

Supplemental file 4.

To:

Sedentary behaviour Intervention as a personalised Secondary prevention Strategy (SIT LESS) for coronary artery disease patients participating in cardiac rehabilitation: rationale and design of the SIT LESS randomised clinical trial

B.M.A. van Bakel, MD¹; S.H. Kroesen, MSc¹; A. Günal, MD²; A. Scheepmaker, MD²; W.R.M. Aengevaeren, MD, PhD³; F.F. Willems, MD, PhD³; R. Wondergem, PhD^{4,5,6}; M.F. Pisters, PhD^{4,5,6}; J. Dam, MSc⁷; A.M. Janssen, MSc⁷; M. de Bruin, PhD⁷; M.T.E. Hopman, MD, PhD¹; D.H.J. Thijssen, PhD^{1,8}; T.M.H. Eijsvogels, PhD¹

Affiliations:

1. Radboud university medical center, Radboud Institute for Health Sciences, Department of Physiology, Nijmegen, The Netherlands
2. Bernhoven hospital, Department of Cardiology, Uden, The Netherlands
3. Rijnstate hospital, Department of Cardiology, Arnhem, The Netherlands
4. Utrecht University, University Medical Center Utrecht Brain Center, Department of Rehabilitation, Physical Therapy Science and Sport, Utrecht, The Netherlands
5. Research Group Empowering Healthy Behaviour, Department of Health Innovations and Technology, Fontys University of Applied Sciences, Eindhoven, The Netherlands
6. Center for Physical Therapy Research and Innovation in Primary Care, Julius Health Care Centers, Utrecht, the Netherlands
7. Radboud university medical center, Radboud Institute for Health Sciences, Department of IQ healthcare, Nijmegen, The Netherlands
8. Research Institute for Sports and Exercise Sciences, Liverpool John Moores University, United Kingdom

Corresponding author:

Thijs M.H. Eijsvogels, PhD, Radboud university medical center, Dept. of Physiology, P.O. Box 9101, 6500 HB, Nijmegen, The Netherlands. E-mail: Thijs.Eijsvogels@radboudumc.nl Telephone: (+31) (0)24 36 14273 Fax: (+31) (0)24 3668340

Supplemental Table S2. Data catalogue SIT LESS RCT

Category	Subcategory	Variables
General	Patient characteristics	Age (years); sex (M/F); height (cm); weight (kg); BMI (kg/m ²); country of origin; smoking (yes/no, never/no, stopped. If yes or no, stopped: Packyears); Alcohol consumption (yes/no, never/no, stopped. If yes or no, stopped: Glasses/week and number of years)
	Index diagnosis and treatment	Hospital (Rijnstate, Arnhem/Bernhoven, Uden); Admission (date); primary diagnosis (STEMI/NSTEMI/UAP/AP); specify coronary artery disease (proximal RCA/mid RCA/distal RCA/RDP/LM/Proximal LAD/mid LAD/distal LAD/D1/D2/Proximal RCx/Intermediate RCx/Mid RCx/MO2/MO3/RPL/Graft); intervention (PCI/CABG/medication), complications hospitalisation (yes, specify/no), Medication at admission (ACE-inhibitor/ ARB/ acenocoumarol/ASA/beta-blocker/calcium-antagonist/clopidogrel/ Diuretics/DOAC/Entresto/ NSAID/Opioid/Paracetamol/Prasugrel/Proton-pump inhibitor/PCSK9-inhibitor/Statin /Ticagrelor/none/other relevant cardiovascular drugs); out-of-hospital cardiac arrest (no/yes. If yes, duration and details); discharge (date)
	Social economic status and personal life	Living environment (urban area/rural area/transition area); type of house (detached/semi-detached/terraced house/corner house/apartment/sheltered home/other); marital status (single/married or civil partnership/divorced or broken up/living together/widow or widower); education (primary education/lower vocational education/secondary education/secondary vocational education/higher secondary education/university); Paid job last year (yes/no. If yes: average workdays per week (days); average work hours per week (h/week); type of work (mainly sedentary/partly sedentary/partly light physical active/physical active, partly sedentary/physical active/high intensity physical active). If no paid job: reason (pension/unemployed/household tasks/informal care/volunteer work/health problems/other); Average monthly total net income (<€1000/€1000-€2000/€2001-€3000/€3001-€4000/€4001-€5000/€5001-€6000/€6001-€7000/€7001-€8000/€8001-€9000/€9001-€10000/>€10001); personal description of financial situation (not sufficient/sometimes not sufficient/sufficient/comfortable); smartwatch (yes/no); monitor amount of steps (yes/no); do you have a dog (yes/no. If yes: current dog is the first dog (yes/no); since when do you have a dog (year); time of dog owner ship during your life (years); When you don't have a dog: Did you had a dog in the past (yes/no). If yes: until when did you have a dog (year) and how many years did you have a dog during your life (year)); When the person has a dog or lets the dog out from someone else: how many time do you let the dog out (number/day and number/week); how long do you let the dog out (less dan 30 min per day/30 min per day – 1 h per day/1-2 hours per day/2-3 hours per day/>3 hours per day); where do you let the dog out (neighbourhood/park or greening in or close to the neighbourhood/dog park in or close to the neighbourhood/forest or nature reserve.
Medical history	Hypertension (yes/no/unknown); Diabetes Mellitus (yes/no/unknown); Family history of cardiovascular diseases (yes/no/unknown. If yes, specify); Dyslipidaemia (yes/no/unknown); Rheumatoid arthritis (yes/no/unknown); prior myocardial infarction (yes/no/unknown. If yes, date); prior coronary artery disease (yes/no/unknown. If yes, specify coronary artery disease and intervention); reduced left ventricular ejection fraction (yes/no/unknown. If yes, year of diagnosis and classification: mildly reduced 40-50%/moderately reduced 30-40%/severely reduced <30%); prior resuscitation (yes/no/unknown. If yes, cause: cardiac/pulmonary/brain injury/intoxication/hypo- or hyperthermia/electrolyte disturbances/hypovolemia); heart valve disease (yes/no/unknown. If yes, year of diagnosis and type of heart valve disease: aortic valve/mitral valve/pulmonary valve/tricuspid valve); atrial fibrillation (yes/no/unknown. If yes, type: paroxysmal/persistent/permanent); pacemaker implementation (yes/no/unknown); COPD (yes/no/unknown. If yes, GOLD classification: I/II/III/IV/unknown); peripheral artery disease (yes/no/unknown); neurological events (No/CVA/TIA); Depression (yes/no/unknown); kidney failure (yes/no/unknown. If yes, CKD stage: G3a/G3b/G4/G5); malignancy diagnosed (no/yes,	

		in the past 5 years/yes, but not in the past 5 years. If yes, kind of malignancy: lung/breast/dermal/colon/blood/brain/stomach/oesophageal/other)
Primary, secondary and other outcomes	Blood samples	Date and time of lab results; haemoglobin (mmol/l); sodium (mmol/l); potassium (mmol/l); urea (mmol/l); creatine (umol/l); eGFR (MDRD) (ml/min/1.73m ²); ASAT (u/L); CRP (mg/L); peak cardiac Troponin T/I (ng/L); peak creatine kinase (ng/L); LDL cholesterol (mmol/l); HDL cholesterol (mmol/l); total cholesterol (mmol/l); triglycerides (mmol/l); leucocytes (*10 ⁹ /l); thrombocytes (*10 ⁹ /l)
	Objective outcome measures	Total sedentary time (h/day); sitting bouts (number/day); average duration of sitting bouts (h/day); sitting bouts <30 min (number/day); sitting bouts < 1 hour (number/day); sitting bouts > 1 hour (number/day); proportion of participants with a decrease in time spent sedentary of 30 min/day after CR (%); proportion of participants with a decrease in time spent sedentary of 60 min/day after CR (%); Total light-intensity physical activity (h/day); Total moderate-to-vigorous intensity physical activity (h/day)
	Subjective outcome measures	Health-related quality of life (HeartQoL score); Patients' competencies for self-management (PAM score); Total sedentary time (h/day); Sedentary time during work (h/day); Sedentary time during transportation (h/day); Sedentary time during leisure time (h/day); total physical activity (h/day); physical activity during work (h/day); physical activity during transportation (h/day); physical activity during household tasks (h/day); physical activity during leisure time (h/day)
	Functional outcome measures	Timed up&go (s); Handgrip strength test (kg)
	Events	Mortality (yes/no. If yes: date); Cardiovascular mortality (yes/no. If yes: date); MACE (date, details); rehospitalization (yes/no. If yes, type of event: myocardial infarction/heart failure/atypical thoracic pain/(unstable) angina pectoris/non-cardiovascular; days), recurrence of acute coronary events (if yes: STEMI/NSTEMI; revascularization: yes/no)
Cardiac rehabilitation	General	Start of CR (date); Physiotherapy sessions (yes/no. If yes: where: hospital/primary care. If in the hospital: sessions (number), first session (date), last session (date)); Patient has fulfilled the CR programme (yes/no); end of CR (date).
	Medical	Medication at start and end of cardiac rehabilitation (ACE-inhibitor/ ARB/ acenocoumarol/ASA/beta-blocker/calcium-antagonist/clopidogrel/ Diuretics/DOAC/Entresto/ NSAID/Opioid/Paracetamol/Prasugrel/Proton-pump inhibitor/PCSK9-inhibitor/Statin /Ticagrelor/none/other relevant cardiovascular drugs); blood pressure baseline (mmHg); baseline blood pressure measurement (day); blood pressure at follow-up (mmHg); follow-up blood pressure measurement (day); smoking at follow-up (yes/no, never/no, stopped. If yes or no, stopped: Packyears); cardiovascular risk score at baseline (SMART score); cardiovascular risk score at follow-up (SMART score); blood samples (haemoglobin (mmol/l); leucocytes (*10 ⁹ /l); thrombocytes (*10 ⁹ /l); LDL cholesterol (mmol/l); HDL cholesterol (mmol/l); total cholesterol (mmol/l); triglycerides (mmol/l))
	Activity tracker (intervention group)	Average sedentary time per week (h/day); (prolonged) sitting bouts (number/day); valid wear days (number)

BMI, Body mass index; STEMI, ST-Elevated Myocardial Infarction; NSTEMI, Non ST-Elevated Myocardial Infarction; UAP, Unstable Angina Pectoris; AP, Angina Pectoris; RCA, Right Coronary Artery; RDP, Right Posterior Descending Posterior; LM, Left Main; LAD, Left Anterior Descending; D, diagonal; RCx, Ramus Circumflex; MO, Margo Obtusus; RPL, Right Posterolateral; PCI, percutaneous coronary intervention; CABG, coronary artery bypass grafting; ACE-inhibitor, Angiotensin-converting enzyme inhibitor; ARB, Angiotensin receptor blocker; ASA, acetylsalicylic acid; DOAC, Direct oral anticoagulants; NSAID, non-steroidal anti-inflammatory drug; PCSK9, proprotein convertase subtilisin/kexin type 9; COPD, chronic obstructive pulmonary disease; GOLD, Global initiative for chronic Obstructive Lung Disease; CVA, Cerebro Vascular Accident; TIA, Transient Ischemic Attack; CKD, Chronic kidney disease; eGFR, Glomerular Filtration Rate; MDRD,

Modification of Diet in Renal Disease; ASAT, ASpartate AminoTransferase; CR, cardiac rehabilitation; CRP, C-reactive protein; LDL, low-density lipoprotein; HDL, high-density lipoprotein); HeartQoL, Heart Quality of Life; PAM, Patient Activation Measure; SBQ, sedentary behaviour questionnaire; SQUASH, Short Questionnaire to Assess Health-enhancing physical activity; MACE, Major adverse Cardiovascular Event; SMART, Second Manifestation of ARTERial disease.