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| **Citation** | **Sample size** | **Study design** | **Participants** | **ST Measurement** | **Intervention** | **Results** |
| Asaoka et al., 2007 (81) | n=8 | Uncontrolled trial, 3 day intervention | Healthy  Age: 74±3 yrs | Objective (accelerometer) and self-report (log sheet) | Participants were asked to follow their regular routine during the study but to limit TV viewing time to 30 min per day from Tuesday to Thursday in the second week of the intervention. | TV time decreased by 306 min/day, more time was spent reading and listening to music during the 3 day restriction.  No change in sleep-wake patterns. |
| Barone Gibbs et al., 2016 (92) | Sit Less n=19; Get Active n=19 | Randomized trial, two intervention groups,  12 week follow-up | Healthy, insufficiently active, able to walk 400m without assistance.  Age: 68±7 yrs | Objective (accelerometer/skin temperature) and self-report (questionnaire) | Both groups received a combination of in-person, and phone consultations with an exercise physiologist, and use of a measurement device that interfaced on their personal smartphone. The goal for group 1 was to “Sit Less”: reduce sedentary time by 1 hr per day. The goal for group 2 was to “Get Active”: reach 150 min of moderate-vigorous intensity physical activity per week. | No significant change in measured sedentary time in either group.  “Get Active” group increased measured physical activity.  Both groups increased self-reported physical activity. |
| Burke et al., 2013 (91) | Intervention n = 176; Control  n = 199 | Randomized controlled trial; 6 month follow-up | Community dwelling, able to exercise without assistance.  Age: Intervention: 66±3 yrs; Control: 66±3yrs | Self-Report (questionnaire) | Information booklet with physical activity and nutrition advice; support materials including an exercise chart, calendar, bi-monthly newsletters, resistance band, and pedometer; telephone and email contact by program guides. Based on Social Cognitive Theory and the Precede-Proceed Model.  Control: no information provided. | Sitting time decreased by 350 min/week; walking, strength exercise, and vigorous exercise all increased. |
| Chang et al., 2013 (100) | Intervention n=27; Control n=21 | Quasi-experimental, pretest-posttest; 8 week follow-up | Hypertensive; able to exercise without assistance.  Age: Intervention:  67±4 yrs  Control: 66±4 yrs | Self-Report (questionnaire) | Eight weekly 110-minute sessions to increase physical activity self-efficacy and reduce ST.  Based on Empowerment Theory.  Control: usual care. | Sitting time decreased by 530 min/week.  Physical activity increased in both groups with greater gains in intervention group. |
| Fanning et al., 2016 (89) | Intervention n = 103; Control n = 118 | Randomized controlled trial, 12 month follow-up | Community dwelling, insufficiently active.  Age: Intervention: 70±5 yrs  Control: 71±5 yrs | Objective (accelerometer) | Six DVD-delivered exercise sessions plus DVD with information on exercise safety and healthy living (e.g., replacing sitting behaviors, proper nutrition). Participants also received yoga mat and exercise logs.  Based on Social Cognitive Theory.  Control group: waitlist | No significant difference in total sedentary time.  Number of breaks in sedentary time was higher in the intervention group compared to control |
| Fitzsimons et al., 2013 (97) | n=24 | Single group, pretest–posttest; 2 week follow-up | Community dwelling.  Age:68±6 yrs | Objective (inclinometer) and self-report (questionnaire) | One 30-minute individualized consultation targeting sedentary behaviour. Based on Behavior Change Techniques. | Sitting/lying time decreased by 25 min/day.  Stepping increased by 13 min/day. |
| Gardiner et al., 2011 (95) | n=59 | Single group, pretest–posttest; 6 day follow-up | Retired, ambulatory.  Age: ≥60 yrs | Objective (accelerometer) | One 45-minute individualized consultation targeting sedentary behaviour. Based on Social Cognitive Theory and Behavioural Choice Theory. | Sedentary time decreased 3.2% and breaks in sedentary time increased by 4 per day.  Light physical activity increased by 2.2%. |
| Kallings et al., 2009, (94) Sjogren et al., 2014 (90) | Intervention n=47; Control n=54  (Sub-sample for Sjorgen: Intervention n=21; Control n=21) | Randomized controlled trial, 6 month follow-up | Insufficiently active, healthy, overweight with abdominal obesity.  Age: 68 yrs. | Objective (pedometer) and self-report (questionnaire and diary) | 30-minute individualized patient-centred counselling with a physical activity prescription and recommendations to reduce sitting time.  Control: Usual care including brief, written information on benefits of physical activity. | Both groups decreased self-reported sitting time: 2 hrs/day in intervention and 1 hr/day in control.  Both groups increased steps per day, greater increase in intervention group.  Improved BMI, fat mass, HbA1C, and cholesterol in intervention group.  In sub-sample analysis (Sjoogren) intervention group had significant telomere lengthening. |
| Lee & King, 2003 (93) | n=103 | Randomized controlled trial, 12 month follow-up | Community dwelling, able to exercise.  Age: 70±4 yrs | Self-Report (questionnaire) | Both groups received weekly phone calls from a health educator focused on increasing physical activity, based on the Social Cognitive Theory and Transtheoretical Model. In addition, intervention group received supervised exercise classes while comparison group received supervised flexibility classes. | No significant change in time spent in sedentary social and recreational activities; women increased time spent in non-intervention physical activities, men decreased time spent in non-intervention physical activities. |
| Lewis et al., 2016 (99) | n=27 | Single group, pretest–posttest; 6 week follow-up | Community dwelling, not working, able to walk independently.  Age:72±7 yrs | Objective (inclinometer) and self-report (questionnaire) | One hour, individual session of education and goal setting around sedentary behaviour, followed by weekly phone calls.  Based on self-determination theory. | Measured sitting time decreased by 52 min/day, standing increased by 39 min/day, no change in stepping.  Self-reported TV time decreased by 32 min/day, and self-reported physical activity increased. |
| Matei et al., 2015 (98) | Sample 1 n=12;  Sample 2 n=23 | Uncontrolled trial with two independent samples; 8 week follow-up. | All able to perform light activity. Sample 1: residents of sheltered housing;  Age: 66±5 yrs  Sample 2: community dwelling, inactive  Age: 67±4 yrs | Self-Report (questionnaire and self-reported habits) | Booklet containing educational information, tip sheets, and log sheets. One meeting for individual explanation of material provided.  Based on Habit Formation Model. | No significant changes in Sample 1.  In sample 2 sitting time decreased by 1055 min/week; walking and vigorous activity increased. |
| Rosenberg et al., 2015 (96) | n=25 | Single group, pretest–posttest; 8 week follow-up | Able to sit, stand and walk one block Age: 71±6 yrs | Objective (inclinometer and accelerometer) and self-report | Five phone calls delivered by a health coach with individual goal-setting to ultimately achieve a decrease in sitting time of 2 hours per day and additional 15 breaks from sitting.  Based on Social Cognitive Theory. | Sitting time decreased by 27 min/day, standing time increased by 25 min/day, physical activity increased by 3.7 min/day. Gait speed improved. |