

# Clinical trials of Exercise training

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## 1 heart failure

Trial	Treatments	Patients	Trials design and methods
<b>Exercise training vs control</b>			
Dubach et al , 1997 n=24/26 follow-up: 0.7 y	Supervised walking, two hours daily; supervised cycling 40minutes four days a week versus control	patients with chronic heart failure	open Switzerland
Giannuzzi et al , 1997 n=46/42 follow-up: 0.6 y	Supervised cycling, 30 minutesthree days a week for two months, then home based 30 minutes for three days a week and walking for 30 minutes versus control	patients with <40% ejection fraction after a first Q-wave myocardial infarction	open Italy
Belardinelli et al , 1999 n=50/49 follow-up: 3.1 y	Supervised cycling, 60 minutes three days a week for eightweeks, then two days a week versus no exercise	patients with CHF	open 65279;Italy
Hambrecht et al , 1995 n=34/35 follow-up: 0.4 y	Supervised and home based walking, calisthenics, cycling40-60 minutes a day versus physically inactive control group	patients with chronic heart failure	open Germany
ExTraMATCH , 2004 n=NA follow-up:	-	-	
Kiilavuori et al , 2000 n=12/15 follow-up: 6.3 y	Supervised cycling 30 minutes three days a week for three months, then home basedtraining (walking, cycling,rowing, and swimming) versus control	patients with stable NYHA class II-III CHF	open Finland

continued...

<b>Trial</b>	<b>Treatments</b>	<b>Patients</b>	<b>Trials design and methods</b>
McKelvie et al , 2002 n=90/91 follow-up: 1.5 y	Supervised aerobic (cycling,treadmill, arm) and resistance training 30 minutes three days a week for three months, then home based aerobic training three days a week versus usual care	patients in NYHA class I to III, with ejection fraction <40% and 6-minute walk distance <500 meters	single blind Canada
Zanelli et al , 1997 n=76/79 follow-up: 0.8 y	-	-	Italy
Wielenga et al , 1999 n=41/39 follow-up: 3.9 y	Supervised cycling, walking,ball game 30 minutes threedays a week for eight weeks, then two days a week versus control	patients with chronic heart failure NYHA II-III	open Netherlands
Willenheimer et al , 1998 n=22/30 follow-up: 4.4 y	Supervised interval cyclingtraining (90 second exercise and 30 second rest) for 15-45 minutes two days a week versus control	patients with stable mild-to-moderate heart failure	open Sweden
<b>structured exercise training vs control</b>			
Patwala , 2009 n=25/25 follow-up: 6 months	program of physician-supervised exercise training versus control	patients with chronic systolic heart failure receiving a Cardiac Resynchronization Therapy device	Parallel groups open
HF-ACTION , 2008 [NCT00047437] n=1159/1172 follow-up: mean 2.5 y	highly structured exercise program focused on increasing workout intensity and duration versus usual care,including recommendations for daily exercise	heart-failure patients (NYHA class 2-4, ejection fraction <35% )	Parallel groups open USA, Canada, France

More details and results :

- Exercise Therapy for heart failure in all type of patients at <http://www.trialresultscenter.org/go-Q88>
- Exercise Therapy for heart failure in patients receiving a CRT device at <http://www.trialresultscenter.org/go-Q330>

## References

Dubach et al, 1997:

Dubach P, Myers J, Dziekan G, Goebbels U, Reinhart W, Muller P, Buser P, Stulz P, Vogt P, Ratti R Effect of high intensity exercise training on central hemodynamic responses to exercise in men with reduced left ventricular function. *J Am Coll Cardiol* 1997 Jun;29:1591-8 [[9180124](#)]

**Giannuzzi et al, 1997:**

Giannuzzi P, Temporelli PL, Corra U, Gattone M, Giordano A, Tavazzi L Attenuation of unfavorable remodeling by exercise training in postinfarction patients with left ventricular dysfunction: results of the Exercise in Left Ventricular Dysfunction (ELVD) trial. *Circulation* 1997 Sep 16;96:1790-7 [[9323063](#)]

**Belardinelli et al, 1999:**

Belardinelli R, Georgiou D, Cianci G, Purcaro A Randomized, controlled trial of long-term moderate exercise training in chronic heart failure: effects on functional capacity, quality of life, and clinical outcome. *Circulation* 1999 Mar 9;99:1173-82 [[10069785](#)]

**Hambrecht et al, 1995:**

Hambrecht R, Niebauer J, Fiehn E, Klberer B, Offner B, Hauer K, Riede U, Schlierf G, Kbler W, Schuler G Physical training in patients with stable chronic heart failure: effects on cardiorespiratory fitness and ultrastructural abnormalities of leg muscles. *J Am Coll Cardiol* 1995;25:1239-49 [[7722116](#)]

**ExTraMATCH, 2004:**

**Kiilavuori et al, 2000:**

Kiilavuori K, Naveri H, Salmi T, Harkonen M The effect of physical training on skeletal muscle in patients with chronic heart failure. *Eur J Heart Fail* 2000 Mar;2:53-63 [[10742704](#)]

**McKelvie et al, 2002:**

McKelvie RS, Teo KK, Roberts R, McCartney N, Humen D, Montague T, Hendrican K, Yusuf S Effects of exercise training in patients with heart failure: the Exercise Rehabilitation Trial (EXERT). *Am Heart J* 2002 Jul;144:23-30 [[12094184](#)]

**Zanelli et al, 1997:**

**Wielenga et al, 1999:**

Wielenga RP, Huisveld IA, Bol E, Dunselman PH, Erdman RA, Baselier MR, Mosterd WL Safety and effects of physical training in chronic heart failure. Results of the Chronic Heart Failure and Graded Exercise study (CHANGE) *Eur Heart J* 1999 Jun;20:872-9 [[10329092](#)]

**Willenheimer et al, 1998:**

Willenheimer R, Erhardt L, Cline C, Rydberg E, Israelsson B Exercise training in heart failure improves quality of life and exercise capacity. *Eur Heart J* 1998 May;19:774-81 [[9717012](#)]

**Patwala, 2009:**

Patwala AY, Woods PR, Sharp L, Goldspink DF, Tan LB, Wright DJ Maximizing patient benefit from cardiac resynchronization therapy with the addition of structured exercise training: a randomized controlled study. *J Am Coll Cardiol* 2009;53:2332-9 [[19539142](#)]

**HF-ACTION, 2008:**

O'Connor CM, Whellan DJ, Lee KL, Keteyian SJ, Cooper LS, Ellis SJ, Leifer ES, Kraus WE, Kitzman DW, Blumenthal JA, Rendall DS, Miller NH, Fleg JL, Schulman KA, McKelvie RS, Zannad F, Pia IL Efficacy and safety of exercise training in patients with chronic heart failure: HF-ACTION randomized controlled trial. *JAMA* 2009 Apr 8;301:1439-50 [[19351941](#)]

Flynn KE, Pia IL, Whellan DJ, Lin L, Blumenthal JA, Ellis SJ, Fine LJ, Howlett JG, Keteyian SJ, Kitzman DW, Kraus WE, Miller NH, Schulman KA, Spertus JA, O'Connor CM, Weinfurt KP Effects of exercise training on health status in patients with chronic heart failure: HF-ACTION randomized controlled trial. *JAMA* 2009 Apr 8;301:1451-9 [[19351942](#)]

Entry terms: Exercise Therapy, Exercise Therapy, Exercise Therapies,