Supplemental Table 1 Drug treatment during the trial

	Exercise		Control	
	baseline	**6 months**	**baseline**	**6 months**
Antihypertensive drugs				
Calcium antagonists	41 (41%)	43 (41%)	47 (39%)	42 (34%)
ACE inhibitors and sartans	33 (33%)	28 (28%)	41 (34%)	45 (37%)
Sympatholytic agents and beta-blockers	48 (48%)	47 (46%)	54 (45%)	57 (47%)
CKD-MBD				
Active form vitamin D	67 (66%)	71 (70%)	71 (59%)	79 (65%)
Calcium based phosphate binders	52 (52%)	48 (47%)	63 (53%)	60 (50%)
Non calcium based phosphate binders	53 (52%)	46 (45%)	65 (54%)	57 (47%)
Cinacalcet	16 (16%)	22 (22%)	29 (24%)	35 (29%)
Drugs applied to treat anemia				
ESA	83 (83%)	89 (86%)	101 (84%)	104 (85%)
Intravenous iron	49 (47%)	49 (47%)	71 (59%)	44 (36%)
(poli)vitamin B supplements	45 (45%)	42 (40%)	47 (39%)	45 (37%)
Statins	29 (28%)	36 (35%)	37 (31%)	39 (32%)
Hypoglycemizing agents				
Oral hypoglycemizing agents	2 (2%)	4 (4%)	4 (3%)	1 (1%)
Insulin	14 (14%)	11 (11%)	15 (12%)	15 (12%)
Aspirin and antiplatelet agents	58 (58%)	68 (66%)	55 (48%)	74 (61%)

Supplemental Table 2 Baseline results of the six minute walking test and the sit to stand test and changes brought about the intervention in the exercise and control group.

	Exercise Group		**Control Group**		**Between groups difference**
	Baseline	**Change at 6 months**	**Baseline**	**Change at 6 months**	
Six minutes walking test (m)					
Analysis of all randomized patients	315±104	39 (from 33 to 46)	312±112	2 (from -5 to 10)	P<0.001
Patients who completed the 6 months trial	328±96	41 (from 31 to 51)	321±107	3 (from -7 to 12)	P<0.001
5 times Sit to stand test (sec)					
Analysis of all randomized patients	21.2±5.9	-2.5 (from -3.0 to -2.1)	21.2±6.0	-0.6 (from -1.5 to -	P<0.001

				0.1)	
Patients who completed the 6 months trial	20.5±6.0	-2.4 (from -3.0 to -1.8)	29.9±5.8	-0.7 (from -1.5 to 0.2)	P<0.001

Data are mean ± SD or mean and 95% CI.

Supplemental Table 3

Hospitalizations in patients in the active and in the control group who completed the trial.

Reasons of admission	**Exercise group** (number of hospitalizations)	**Number of patients**	**Control group** (number of hospitalizations)	**Number of patients**
Vascular access problems	10	6	9	6
Severe Arrhythmia	1	1	4	4
Coronary heart disease	0	0	4	4
Decompensated Heart Failure	2	2	0	0
Peripheral Arteriopathy	0	0	1	1
Infection	1	1	5	5
Chronic Obstructive Pulmonary Disease	0	0	1	1
Surgical intervention	1	1	5	5
Diarrhea, abdominal pain	0	0	1	1
Thoracic pain of undetermined origin	0	0	1	1
Severe anemia	0	0	1	1
Social and logistic problems	1	1	0	0
Neurological	2 (stroke, confusional status)	2	3 (hypertensive encephalopathy, vertigo, hypotension)	3
	N=18		N=35	

Supplemental Table 4 Baseline demographic data, main cardiovascular comorbidities in patients randomized to exercise and control groups. Data of randomized patients who dropped out before the actual start of the study, of patients who completed the study and of those who dropped out during the study are presented in 3 separate columns for each study arm. See also CONSORT Flow diagram (fig .1)

	Exercise Group			**Control Group**		
	Patients randomized to the exercise arm who dropped out before the study start	**Patients who completed the training program and were retested at 6 month**	**Drop outs during the trial**	**Patients randomized to the control arm who dropped out before the study start**	**Patients who were re-tested after 6 months**	**Drop outs during the trial**
	N=12	**N=104**	**N=47**	**N=9**	**N=123**	**N=22**
Age (years)	70±13	63±13	66±13	73±11	64±14	70±12
Males (%)	75%	64%	74%	67%	68%	59%
Myocardial Infarction	33%	15%	13%	11%	17%	14%
Heart Failure	42%	17%	15%	55%	24%	27%
Stroke/transient ischemic attack	25%	8%	13%	11%	14%	13%
Peripheral vascular disease	17%	7%	4%	11%	12%	23%
Assisted ambulation (%)	8%	4%	4%	0%	2%	18%
Six minutes walking test (m)	---	328±96	289±117	----	321±107	262±126
sit to stand test (sec)	---	20.5±6.0	22.6±5.8	----	20.9±5.8	23.1±7.1

Exercise program description, evaluation of adherence to the program and details about the physical exercise testing sessions

The Exercise Program: Patients randomized to the exercise group received specific training to perform a simple home-based exercise program (see you-tube video at: **https://www.youtube.com/watch?v=ki8YX_t-0jA**). The training program was personalized according to the patients baseline functional capacity assessed by the 6-min walking test (6MWT)[1]. On the basis of the results of this simple test which measures the walking distance covered (6MWD) by the patient during 6 min, subjects were stratified according to their functioning capacity into 4 pre-specified functional capacity categories (Normal, Moderate, Low and Very Low, see Supplemental **Table III,** below).

The program consisted in two daily 10-min home walking sessions during the day off-dialysis (3 days per week). During the first 14 weeks, to minimize fatigue and symptoms and to optimize the safety of exercise, two 5-min periods separated by 1 minute of resting were contemplated in the Normal to Low functional capacity categories and five, 2-min periods of resting in the Very Low category . From the 15th week on, a 10 min period of uninterrupted walking was contemplated for the Normal to Low categories and two, 5-min session, separated by 1 minute of resting for the Very Low category (**Table III, main text**).

For each patient's category the exercise intensity was prescribed according to the walking speed calculated from the 6MWD, ranging in each category from 70% to 120% of the patient walking speed at baseline. The prescribed speed, was progressively increased at weekly intervals, was converted into walking cadence (steps/minute) to be maintained at home by a metronome (Seiko DM50, Seiko LTD, Japan) which was distributed to all patients, who were specifically instructed to walk in rhythm with it.

To facilitate accurate recording of exercise performed, a personal diary was given to all patients. This diary included a page with basic instructions in a plain language and 24 pages, 1 for each week, reporting a) the individual program to be performed (number and duration of sessions in terms of walking and resting time between sessions, prescribed walking intensity in steps/min and b) a box to be marked after each training session where relevant symptoms were listed (none, fatigue, leg pain-exertion, dyspnoea, others).

Whenever possible, a caregiver was involved in the control of the actual execution of the exercise program and in data recording.

Evaluation of the adherence to the exercise program Adherence to the exercise program was established on the basis of data reported in patients' diaries and on the basis of residual charge of metronomes batteries. In preliminary measurements of the batteries charge of the purchased lot of metronomes, it was found that 3,35 mV corresponded to the full charge battery and that the residual battery charge remaining after a 18-24 hours use of the metronome (corresponding to the whole training time) ranged between 2.98 and 2,94 mV Thus, a battery charge below 2.98 mV was considered as a proof of compliance with the prescribed amount of exercise. Adherence was categorized as high/low when patients certified to have performed $\geq$60% / <60%) of the prescribed sessions. A residual charge of the metronome battery $\leq$2.98 mV/ >2.98 mV was also considered proof of compliance with exercise program.

Physical exercise testing sessions

The 6MWT was performed in a special course of two 10 m straight sections connected by two 1 m curves (22 meters in all) drawn by special 10 m strips [with markers at 2.43 m (8ft), 4.57 m (15ft) and 9.11 m (30 ft)] in the renal unit corridor (or nearby premises) of participating units. During this test each patient was fitted with a heart rate recorder on the chest and a monitor at wrist (Sport Tester, Polar Electro, Finland) for heart rate recording during the test execution. Patients were asked to walk back and forth along the 22 meters marked corridor as quickly as possible, aiming to cover the maximal distance they could in six-minutes. They were allowed to rest in case of fatigue or pain and to restart when possible. During the test execution the time to walk 8 ft-15ft and 30 ft as well the distance walked in a two minutes (2-min walking distance, 2 min-WD) period were accurately measured and recorded by the investigator attending the testing session. At the end of the 6 min the final distance covered by the patient was registered along with the number of interruptions. The rate of the patient's perceived exertion was obtained by the Borg CR10 Scale [2].

The 5-STS is test measures the time that the patient needs to move from a sitting position to a standing position on a chair 42 cm high as quick as possible for five times. For patients unable to complete the test for fatigue or other symptoms, number of completed sit to stand repetitions and related time were recorded [3]. Ten minutes of rest separated the execution of the two tests.

Reference List

1. ATS statement: guidelines for the six-minute walk test. *Am J Respir Crit Care Med* 2002; **166**(1):111-117.

2. Borg G. Borg's Perceived Exertion and Pain Scales. 1998. Champaign, IL, Human Kinetics.

3. Mong Y, Teo TW, Ng SS. 5-repetition sit-to-stand test in subjects with chronic stroke: reliability and validity. *Arch Phys Med Rehabil* 2010; **91**(3):407-413.