

Table S1: Full search strategy for the MEDLINE and CINAHL databases.  
Dual-energy x-ray absorptiometry (DEXA), end-stage kidney disease (ESKD), end-stage renal disease (ESRD), magnetic resonance imaging (MRI), MeSH terms (MH), short physical performance battery (SPPB).

	Search term	Field
1	Renal insufficiency	MH (explode)
2	Renal insufficiency	TX
3	Renal insufficiency, chronic	MH (explode)
4	Renal insufficiency, chronic	TX
5	Renal Dialysis	MH (explode)
6	Renal dialysis	TX
7	Kidney failure, chronic	MH
8	Kidney failure, chronic	TX
9	Renal Replacement therapy	MH
10	Renal Replacement therapy	TX
11	Haemodialysis	TX
12	Hemodialysis	TX
13	Dialysis	TX
14	ESRD	TX
15	ESKD	TX
16	kidney disease adj2 (end-stage OR end stage OR chronic)	TX
17	renal disease adj2 (end-stage OR end stage OR chronic)	TX
18	kidney failure adj2 (end-stage OR end stage OR chronic)	TX
19	Renal replacement therapy	TX
20	renal failure adj2 (end-stage OR end stage OR chronic)	TX
21	Transplants	MH (explode)
22	Transplants	TX
23	Kidney diseases	MH (explode)
24	Kidney diseases	TX
25	Peritoneal dialysis	MH (explode)
26	Peritoneal dialysis	TX
27	Peritoneal dialysis, continuous ambulatory	MH (explode)
28	Peritoneal dialysis, continuous ambulatory	TX
29	Kidney transplantation	MH (explode)
30	Kidney transplantation	TX
31	Conservative treatment	MH (explode)
32	Conservative treatment	TX
33	1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21 OR 22 OR 23 OR 24 OR 25 OR 26 OR 27 OR 28 OR 29 OR 30 OR 31 OR 32 OR 32	
34	Life Style	MH (explode)
35	Life Style	TX
36	Lifestyle	TX
37	Lifestyle intervention	TX
38	Exercise	MH (explode)
39	Exercise	TX
40	Healthy lifestyle	MH (explode)
41	Healthy lifestyle	TX
42	Exercise therapy	MH (explode)
43	Exercise therapy	TX
44	Exercise training	TX
45	Exercise program*	TX
46	Aerobic exercise	TX
47	Aerobic training	TX
48	Resistance training	MH (explode)
49	Resistance training	TX
50	Physical Activity	TX
51	Diet	MH (explode)
52	Diet	TX
53	Nutrition	TX
54	Nutrition therapy	MH (explode)
55	Nutrition therapy	TX
56	Non adj2 pharmacological	TX
57	Pharmaceutical preparations	MH (explode)
58	Pharmaceutical preparations	TX
59	Pharmaceutical Aids	MH (explode)
60	Pharmaceutical Aids	TX
61	Pharmacological intervention	TX
62	Pharmaceutical	TX
63	Drug	TX
64	Vitamin adj2 d	TX
65	Growth adj2 hormone	TX
66	Dehydroepiandrosterone	TX
67	Growth adj2 factor	TX
68	Testosterone	TX

69	Angiotensin-Converting Enzyme Inhibitors	MH (explode)
70	Angiotensin-Converting Enzyme Inhibitors	TX
71	ACE inhibitor	TX
72	34 OR 35 OR 36 OR 37 OR 38 OR 39 OR 40 OR 41 OR 42 OR 43 OR 44 OR 45 OR 46 OR 47 OR 48 OR 49 OR 50 OR 51 OR 52 OR 53 OR 54 OR 55 OR 56 OR 57 OR 58 OR 59 OR 60 OR 61 OR 62 OR 63 OR 64 OR 65 OR 66 OR 67 OR 68 OR 69 OR 70 OR 71	
73	Sarcopenia	MH (explode)
74	Sarcopenia	TX
75	Cachexia	MH (explode)
76	Cachexia	TX
77	Muscle adj2 wasting	TX
78	Protein-energy malnutrition	MH (explode)
79	Protein-energy malnutrition	TX
80	Wasting adj2 (protein energy OR protein-energy)	TX
81	Frailty	MH (explode)
82	Frailty	TX
83	Muscle weakness	MH (explode)
84	Muscle weakness	TX
85	Muscle atrophy	MH (explode)
86	Muscle atrophy	TX
87	Muscle strength	MH (explode)
88	Muscle strength	TX
89	Body composition	TX
90	Fat free mass	TX
91	Muscle, skeletal	MH (explode)
92	Muscle, skeletal	TX
93	Lean body mass	TX
94	Muscle mass	TX
95	Grip strength	TX
96	Sit adj2 stand	TX
97	MRI	TW
98	Magnetic resonance imaging	TW
99	DEXA	TW
100	Dual-energy x-ray absorptiometry	TX
101	Bioelectrical adj2 impedance	TX
102	CT adj2 imaging	TW
103	Physical functional performance	MH (explode)
104	Physical functional performance	TX
105	Short physical performance battery	TX
106	SPPB	TX
107	Timed up and go	TX
108	Walk adj2 speed	TX
109	Gait adj2 speed	TX
110	Quality adj2 life	TW
111	Physical adj2 activity	TW
112	Fall*	TW
113	Hospital adj2 admissions	TW
114	73 OR 74 OR 75 OR 76 OR 77 OR 78 OR 79 OR 80 OR 81 OR 82 OR 83 OR 84 OR 85 OR 86 OR 87 OR 88 OR 89 OR 90 OR 91 OR 92 OR 93 OR 94 OR 95 OR 96 OR 97 OR 98 OR 99 OR 100 OR 101 OR 102 OR 103 OR 104 OR 105 OR 106 OR 107 OR 108 OR 109 OR 110 OR 111 OR 112 OR 113	
115	Randomized controlled trial as topic	MH (explode)
116	Controlled clinical trial	MH (explode)
117	Randomized OR Randomised	TX
118	Placebo	TX
119	Drug therapy	TX
120	Random*	TX
121	Trial	TX
122	Groups	TX
123	115 OR 116 OR 117 OR 118 OR 119 OR 120 OR 121 OR 122	TX
124	Exp animals/ not humans	TX
125	123 NOT 124	TX
126	33 AND 72 AND 114 AND 125	

Table S2: Full search strategy for EMBASE database. All fields (AF), End-stage kidney disease (ESKD), end-stage renal disease (ESRD).

	Search term	Field
1	Renal insufficiency	AF
2	Renal insufficiency, chronic	AF
3	Renal Dialysis	AF
4	Kidney failure, chronic	AF
5	Renal Replacement therapy	AF
6	Haemodialysis	AF
7	Hemodialysis	AF
8	Dialysis	AF
9	ESRD	AF
10	ESKD	AF
11	kidney disease adj2 (end-stage OR end stage OR chronic)	AF
12	renal disease adj2 (end-stage OR end stage OR chronic)	AF
13	kidney failure adj2 (end-stage OR end stage OR chronic)	AF
14	Renal replacement therapy	AF
15	renal failure adj2 (end-stage OR end stage OR chronic)	AF
16	Transplant*	AF
17	Kidney diseases	AF
18	Peritoneal dialysis	AF
19	Peritoneal dialysis, continuous ambulatory	AF
20	Kidney transplantation	AF
21	Conservative treatment	
22	1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21	
23	Lifestyle	AF
24	Lifestyle intervention	AF
25	Exercise	AF
26	Healthy Lifestyle	AF
27	Exercise therapy	AF
28	Exercise training	AF
29	Exercise program*	AF
30	Aerobic exercise	AF
31	Aerobic training	AF
32	Resistance training	AF
33	Physical Activity	AF
34	Diet	AF
35	Nutrition	AF
36	Nutrition therapy	AF
37	Non adj2 pharmacological	AF
38	Pharmaceutical preparations	AF
39	Pharmaceutical Aids	AF
40	Pharmacological intervention	AF
41	Pharmaceutical	AF
42	Drug	AF
43	Vitamin adj2 d	AF
44	Growth adj2 hormone	AF
45	Dehydroepiandrosterone	AF
46	Growth adj2 factor	AF
47	Testosterone	AF
48	Angiotensin-Converting Enzyme Inhibitors	AF
49	ACE inhibitor	AF
50	23 OR 24 OR 25 OR 26 OR 27 OR 28 OR 29 OR 30 OR 31 OR 32 OR 33 OR 34 OR 35 OR 36 OR 37 OR 38 OR 39 OR 40 OR 41 OR 42 OR 43 OR 44 OR 45 OR 46 OR 47 OR 48	
51	Sarcopenia	AF
52	Cachexia	AF
53	Muscle adj2 wasting	AF
54	Protein-energy malnutrition	AF
55	Wasting adj2 (protein energy or protein-energy)	AF
56	Frailty	AF
57	Muscle weakness	AF
58	Muscle atrophy	AF
59	Muscle strength	AF
60	Body composition	AF
61	Fat free mass	AF
62	Skeletal muscle	AF
63	Lean body mass	AF
64	Muscle mass	AF
65	Grip strength	AF

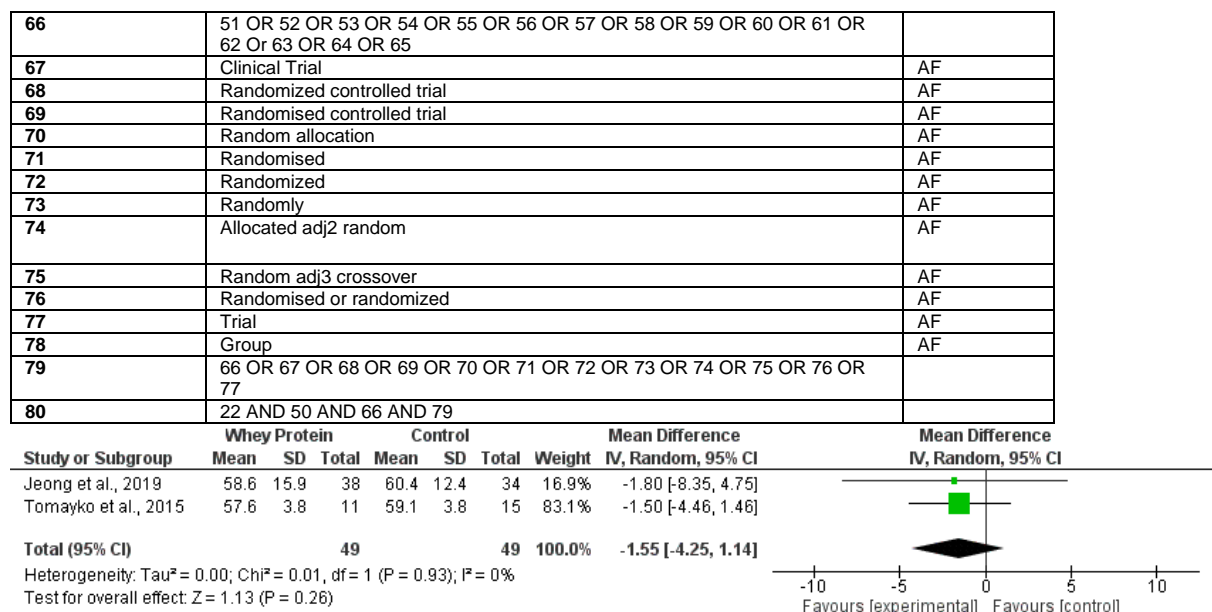


Figure S1. Effect of whey protein supplementation on whole lean body mass (kg) measured by DEXA in individuals receiving haemodialysis. Data are expressed as mean difference and 95% CI. Data for whey protein and control groups from both trials [22,66].

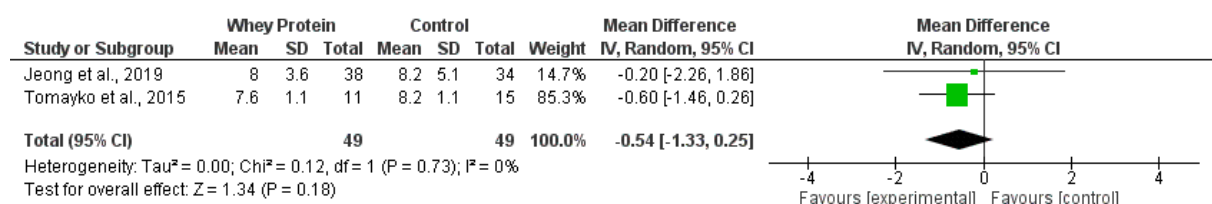


Figure S2. Effect of whey protein supplementation on timed-up-and-go in individuals receiving haemodialysis. Data are expressed as mean difference and 95% CI. Data for whey protein and control groups from both trials[22,66].