

## Electronic supplementary material

### ESM Table 1 Exercise programme

Brisk walking programme															
Month	Warming up <sup>s</sup>		Resistance exercise*					Interval endurance exercise <sup>s</sup>				Cooling down <sup>s</sup>	Session	Frequency	Total exercise training
	Walking		Elastic band/Floor exercises					'In' (active exercise)		'Out' (active recovery)					
	Duration (min)	Intensity (%HF <sub>max</sub> )	Exercises (n)	Duration (min)	Sets (n)	Repetitions (n)	%1-RM	Intensity (%HF <sub>max</sub> )	Duration (min)	Intensity (%HF <sub>max</sub> )	Duration (s)				
1	10	45–50	5	10–15	1–2	10–15	N/A	55–60	10 × 1	40	60	5	45	3	135
2	10	55–60	5	15	2	10–15	N/A	55–60	12 × 1	40	60	5	55	3	165
3	10	55–60	5	15	2	10–15	N/A	60–65	12 × 1	40	60	5	55	3	165
4	10	55–60	5	15	2	15–20	N/A	60–65	10 × 1.5	45	60	5	60	3	180
5	10	55–60	5	15	2	15–20	N/A	65–70	10 × 1.5	45	60	5	60	3	180
6	10	55–60	5	15	2	15–20	N/A	65–70	8 × 2	45	45	5	60	3	180
7	10	55–60	5	15	2	15–20	N/A	70–75	6 × 3	45	60	5	60	3	180
8	10	55–60	5	15	2	15–20	N/A	70–75	5 × 4	45	90	5	60	3	180
9	10	55–60	5	15	2	15–20	N/A	70–80	6 × 3	45	60	5	60	3	180
10	10	55–60	5	15	2	15–20	N/A	70–80	7 × 3	45	45	5	60	3	180
11	10	55–60	5	15	2	15–20	N/A	75–80	7 × 3	45	60	5	60	3	180
12	10	55–60	5	15	2	15–20	N/A	75–80	7 × 3	45	45	5	60	3	180

  

Medical fitness programme															
Month	Warming up <sup>ss</sup>		Resistance exercise**					Interval endurance exercise <sup>ss</sup>				Cooling down <sup>ss</sup>	Session	Frequency	Total exercise training
	Cycling		Weight machines					'In' (active exercise)		'Out' (active recovery)					
	Duration (min)	Intensity (%HF <sub>max</sub> )	Exercises (n)	Duration (min)	Sets (n)	Repetitions (n)	%1-RM	Intensity (%W <sub>max</sub> )	Duration (min)	Intensity (%HF <sub>max</sub> )	Duration (s)				
1	5	45–50	5	10–15	1–2	10	50	80–100	4–6 × 0.5	40	60	5	30–40	3	90–120
2	10	55–60	5	20	2	10	55–60	90–110	8–10 × 0.5	45	45	5	45	3	135
3	10	55–60	5	20	2	10	60	60–80	6–10 × 0.75	45	60	5	50	3	150
4	10	55–60	5	20	2	10	65	50–55	6–8 × 1	45	45	5	55	3	165
5	10	55–60	5	20	2	10–12	50–70	45	6–8 × 2–3	45	60	5	60	3	180
6	10	55–60	3–5	15–20	2	10–12	50–75	50–60	5–8 × 3–4	45	60	5	60	3	180–225

7	10	55–60	3–5	15–20	2	14	55–75	70	5–8 × 3–4	45	60	5	60–75	3	180–225
8	10	55–60	3–5	15–20	2	14	55–75	70	3–5 × 4–5	45	90–120	5	60–75	3	180–225
9	10	55–60	3–5	15–20	2	14	60–75	70–75	8–12 × 2–3	45	60–90	5	60–75	3	180–225
10	10	55–60	3–5	15–20	2	10	70–75	65–75	5–7 × 3–4	45	60–90	5	60–75	3	180–225
11	10	55–60	3–5	15–20	2	10	60–80	70–75	6–12 × 2–3	45	60–90	5	60–75	3	180–225
12	10	55–60	3–5	15–20	2	12	75–80	70–85	4–10 × 1–3	45	60–120	5	60–75	3	180–225

<sup>§</sup>In brisk walking programme the warming up and cooling down consisted of a combination of low intensity (45–60% HF<sub>max</sub>) walking and stretching exercises

\*Depending on the weather conditions, for each training session five different resistance exercises were prescribed out of 21 different floor or elastic band exercises aiming at upper limbs, trunk, back, hip and lower limb muscle groups

<sup>§</sup>In the brisk walking programme interval endurance exercise training was applied in an intermittent fashion. To vary its intensity and increase its attractiveness, exercise trainers could choose from 15 different walking trails or exercise patterns.

<sup>§§</sup>In the medical fitness programme warming up and cooling down consisted of a combination of low-intensity (45–60% HF<sub>max</sub>) cycling on a cycle ergometer and stretching exercises

\*\*For each training session, three to five different resistance exercises were individually prescribed out of ten different weight machines exercises (vertical row, vertical traction, leg press, leg extension, bench/chest press, pull over, abdominal crunch and flys). Percentage of 1 repetition maximum (% 1-RM) was based on repetitive strength testing every 4–6 weeks

<sup>§§</sup>In the medical fitness programme interval endurance exercise started with short, relatively high-intensity exercise bouts applied in an intermittent fashion with the intention to increase muscle strength and functional performance. Maximum exercise capacity on a cycle ergometer achieved during intake ( $W_{max}$ ) was used to individualise the training load. These so-called ‘In-and-Out’ exercises do not produce feelings of dyspnoea or discomfort and have been shown safe and effective in deconditioned heart failure [1] and diabetes patients [2]. After 4 months the emphasis shifted towards longer exercise bouts on both treadmill as well as cycle- and rowing ergometers. These exercise bouts were alternated with relatively shorter recovery periods aiming to improve endurance capacity

HF<sub>max</sub>, maximum heart frequency; N/A, not applicable; % 1-RM, percentage of 1 repetition maximum;  $W_{max}$ : maximum workload capacity

## References

1. Meyer K, Samek L, Schwaibold M et al (1997) Interval training in patients with severe chronic heart failure: analysis and recommendations for exercise procedures. *Med Sci Sports Exerc* 29: 306–312
2. De Feyter HM, Praet SF, van den Broek NM et al (2007) Exercise training improves glycemic control in long-standing, insulin-treated type 2 diabetes patients. *Diabetes Care* 30: 2511–2513