +4) music 4 months.		**X**			PA: Rate of stairwell trips per occupant per day (entering and leaving staircase measured with infrared beam sensors).

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				SB	PA	WP	MPO	
	Age= NA BMI= NA							
Kwak (2007)(62)	150 employees in office building + approximately 800 blue collar workers in paper factory Age= NA BMI= NA	ITS, 3 weeks	I: Posters at the entrance of the elevator and in the stairwell on every floor; various texts, all ending with: "the stairs? A good idea!" Part of larger intervention; this intervention was implemented 14 months		**X**			PA: observer recorded stair use (proportion of total use of stairs and elevator).

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
			after the start of a larger intervention directed at weight gain prevention - subjects had already received individual feedback and environmental intervention.					
Meyer (2010)(63)	Employees of hospital N= 77 (42F, 35M) Age= 43 (9) BMI= 26 (4)	Cohort, 12 weeks	I: Promotional campaign for stair use, using posters and floor stickers positioned at a 'point of choice' between stairs and elevators at each floor.		**X**		**X**	PA: Self-reported number of ascended and descended one-story staircase units; total daily PA by the validated Physical Activity Frequency Questionnaire and accelerometer (3x one week). MPO: weight, BMI, fat mass, fat free mass, waist circumference, diastolic and systolic BP, resting HR, VO_2

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				SB	PA	WP	MPO	
								max, HDL, LDL and total cholesterol, triglycerides, insulin resistance index, C-reactive protein.
Olander (2011)(64)	University employees N=5965(51% F) of which 1200 received I 1321-1591 ascents were counted Age= NA BMI= NA	ITS, 12 days	I: Two-phase stair climbing campaign. 1) Information regarding the benefits of stair climbing (offered during an information day with physical activity 'classes' and stands promoting healthy eating and free BP check), and 2) positioning (7 days later) of point-of-choice		**X**			PA: Observer recorded ascending stair use (proportion of total use of stairs and elevator); observed for 5 days during 8-10 a.m. in 4 different buildings.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
			prompts between elevator and stairs.					
Schumacher (2013)(65)	Employees of a local business, working in the same building N= 216 (181F, 35M) Age= 45 BMI= NA	Cohort, 6 months	I: Financial incentive for stair use for 6 months after a 2-weeks promotional campaign to stimulate stair use (meetings, e-mails, newsletters, flyers), and access to personalized web-based account with info on targeted health behaviour(s) and related incentives, accounting of points earned, and link to internet shop to purchase		**X**			PA: Automatic recording of entering and exciting a stairwell by use of worker's identification card; processed to number of stair takers (>1 stair transaction/6 months), number of stair transactions per member and per member per weekday.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
			prizes for points. Part of larger health and wellness incentives program with health risk assessment, biometric testing and feedback, health education classes and weight loss / lifestyle programs.					
Swenson (2013)(66)	Employees of a county public health department (intervention site) and employees of a	ITS with control site 6 week intervention	I worksite: In a 3-storey building the stairwell was decorated with interactive paintings such as maps, storyboards, and wish lists to encourage		**X**			PA: Daily stair and elevator usage were monitored for 2 weeks prior to the intervention and 6 weeks after intervention, using discrete electronic people counters in the intervention worksite. At the control worksite only stair use was monitored using door-access card counter.

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				SB	PA	WP	MPO	
	city hall office (control site) IG: N= 200 CG: N= 140		employees to take the stairs rather than the elevator. C worksite: Nothing was changed					
Titze (2001)(67)	338 Office workers working in the same building Baseline questionnaire filled in by N=253 (82F, 171M) Age= 43 (10)	ITS, 4 months	I: Promoting stair use with written information about PA recommendations, action-days encouraging stair use (fruit, games, symbolically closing the lift), steering committee with representatives from each office.		**X**			PA: Observation of absolute and % stair use and absolute and % lift use; automatic measurement of stair use (per person) and lift use (per door opening).

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
	BMI= 23 (3)							
Van Nieuw-Amerongen (2011)(68)	Students and employees of an university building N= NA 21,786 observations (58%F) Age= NA BMI= NA	ITS, 4 weeks	I: Multiple environmental changes of five-level stairwell: stair rise banners with health messages on 20 steps between level 0-1, 1-2; posters with humorous messages in stairwell between level 0-1, 1-2; orange footsteps towards stairs at levels 0 and 1; wooden entrance door replaced by glass door + doors permanently open;		**X**			PA: Observation of absolute and % stair use, counted from video recordings on levels 0 and 1.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
			walls painted and carpet replaced. No instructions, incentives or meetings mentioned, and no info whether it's part of a larger intervention.					
Personalized behavioural interventions								
Aittasalo (2012)(69)	Office workers IG: N=123 (87F, 36M) CG: N=118 (78F, 40M) IG: Age= 44 (9)	RCT, 6 months	I: Pedometer and logbook for self-monitoring PA, 1-h motivational meeting, monthly email messages with tailored goals	**X**	**X**			SB and PA: Long version of the IPAQ with some modifications. Walking and sitting behaviour at work measured using self-reports of min/week spent on 'walking at work', and min/day spent on 'sitting during a working day'.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
	CG: Age= 45 (9) I: BMI>25: 51% C: BMI>25: 64%		C: Pedometer and logbook without any meetings/goals etc.					
De Cocker (2010)(70)	Office workers (social service company) IG: N=146 (85F, 61M) CG: N=152 (73F, 79M) Age= 40 (10) BMI= 24 (4)	CCT, 20 weeks	I: Comprehensive worksite intervention program which included providing pedometers and activity logs, periodic emails with information, motivation, tips, goal-setting and feedback, flyers and posters encouraging more PA, stair use promotion by flyers/posters and also footsteps painted on the		**X**			PA: Work time and overall PA measured by self-administered IPAQ questionnaire (long-form) and 7 days objective PA measurement (Yamax Digiwalker SW-200) and activity logs.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
			floor and an intra-office step-competition. C: Behave as usual.					
Evans (2012)(71)	Office workers (in administrative research and lecturer roles) IG: N=14 (11F, 3M) CG: N=14 (11F, 3M) IG: Age= 49 (8) CG: Age= 39 (10) IG: BMI= 24 (4) CG: BMI= 24 (3)	RCT, 5 days	I: Brief education session on the importance of reducing long sitting periods at work, prompting software for 5 workdays at computer which reminded them to stand up for at least 1 min once every 30 min.	**X**				SB: Total ST at work, no. of sitting events/workday and no and duration of prolonged sitting events (> 30 min) at work were measured objectively (ActivPAL) for 5 workdays at baseline and 5 workdays during the intervention.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
			C: Received only the brief education session.					
Faghri (2008)(72)	Office workers (in state agency) N=206 (169F, 37M) Age<45: 49% BMI= 27 (0.5)	Cohort, 10 weeks	I: Participants were given pedometers from the start of the workday to the end of the workday, were asked to fill in an activity monitoring log every day, received weekly motivational emails with tips on goal-setting, received access to website with worksite walking routes and monthly newsletters with information on healthy		**X**		**X**	PA: Self reports of PA levels and objective PA using pedometers to obtain no. of steps walked per week during work hours. MPO: BP and BMI.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
			living seminars conducted at the worksite.					
Gilson (2007)(73)	Office workers (academic and administrative workers in university) IG1: N=21 IG2: N=21 CG: N=22 Age= 40 (11) BMI=normal weight	RCT, 10 weeks	All employees in I and C received pedometers and self-maintained activity logs. I: encouraged to accumulate step counts by walking during the tasks performed during each working day. C: was asked to continue current behaviour.		**X**		**X**	PA: Steps counts during waking hours were reported for 5 days using pedometer logs and pedometer (Yamax Digiwalker SW-200). MPO: % body fat, waist circumference and BP.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
Gilson (2009)(74)	Office workers (university employees) IG: N=59 CG: N=60 IG: Age= 43 (11) CG: Age= 39 (10) IG: BMI=around 25 CG: BMI=around 25	RCT, 10 weeks	I: Participants were asked to engage in incidental walking and accumulate step counts during working tasks – this strategy targeted walking and talking to colleagues, rather than sending emails or making telephone calls, and standing and walking in meetings, instead of sitting at desks. C: Participants were asked to continue current behaviour.	X	X			SB and PA: Workday ST was self-reported in log books using a question-based format twice during each day (at the end of each morning and afternoon work period) for 5 days and step counts during waking hours were reported for 5 days using pedometer logs and pedometer (Yamax Digiwalker SW-200).

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
Kwak (2009)(75)	White collar and blue collar workers (hospitals, local governments, factories) IG: N=308 CG: N=181 (261F, 228M) IG: Age= 39 (8) CG: Age= 35 (7) IG: BMI= 26 (4) CG: BMI= 24 (3)	CCT, 1 year	I: Focus on PA and diet with individual and environmental component. Individual: monitoring of body composition (BC); instructions and personalized feedback on PA and BC by website; devices to monitor PA and BC. Intervention tailored by leaving choice to start with PA or BC to participant. Environmental (worksite dependent in IG): e.g.		**X**			PA: Self-reported PA in average time/day spent on daily physical activities in 4 domains: transport, work, leisure time, and household. Overall PA (min/week) calculated by summing activities of 4 domains (using SQUASH).

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
			changes in assortment of food products in cafeteria; workshops; information wall; posters or prompts stimulating stair use; lunch walking and cycling groups. C: None of the above.					
Opdenacker (2008)(76)	University employees N=87 IG1: Age= 39 (11) IG2: Age= 40 (10) IG1: BMI= 24 (4)	Cohort, 3 months	Personal coaching to increase PA. After a face-to-face intake session for both groups: I1 received 4 personal coaching sessions face-to-face	**X**	**X**			SB and PA: PA at work (min/wk) measured with long version of IPAQ in personal interview: 7-days recall of moderate and vigorous PA in 4 domains (job-related, transportation, housework and gardening, leisure time) and one question on overall SB.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
	IG2: BMI= 26 (5)		I2 received 4 personal coaching sessions by telephone. In the intake, both groups received an individualized PA program and a brochure with information, tips and examples. Part of a larger PA promotion campaign, containing signed walking and cycling routes, point-of-choice prompts at elevators, information by					

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
			brochures and website, organized running sessions and a PA ambassador for each department.					
Parry (2013)(52)	University employees IG: N= 29 CG: N= 14 (50F, 12M) Age= 44 (6) BMI= 28 (6)	RCT, 12 weeks	I: Pedometer challenge to increase walking during work day, promote active transport, walk-and-talk meetings, short frequent walks during breaks/lunchtime/commuting, promote stair use. C: Office ergonomics: active sitting (chair	**X**	**X**	**X**		SB and PA: Objectively measured total ST and sustained ST, time in low-intensity PA and in moderate-vigorous PA, frequency of breaks in ST during work hours and overall (ActiGraph GT3X worn on right hip). MPO: Weight.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
			bound), taking breaks from sitting, standing meetings, use of products that invite active sitting.					
Swartz (2014)(77)	University employees (office workers) IG1 (stand): N= 29 (18F, 11M) IG2 (step): N= 31 (23F, 8M) IG1: Age= 42 (12) IG2: Age= 46 (11)	Cohort, 3 days	I1 (stand): prompt from a wrist-worn device (beep or vibration) and a desktop computer application (message to get out of chair, no further instructions) once per hour. I2 (step): prompt from a wrist-worn device (beep	**X**	**X**			SB and PA: total time sitting, average duration of sitting bouts, duration of longest sitting bout, no. of sitting bouts >30 min of >60 min, no. of sit-stand transitions; no. of steps, total time standing and stepping (ActivPAL); all per workday.

Paper	Population IG: Intervention group CG: Control group M: male F: female BMI= mean (SD) kg/m^2 Age= mean (SD) years	Type of study, duration of intervention	Content of intervention (I) and control (C) conditions	Outcome measures: SB: Sedentary behaviour PA: Physical activity WP: Work performance MPO: Metabolic and physiological outcomes				Measurement methods
				SB	PA	WP	MPO	
	IG1: BMI= 29 (7) IG2: BMI= 28 (7)		or vibration) and a desktop computer application (message to get up and walk at least 100 steps) once per hour, plus pedometer to check number of steps.					

BMI: body mass index; BMR: basal metabolic rate; BP: blood pressure; C: control condition; CG: control group; CCT: controlled clinical trial; F: females; HDL: high-density lipoprotein cholesterol; HR: heart rate; I: intervention; IG: intervention group; IPAQ: International Physical Activity Questionnaire; ITS: interrupted time series; LDL: low-density lipoprotein cholesterol; M: males; MET: metabolic equivalent of task; MPO: metabolic and physiological outcomes; N: number of participants; NA: not available; OSPAQ: Occupational Sitting and Physical Activity Questionnaire; PA: physical activity; RCT: randomized controlled trial; SB: sedentary behaviour; SD: standard deviation; ST: sedentary time; SQUASH: validated Dutch short questionnaire to measure health-enhancing physical activity; WP: work performance.

Table C. Results of the quality assessment

	A. Selection bias			B. Study design		C. Confounders			E. Data collection			F. Withdrawals and dropouts			Global rating
Paper	Participants representative of target population?	% of selected individuals that agreed to participate	Rating	Study design	Rating	Important differences between groups?	% of relevant confounders controlled for	Rating	Valid methods	Reliable methods	Rating	With-drawals re-ported?	% comple-ting the study	Rating	
Alternative workstation interventions															
Alkhajah (2012)(39)	Somewhat likely	<60%	WEAK	CCT	STRONG	No		STRONG	Yes	Yes	STRONG	Yes	80-100%	STRONG	**MOD**
Ben-Ner 2014)(40)	Not likely	Can't tell	WEAK	Cohort	MOD	N/A		N/A	Yes	Yes	STRONG	Yes	80-100%	STRONG	**MOD**
Carr (2012)(41)	Not likely	Can't tell	WEAK	Cohort	MOD			N/A	Yes	Yes	STRONG	Yes	80-100%	STRONG	**MOD**
Carr (2013)(42)	Somewhat likely	60-79%	MOD	RCT	STRONG	No		STRONG	Yes	Yes	STRONG	Yes	80-100%	STRONG	**STRONG**
Chau (2014)(43)	Somewhat likely	<60%	WEAK	Cohort	MOD	N/A		N/A	Yes	Yes	STRONG	Yes	80-100%	STRONG	**MOD**
Davis (2014)(44)	Somewhat likely	60-79%	MOD	CCT	STRONG	Can't tell	Can't tell	WEAK	Yes	No	MOD	Yes	80-100%	STRONG	**MOD**

	A. Selection bias			B. Study design		C. Confounders			E. Data collection			F. Withdrawals and dropouts			Global rating
Dutta (2014)(45)	Not likely	60-79%	WEAK	Cohort	MOD	N/A		N/A	Yes	YEs	STRONG	Yes	80-100%	STRONG	**MOD**
Gilson (2012)(46)	Somewhat likely	<60%	WEAK	Cohort	MOD			N/A	Yes	Yes	STRONG	Yes	80-100%	STRONG	**MOD**
Gorman (2013)(47)	Not likely	<60%	WEAK	Cohort	MOD			N/A	Yes	Yes	STRONG	Yes	80-100%	STRONG	**MOD**
Grunseit (2013)(48)	Somewhat likely	<60%	WEAK	Cohort	MOD			N/A	Yes	Yes	STRONG	Yes	60-79%	MOD	**MOD**
Healy (2013)(49)	Somewhat likely	<60%	WEAK	CCT	STRONG	Yes	80-100%	STRONG	Yes	Yes	STRONG	Yes	80-100%	STRONG	**MOD**
John (2011)(50)	Not likely	Can't tell	WEAK	Cohort	MOD			N/A	Yes	Yes	STRONG	Yes	80-100%	STRONG	**MOD**
Koepp (2013)(51)	Somewhat likely	N/A	MOD *	Cohort	MOD			N/A	Yes	Yes	STRONG	Yes	80-100%	STRONG	**STRONG**
Neuhaus (2014)(30)	Somewhat likely	<60%	WEAK	CCT	STRONG	Can't tell	80-100%	STRONG	Yes	Yes	STRONG	Yes	80-100%	STRONG	**MOD**
Parry (2013)(52)	Very likely	Can't tell	MOD	RCT	STRONG	Yes	80-100%	STRONG	Yes	Yes	STRONG	Yes	60-79%	MOD	**STRONG**

	A. Selection bias			B. Study design		C. Confounders			E. Data collection			F. Withdrawals and dropouts			Global rating
Pronk (2012)(53)	Not likely	60-79%	WEAK	CCT	STRONG	No		STRONG	No	No	WEAK	Yes	80-100%	STRONG	**WEAK**
Schuna (2014)(54)	Somewhat likely	Can't tell	MOD	RCT	STRONG	No	-	STRONG	Yes	Yes	STRONG	Yes	60-79%	MOD	**STRONG**
Thompson (2011)(55)	Not likely	Can't tell	WEAK	Cohort	MOD			N/A	Yes	Yes	STRONG	Yes	80-100%	STRONG	**MOD**
Thompson (2008)(56)	Not likely	<60%	WEAK	Cohort	MOD			N/A	Yes	Yes	STRONG	Yes	80-100%	STRONG	**MOD**
Thompson (2014)(57)	Not likely	Can't tell	WEAK	Cohort	MOD			N/A	Yes	Yes	STRONG	Yes	80-100%	STRONG	**MOD**
Interventions promoting stair use															
Adams (2002)(58)	Somewhat likely	N/A	MOD*	ITS	MOD			N/A	Yes	No	MOD	N/A	N/A	MOD*	*
Auweele (2005)(59)	Somewhat likely	N/A	MOD*	ITS	MOD			N/A	No	No	WEAK	N/A	N/A	MOD*	*
Eves (2012)(60)	Somewhat likely	N/A	MOD*	ITS	MOD			N/A	Yes	Yes	STRONG	N/A	N/A	MOD*	*
Kerr (2004)(61)	Somewhat likely	N/A	MOD*	ITS	MOD			N/A	Yes	Yes	STRONG	N/A	N/A	MOD*	*

	A. Selection bias			B. Study design		C. Confounders			E. Data collection			F. Withdrawals and dropouts			Global rating
Kwak (2007)(62)	Somewhat likely	N/A	MOD*	ITS	MOD			N/A	No	No	WEAK	N/A	N/A	MOD*	*
Meyer (2010)(63)	Very likely	<60%	WEAK	Cohort	MOD			N/A	Yes	Yes	STRONG	Yes	80-100%	STRONG	**MOD**
Olander (2011)(64)	Somewhat likely	N/A	MOD*	ITS	MOD			N/A	No	Yes	WEAK	N/A	N/A	MOD*	*
Schumacher (2013)(65)	Somewhat likely	80-100%	MOD	Cohort	MOD			N/A	Yes	Yes	STRONG	N/A	N/A	MOD*	**STRONG**
Swenson (2013)(66)	Somewhat likely	N/A	MOD*	ITS with control site	MOD			N/A	No	Yes	WEAK	N/A	N/A	MOD*	*
Titze (2001)(67)	Somewhat likely	N/A	MOD*	ITS	MOD			N/A	No	No	WEAK	N/A	N/A	MOD*	*
Van Nieuw-Amerongen (2011)(68)	Somewhat likely	N/A	MOD*	ITS	MOD			N/A	No	No	WEAK	N/A	N/A	MOD*	*
Personalized behavioural interventions															
Aittasalo (2012)(69)	Very likely	<60%	WEAK	RCT	STRONG	No		STRONG	Yes	Yes	STRONG	Yes	60-79%	MOD	**MOD**

	A. Selection bias			B. Study design		C. Confounders			E. Data collection			F. Withdrawals and dropouts			Global rating
De Cocker (2010)(70)	Somewhat likely	<60%	WEAK	CCT	STRONG	Yes	80-100%	STRONG	Yes	Yes	STRONG	Yes	<60%	WEAK	**WEAK**
Evans (2012)(71)	Somewhat likely	Can't tell	MOD	RCT	STRONG	Yes	80-100%	STRONG	Yes	Yes	STRONG	Yes	80-100%	STRONG	**STRONG**
Faghri (2008)(72)	Somewhat likely	Can't tell	MOD	Cohort	MOD			N/A	No	No	WEAK	Yes	<60%	WEAK	**WEAK**
Gilson (2007)(73)	Somewhat likely	Can't tell	MOD	RCT	STRONG	Yes	80-100%	STRONG	Yes	Yes	STRONG	Yes	80-100%	STRONG	**STRONG**
Gilson (2009)(74)	Somewhat likely	Can't tell	MOD	RCT	STRONG	No		STRONG	No	No	WEAK	Yes	80-100%	STRONG	**MOD**
Kwak (2009)(75)	Somewhat likely	<60%	WEAK	CCT	STRONG	Yes	80-100%	STRONG	Yes	Yes	STRONG	Yes	60-79%	MOD	**MOD**
Opdenacker (2008)(76)	Somewhat likely	Can't tell	MOD	Cohort	MOD			N/A	Yes	Yes	STRONG	Yes	80-100%	STRONG	**STRONG**
Parry (2013)(52)	Very likely	Can't tell	MOD	RCT	STRONG	Yes	80-100%	STRONG	Yes	Yes	STRONG	Yes	60-79%	MOD	**STRONG**
Swartz (2014)(77)	Not likely	Can't tell	WEAK	Cohort	MOD			N/A	Yes	Yes	STRONG	Yes	60-79%	MOD	**MOD**

STRONG: high quality; MOD: medium quality; MOD*: medium quality conform the EPHHP quality assessment tool, but one of the individual items was not applicable; WEAK: low quality; CCT: controlled clinical trial; RCT: randomized controlled trial; ITS: interrupted time series; N/A: not applicable. *: global quality rating was not scored because three of the individual components were rated not applicable.

Table D. Overview of the results

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
Alternative workstation interventions					
Alkhajah (2012)(39)	+ (ST at work↓) IG: Reduced ST at the workplace by 143 min/day at 1-week follow-up and by 137 min/day at 3 months follow-up.	+ (standing time at work↑) = (stepping time at work) IG: ST was almost exclusively replaced by standing.	= (productivity) From self-reports: 33% of IG agreed that the new workstation improved their productivity, and 22% disagreed.	+ (HDL↑) = (Fasting total cholesterol, triglycerides, glucose levels) IG: increased HDL by 0.26 mmol/l.	**MODERATE**
Ben-Ner (2014)(40)	+ (overall ST↓) IG: overall daily time sedentary (sitting or walking at a speed	+ (overall daily caloric expenditure↑, daily caloric expenditure at work↑, overall time in light activities↑, overall time in active activities↑)	+ (WP self-reported and scored by supervisors: overall, quantity, quality and interaction with co-workers)		**MODERATE**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
	<1mph) decreased with 77 minutes compared to the average of 1,173 min.	I: overall daily caloric expenditure increased with 74 cal compared to the average of 960 cal. I: daily caloric expenditure at work increased with 61 cal compared to the average of 737 cal. I: overall daily time in light activities (speed 1–2 mph) increased with 41 minutes compared to the average of 279 min. I: overall daily time in active activities (speed >2mph) increased with 39 minutes	I: overall self-reported performance increased with 0.7 points compared to the average of 7.5 and overall supervisor-reported performance with 1.1 compared to the average of 7.0. I: self-reported quantity performance, quality performance and quality of interaction with co-workers all increased with 0.4 points compared to the respective averages of 3.8, 3.9, 3.7 points. I: supervisor-reported quantity performance, quality performance and quality of interaction with co-workers all		

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
		compared to the average of 34 min.	increased with 0.6 points compared to the respective averages of 4.0, 4.1, 3.9 points.		
Carr (2012)(41)	= (ST at work)	= (standing time at work) = (walking time at work)	= (work productivity, work quality)		**MODERATE**
Carr (2013)(42)	+ (overall ST↓) IG: ST reduced by 58.7 min/day and by 3.7%	+ (overall time in moderate PA↑) = (overall time in vigorous PA) IG: time in moderate PA increased by 1.3%.		+ (waist circumference↓) = (HR, weight, BP, % body fat, cardiorespiratory fitness and fasting lipids) IG: waist circumference reduced by 2 cm.	**STRONG**
Chau (2014)(43)	+ (obj. ST at work ↓, subj. time spent sitting and watching TV on work day and on non-workday ↓) = (subj. ST at work, subj. time spent	+ (obj. standing time at work increased ↑, subj. standing time at work increased ↑) = (obj. stepping time at work, = (subj. time spent walking at work, subj. time spent in heavy labour at work)			**MODERATE**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
	sitting at work on work day and on non-workday, subj. time spent sitting during transport, computer use at home and other leisure activities on work day and on non-workday) I: obj. ST at work decreased by 73 min/day (95% CI: -106, -39). I: subj. time spent sitting and watching TV decreased by 26 min/day (95% CI: -51, -2) on work day and	I: obj. standing time at work increased by 65 min/day (95% CI: 47, 83). I: subj. standing time at work increased by 99 min/day (95% CI: 74, 125).			

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
	by 46 min/day (95% CI: -86, -7) on non-workday.				
Davis (2014)(44)	+ (%ST at work ↓) I1 (sit-stand with prompts): ST ↓ from 90% (C) to 70% I2 (sit-stand): ST ↓ from 90% (C) to 69% I3 (conventional with prompts): reduced ST from 90% (C) to 81%	+ (%standing time at work ↑) + (no. of times switching between sitting/standing per work shift ↑) I1 (sit-stand with prompts): standing time ↑ from 0.3% (C) to 8.9% I2 (sit-stand): standing time ↑ from 0.3% (C) to 14.2% I3 (conventional with prompts): no difference I1: no. of switches ↑ from 0.5 (C) to 5.1	+ (no. of calls picked up/h ↑) for use of computer prompts): I1 (sit-stand with prompts): 5% more calls picked up/h I3 (conventional with prompts): 4% more calls picked up/h I2 (sit-stand): no more calls picked up/h = (hold time; %time not available for calls) = (no. of keystrokes; no. of mouse clicks; time of computer use)		**MODERATE**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
		I2: no. of switches ↑ from 0.5 (C) to 4.1 I3: no. of switches ↑ from 0.5 (C) to 1.2			
Dutta (2014)(45)	+ (obj. %ST at work ↓, obj. %ST overall ↓, subj. %time spent sitting at work ↓, (sedentary activity units/hr at work ↓, sedentary activity units/hr overall ↓) I: obj. %ST at work 21% (95% CI: 18-25) less than C: 46% versus 67%. I: obj. %ST overall 14% (95% CI: 11-17)	+ (total activity units/hr at work ↑, subj. %time spent standing at work ↑) = (subj. %time spent walking at work, subj. %time spent doing more physically demanding tasks at work, total activity units/hr overall, total activity units/hr non work) I: subj. %time spent standing at work 39% (95% CI: 35-43) more I: total activity units/hr at work 9% more (229,156 versus 210,245)	= (self-reported productivity by Work Productivity and Activity Impairment Questionnaire; WPAIQ)		**MODERATE**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
	less than C: 49% versus 63%. I: subj. %time spent sitting at work 40% (95% CI: 36-44) less. I: sedentary activity units/hr at work 4.8 min (95% CI: 4.1-5.4) less than C: 19.6 versus 24.4 min + sedentary activity units/hr overall 2.3 min (95% CI: 1.8-2.9) less than C: 22.2 versus 24.5 min				
Gilson (2012)(46)	= (ST at work)	= (overall time in low or moderate PA at work)			**MODERATE**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
Gorman (2013)(47)	= (ST at work, ST in bouts ≥30 minutes at work)	+ (standing time/8-hr workday ↑) = (stepping time/8-hr workday, no. of sit-to-stand transitions at the workplace) Increase in standing time from 78 min/8-hr workday pre to 97 min/8-hr workday post intervention (18.5%).	+ (productivity) = (work performance, job satisfaction) 75% agreed/strongly agreed the new environment improved their productivity	= (weight, % body fat, plasma glucose, lipid profile and C-reactive protein, and serum insulin)	**MODERATE**
Grunseit (2013)(48)	+ (% ST at work↓, mean ST↓) IG: Median proportion of ST during workday went down from 85% [range: 50-95%] at baseline to 60% [range: 10-95%] at 3-month follow-up, mean ST went down	= (% standing time at work, % walking time at work, % time doing more physically demanding tasks at work)			**MODERATE**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
	from 6.9 (SD 1.2) to 5.4 (SD 2.3) hours				
Healy (2013)(49)	+ (ST at work↓, prolonged ST at work↓) IG: reduction of workplace ST (by 125 min/8-h workday), with changes primarily driven by a reduction in prolonged ST (of 73 min/8-h workday).	+ (standing time at work↑) = (stepping time at work, no. of steps at work) IG: work place sitting was almost exclusively replaced by standing (+127 min/8-h workday).	= (work performance, absenteeism, presenteeism)	+ (plasma glucose↓) = (body weight, fat mass, fat free mass, waist and hip circumference, BP, cholesterol, triglycerides)	**MODERATE**
John (2011)(50)	+ (overall sitting/lying time↓) IG: Time spent in sitting/lying decreased from 1238 (128) min/day at baseline to	+ (overall standing time↑, overall stepping time↑, no. of steps/day) IG: Time spent standing increased from 146 (110) min/day at baseline to 227 (109)		+ (waist and hip circumference↓, LDL↓ and total cholesterol↓) = (weight, % body fat, resting HR and BP, serum lipid profiles, caloric intake)	**MODERATE**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
	1056 (233) min/day at 3 months, and 1150 (87) min/day at 9 months.	min/day at 3 months, and 203 (67) min/day at 9 months. Time spent stepping increased from 52 (28) min/day at baseline to 127 (105) min/day at 3 months and 90 (39) min/day at 9 months. Steps/day increased from 4352 (2158) steps/day at baseline to 10463 (6971) steps/day at 3 months and 7080 (3169) steps/day at 9 months.		Between baseline and 9 months: waist and hip circumference reduced significantly by 5.5 cm and 4.8 cm respectively, LDL decreased by 16 mg/dl, total cholesterol decreased by 15 mg/dl.	
Koepp (2013)(51)	+ (overall ST↓) IG: ST (in min/day) decreased from 1020 at baseline to 929 (-91 min) at 6 months and to 978 (-43 min) at 12	+ (overall time spent in low, moderate and high intensity PA↑, walking time↑) IG: PA (in AU/day) increased from 3353 at baseline to 4460	= (subject and supervisor rated overall performance, quality of work, quantity of work, and quality of interactions with co-workers)	+ (weight↓, fat free mass↓, waist circumference↓, haemoglobin↑, HDL↑, systolic BP↑) = (body fat, fat mass, glucose, total cholesterol, triglycerides, LDL,	**STRONG**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
	months.	(+33%) at 6 months and to 4205 (+25%) at 12 months. IG: Walking (min/day) sign. increased from 70 at baseline to 128 (+58 min) at 6 months and to 109 (+39 min) at 12 months.		diastolic BP, energy expenditure while lying, sitting and walking IG: Compared to baseline: weight decrease 1.5% (6 months) and 1.6% (12 months); fat free mass decrease 2.9% at 6 months; waist circumference decrease 3.2% (6 months) and 4.2% (12 months); haemoglobin increase 3.8% at 6 months; HDL increase 7% at 12 months; systolic BP decrease 3% (6 months) and 2,3% (12 months).	
Neuhaus (2014)(30)	+ (ST at work in I1 ↓) = (ST at work in I2, prolonged ST at work in I1 and I2) I1: ST at work 89 min (95% CI: -130, -47)	+ (standing time at work in I1 ↑) = (standing time at work in I2, stepping time at work, no. of steps at work, MET min of moderate-to-vigorous PA at work, no. of sit-to-stand	= (work efficiency; absenteeism; presenteeism)		**MODERATE**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
	less relative to C and 56 min (95% CI -107, -4) compared to I2	transitions per hours of workplace sitting). I1: standing time at work 93 min (95% CI: 45, 141) more relative to C and 59 min (95% CI 10,107) compared to I2			
Parry (2013)(52)	= (total ST and frequency of breaks at work) IG: reduction ST (78.3 vs. 76.6 % wear time, which was reduction of 8 min), increase break rate (7.0 vs. 7.7 breaks/sedentary hour).	= (time in light PA, time in moderate and vigorous PA at work IG: increase light PA (19.1 vs. 20.6 % wear time, which was increase of 7 min), increase in moderate or vigorous PA (2.6 vs. 2.8 % wear time).		= (body weight)	**STRONG**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
Pronk (2012)(53)	+ (ST at work↓) (ESM score and self-reported) IG: increase ESM score with 224% from baseline to Fu1 (at 4 weeks, immediately after I); reduction ESM score from Fu1 to Fu2 (at 6 weeks); ESM score Fu2 below baseline. IG: Self-reported ST at work sign. decreased with 66 min/day from baseline to Fu1 and increased	= (overall time spent in PA)			**WEAK**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
	with 74 min/day from Fu1 to Fu2. CG: no change in ESM score over time. Self-reported ST at work increased with 17 min/day from baseline to Fu1 (ns) and with 21 min/day from Fu1 to Fu2.				
Schuna (2014)(54)	+ (ST ↓ at work) = (sedentary bout length) = (transitions per h) IG: ST went from 42.2 to 41.3 min/hour.	+ (steps/day during work ↑) IG: 1001 more steps/day from baseline to follow-up when compared to CG. IG registered 2.1 steps/min more than CG from baseline to follow-up+ (light PA from 6.3 to 7.7		= (body mass, %fat, BMI)	**STRONG**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
		min/hour from baseline to follow-up).			
Thompson (2011)(55)	+ (ST at work↓)	+ (no. of steps at work↑) + (estimated energy expenditure↑) IG: Average energy expenditure +100 calories/hour while walking (126.4 vs. 26.2)	- (time to complete transcription↑) = (no. of errors, time to complete whole tape, self-reported productivity) IG: less time (16%) to complete each transcription while sitting compared to walking; trend (p=0.051) towards less time (ca. 45 min) to complete whole tape while sitting compared to walking.		**MODERATE**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
Thompson (2008)(56)		+ (steps/workday↑) + (estimated energy expenditure↑) IG: Increase in steps/work day from 2200 (B) to 4000 (during 2-week acclimation period) to 4200 (during 2-week intervention period) IG: Increase in estimated energy expenditure of 100 kcal/day.	= (productivity)		**MODERATE**
Thompson (2014)(57)		+ (overall PA↑) IG: Energy expenditure increased by 157 Kcal/day for the intervention period compared to control period.		+ (body weight↓, %body fat↓) IG: Weight decreased by 1.85kg more, and body fat reduced by 1.85% more in IG as compared to CG.	**MODERATE**
Interventions promoting stair use					
Adams (2002)(58)		= (stair use)			*

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
Auweele (2005)(59)		+ (stair use↑) 69% of stair use in baseline week. When compared to baseline, stair use increased immediately after first and second intervention by 8% and 16% respectively. No difference in stair use between baseline and follow-up (i.e. 3 weeks after second intervention)			*
Eves (2012)(60)		+ (stair use↑) Overall increase in stair-use from baseline was 7.2% in posters only campaign and 12.3% in posters + stairwell messages campaign (increases occurred from baseline to intervention week 1 and week			*

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
		2, but the incremental effect had disappeared by week 3).			
Kerr (2004)(61)		+ (stair use↑, I with signs in stairwell) + (stair use↑, I with music in stairwell) Relative to baseline: no change with carpet and paint, nor with art work; 8.9% more stairwell trips with signs in first 3 months after implementation, but not after 3 months; 8.9% more stairwell trips with music >3 months, but not in first 3 months.			*
Kwak (2007)(62)		+ (stair use↑) More % stair use during poster intervention (37.7% vs. 32.6%); OR=1.19 (1.05-1.34). Less %stair			*

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
		use during follow-up (i.e. 1 week after I was removed) compared to I (33.8 vs. 37.7%); OR=0.64 (0.43-0.94). Equal %stair use during baseline and follow-up (32.6% vs. 33.8%); OR=1.04 (0.98-1.12)			
Meyer (2010)(63)		+ (stair use↑) = (total daily PA and accelerometer counts) Median number of staircase units at Fup1 (at 3 months at end of I) and Fup2 (3 months after end of I) higher than at baseline: 20.6 (14.2-28.1)/day resp. 7.2 (3.5-14.0)/day vs. 4.5 (1.8-7.2)/day.		+ (VO_2max↑, body weight↓, BMI↓, fat mass↓, waist circumference↓, diastolic BP↓, LDL↓, triglycerides↓, insulin resistance index↓) At Fup1 (at 3 months at end of I), compared to baseline: 9% higher VO_2max; 0.7% less body weight; 0.7% less BMI; 1.5% less fat mass; 1.7% less waist circumference; 1.8% less diastolic BP; 3% less LDL.	**MODERATE**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
				At Fup2 (3 months after end of I), compared to baseline: 6% higher VO_2max; 1.4% less fat mass; 8% less triglycerides; 17% insulin resistance index.	
Olander (2011)(64)		+ (stair use↑) Relative to baseline: no increase in % stair use after Information Day (48.8% vs. 47.9%; OR=1.02 [0.88-1.19]); sign. increase % stair use after point-of-choice prompts (52.6% vs. 47.9%; OR=1.20 [1.06-1.37]). Also: sign increase % stair use after point-of-choice prompts relative to Information Day (52.6% vs. 48.8%; OR=1.19 [1.02-1.39]).			*

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
Schumacher (2013)(65)		+ (no. of stair takers↑, no. of stair transactions/member↑, no. of stair transactions/member/week day↑) No of stair takers increased from 128 (59.6%) to 213 (98.6%); average total no. of stair transactions per member increased from 23.5 (48.2SD) to 180.1 (173.8); average no. of stair transactions per member per weekday increased from 0.2 to 1.4.			**STRONG**
Swenson (2013)(66)		+ (Proportion of stair users relative to stair and elevator users↑) I site: Proportion of stair users relative to total no of people			*

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
		using stairs and elevator increased from 31.5% to 66.2% from baseline to follow-up in the intervention worksite (increase of 110%). C site: proportional stair use relative to stair and elevator use was estimated to be 22.3% and 23.1% at baseline and follow-up.			
Titze (2001)(67)		+ (observed % stair use↑) = (automatically measured stair use) Increase in observed %stair use (from 61.8% to 67.1%) in all four offices.			**MODERATE**
Van Nieuw-Amerongen		+ (%stair use↑)			*

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
(2011)(68)		Increase in % stair use in week 4 (60%) vs. baseline (51.8%), in week 1 (57%) vs. baseline and in week 2 (59.6%) vs. week 1; no additional increase in week 3 (59.8%) vs. 2, and week 4 (60%) vs. week 3.			
Personalized behavioural interventions					
Aittasalo (2012)(69)	= (ST at work)	= (walking time at work)			**MODERATE**
De Cocker (2010)(70)		= (no. of steps at workdays) + (no. of steps overall ↓, but less in IG) = (overall self-reported PA) Average no. of steps decreased from baseline to follow-up (after 20-wk I) in both groups, but the decrease was significantly more			**WEAK**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
		for the CG than the IG (-1389 steps/day in CG vs. -618 steps/day in IG). Although ns, the decrease in number of steps during a work-day from baseline to follow-up was also more in the CG than in the IG (-86 steps/day in IG vs. -439 steps/day in CG).			
Evans (2012)(71)	+ (no sitting events at work↓, duration of sitting events at work↓) At baseline, participants spent 3.3 (SD 1.3) hours/day and 3.7 (SD 1.4) events/day in sitting				**STRONG**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
	events>30 min, during working hours. In IG: no. of sitting events and average duration of sitting events>30min reduced significantly from baseline to during I (by 0.11 events/hour and 12.2% time). There was also a significant difference between the groups in the change (I to baseline) of both the no (6.8%) and duration (15.5%) of sitting events>30 min.				

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
Faghri (2008)(72)		+ (no. of steps/week at work↑, no. of people that regard themselves as active↑, self-reported PA at work↑) People walked an average of 21000 steps/week during work at baseline. 15-20% increase in the number of steps/week during weeks 2-6 when compared to baseline. Week 7 was Thanksgiving holiday and registered <5% change compared to the baseline. Week 8 showed the largest change of ~26% increase from baseline. Weeks 9 and 10 registered 10-15% increase compared to baseline.		+ (systolic BP↓) = (body weight, diastolic BP) 40% of the participants who were considered hypertensive at pre-assessment became normotensive at post-assessment.	**WEAK**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
		33% increase in the no. of participants whose self-reports indicated that they went from inactive at baseline to active post-intervention.			
Gilson (2007)(73)		+ (no. of steps/day↑) At baseline, participants in the CG registered 8922 (SD 3037) steps/day, IG registered 9287(SD 3459) steps/day. Significant intervention effect found in no. of steps for IG: From pre- to post I, CG step count decreased (-767 steps/day) whereas IG registered an increase (997 steps/day).		= (body weight, waist circumference, diastolic and systolic BP)	**STRONG**
Gilson (2009)(74)	= (ST at work)	+ (no. of steps/day↑)			**MODERATE**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
	IG showed a non-significant decrease of 21 min/day of sitting during week 1 compared to pre-intervention.	Significant differences in step count in IG when compared to CG, from pre-intervention to intervention week1 (i.e. beginning of intervention): CG went down from 9515 to 8993 steps/day, whereas IG went up from 9186 to 9754 steps/day. But although trend existed, no overall significant effect in IG when entire intervention period was considered.			
Kwak (2009)(75)		= (PA at work) + (total PA↑) Total PA (min/week) increased more in the IG than in the CG (+401 vs. +191) over 12 months,			**MODERATE**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
		but was due to increase in household PA (+310 vs. +109).			
Opdenacker (2008)(76)	= (overall ST)	= (PA at work, overall PA)			**STRONG**
Parry (2013)(52)	= (total ST and frequency of breaks at work)	= (time in light PA, time in moderate and vigorous PA at work)			**STRONG**
Swartz (2014)(77)	+ (total ST/workday↓, average duration of sitting bouts at work↓, duration of longest sitting bout at work↓, no. of sitting bouts >30 min at work↓, no. of sitting bouts >60 min at work↓, no. of sit-stand transitions/workday↑)	+ (time standing/workday ↑, time stepping/workday ↑, no. of steps/workday ↑) Significant results in the aimed direction for all parameters in I1-I2 combined. IG1 (stand): +23% time standing +14% time stepping			**MODERATE**

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
	Significant results in the aimed direction for all parameters in I1-I2 combined, though ns results for most parameters in I2 (step). IG1 (stand): -6.6% total ST -16% average duration of sitting bouts -29% duration of longest sitting bout -13% no. of sitting bouts >30 min -54% no. of sitting bouts >60 min +15% no. of sit-stand transitions	IG2 (step): +29% time stepping +35% no. of steps per workday			

Paper	Effects on sedentary behaviour	Effects on physical activity	Effects on work performance	Effects on metabolic and physiological outcomes	Global quality rating
	IG2 (step): -19% average duration of sitting bouts -36% no. of sitting bouts >60 min				

+ : positive effect in favour of the intervention group/condition; - : negative effect for the intervention group/condition; = : no significant differences between intervention group/condition and control; group/condition; ↑: increase; ↓: decrease; AU: activity units; BMI: body mass index; BMR: basal metabolic rate; BP: blood pressure; CG: control group; ESM: experience sampling method; Fu: follow-up; HDL: high-density lipoprotein cholesterol; HR: heart rate; I: intervention condition; IG: intervention group; LDL: low-density lipoprotein cholesterol; ns: not significant; OR: odds ratio; PA: physical activity; SD: standard deviation; ST: sedentary time; *: global quality rating was not scored because three of the individual components were rated not applicable.

Table E. Summary of evidence for the effects on sedentary behaviour and physical activity of subgroups of alternative workstations‡ and personalized behavioural interventions

	Subgroup analyses alternative workstations		
	Overall conclusions alternative workstations (Table 1)	**Sit-stand workstations**	**Treadmill workstations**
Sedentary behaviour			
At work	**Conflicting evidence**	**Moderate evidence for positive effect** (+: MMMMMMMW, =: MM)	**Conflicting evidence** (+: SM, =: S)
Overall	**Strong evidence for positive effect**	**Conflicting evidence** (+: M, =: M)	**Strong evidence for positive effect** (+: SSMM, =: S)
Physical activity			
At work	**Conflicting evidence**	**Moderate evidence for positive effect** (+: MMMMMMM, =: MM)	**Moderate evidence for positive effect** (+: SMMM, =: S)
Overall	**Conflicting evidence**	**Insufficient evidence** (=: MW)	**Moderate evidence for positive effect** (+: SMMM)
	Subgroup analyses personalized behavioural interventions		
	Overall conclusions personalized behavioural interventions (Table 1)	**Self-monitoring SB and/or PA**	**No self-monitoring SB and/or PA**

Sedentary behaviour			
At work	**Conflicting evidence**	**Moderate evidence for no effect** (=: SM)	**Conflicting evidence** (+: SM, =: M)
Overall	**Insufficient evidence**	**Insufficient evidence** (No studies)	**Insufficient evidence** (=: S)
Physical activity			
At work	**Conflicting evidence**	**Moderate evidence for no effect** (+: W, =: SMM)	**Conflicting evidence** (+: M, =: S)
Overall	**Moderate evidence for positive effect**	**Moderate evidence for positive effect** (+: SMW)	**Conflicting evidence** (+: M, =: S)

S (strong): study of high quality; M (moderate): study of medium quality; W (weak): study of low quality; +: studies with a positive effect in favour of the intervention group/condition; -: studies with a negative effect for the intervention group/condition; =: studies indicating a similar effect for intervention and control group/condition.

‡ Two studies of pedal machines were left out of the subgroup analysis because they differed entirely in outcome measures.