Erasmus MC
University Medical Center Rotterdam

Sophia Children's Hospital

Exercise training in children with Tetralogy of Fallot or Fontan circulation, an RCT

Is it effective and safe, and does it improve quality of life?

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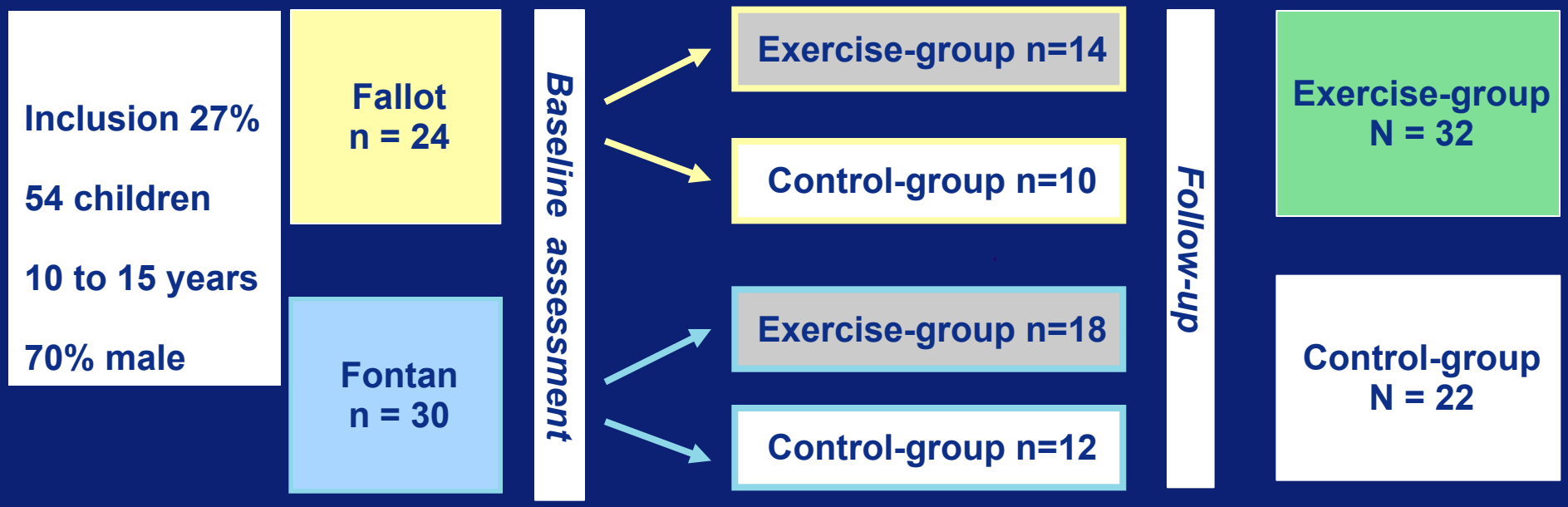
Method- RCT


Inclusion 27%
54 children
10 to 15 years
70% male
Fallot
n = 24
Fontan
n = 30
Baseline assessment
Exercise-group n=14
Control-group n=10
Exercise-group n=18
Control-group n=12
Follow-up
Exercise-group
N = 32
Control-group
N = 22

Method-RCT

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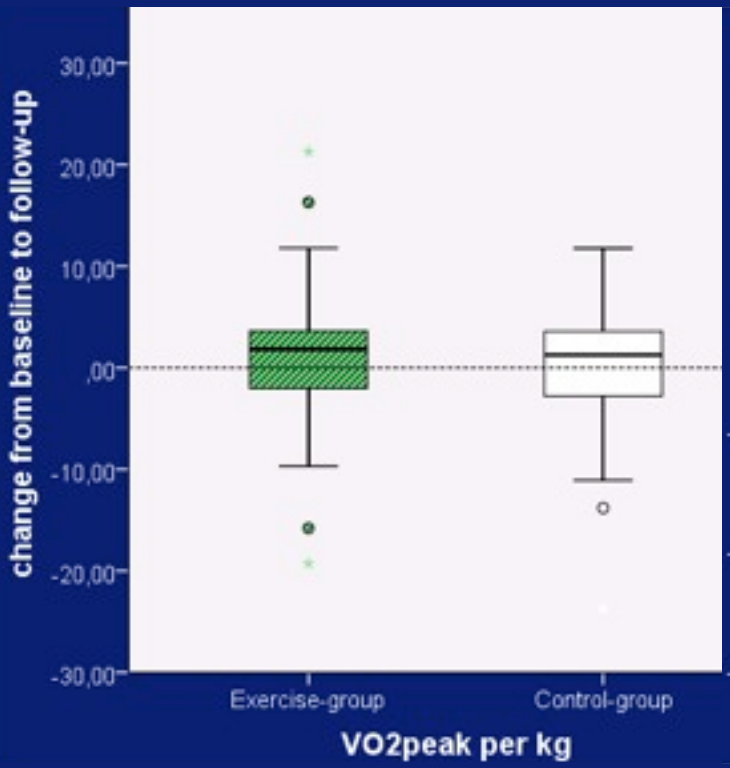
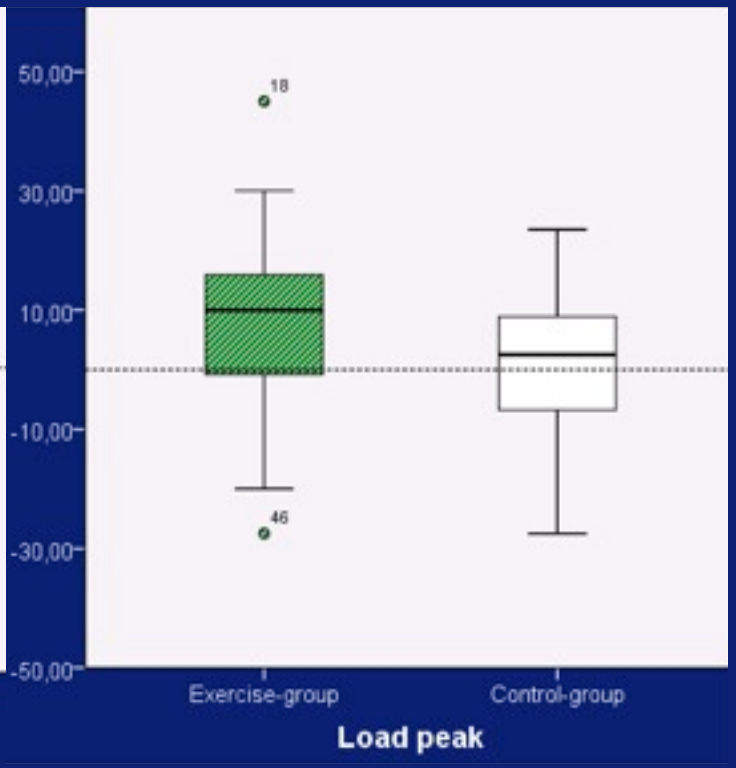
Standardized exercise training

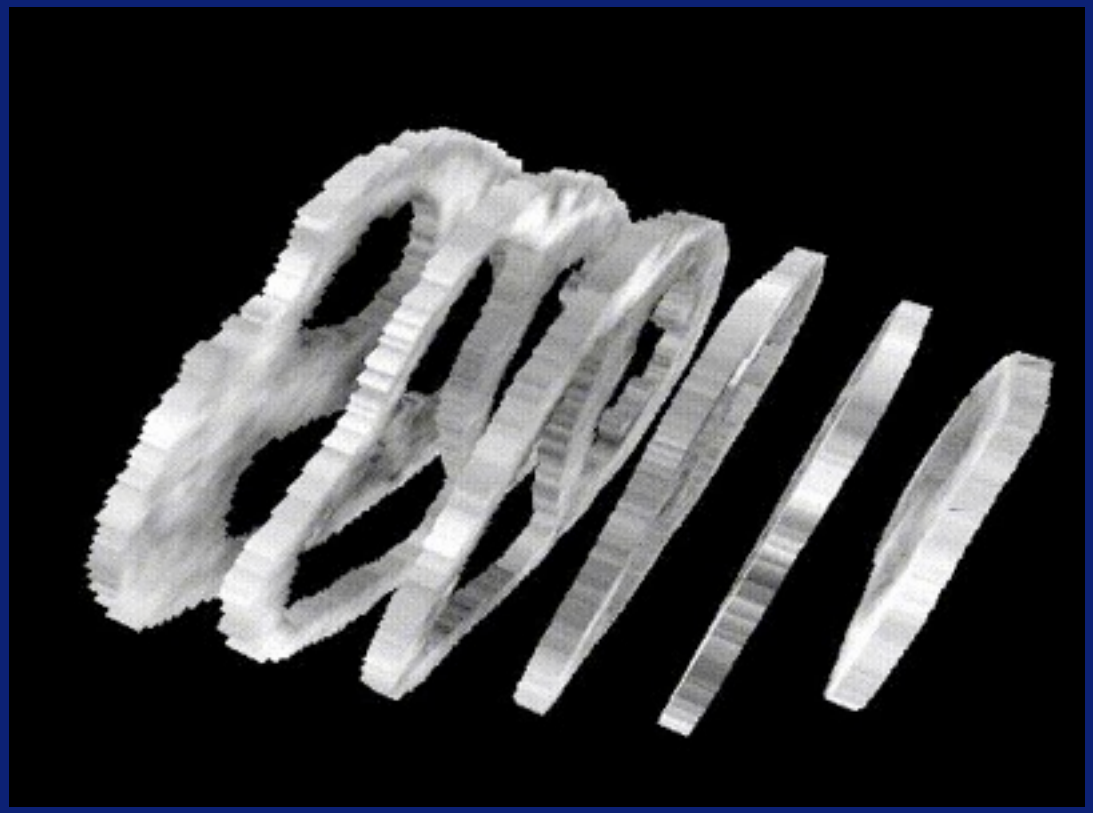
- Training with physiotherapists
- Group format
- Nearby their home
- 3 x per week, for 1 hour
- 60%-70% Heart Rate Reserve

Is it effective?



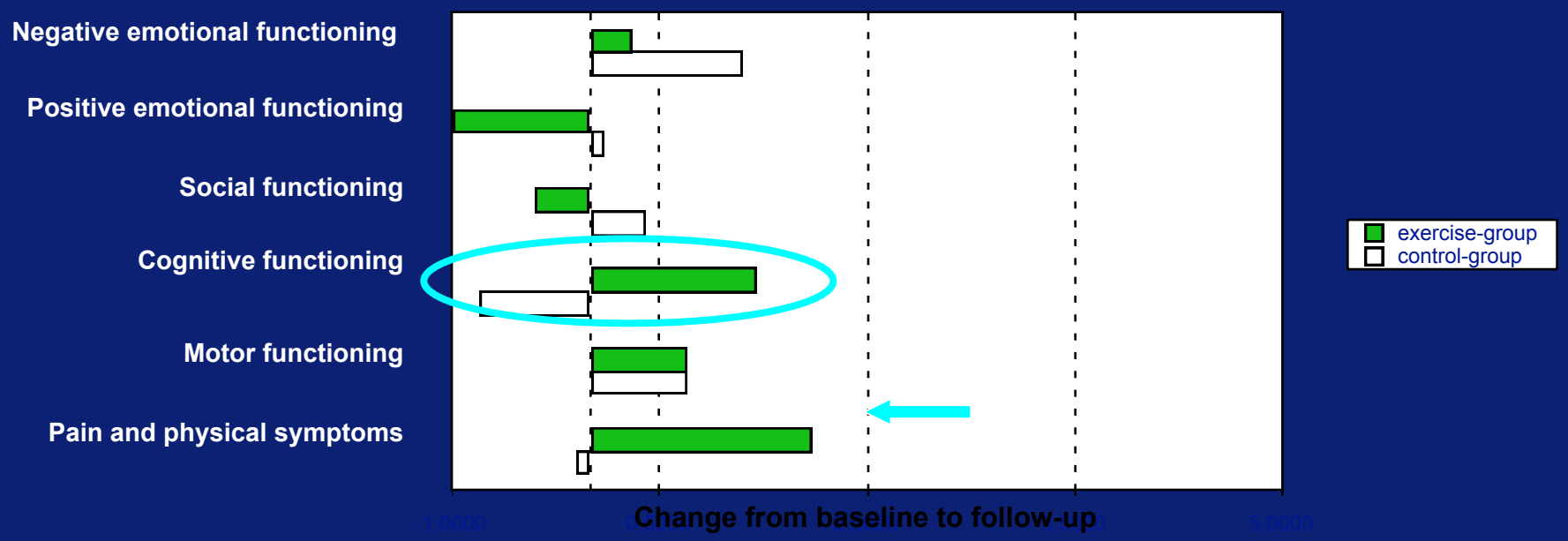


Is it safe?



Does it improve quality of life? - *Self*

TACQOL – Child Form



Does it improve quality of life? - *Parent*

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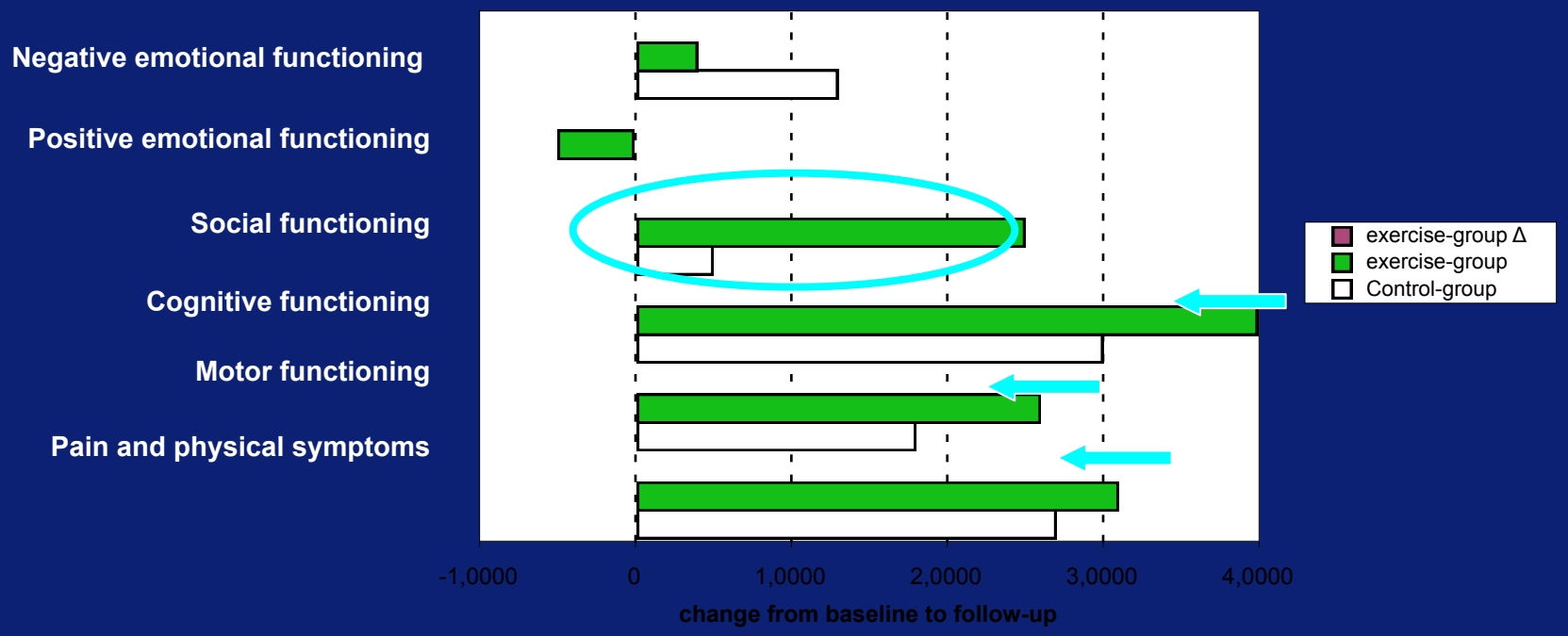
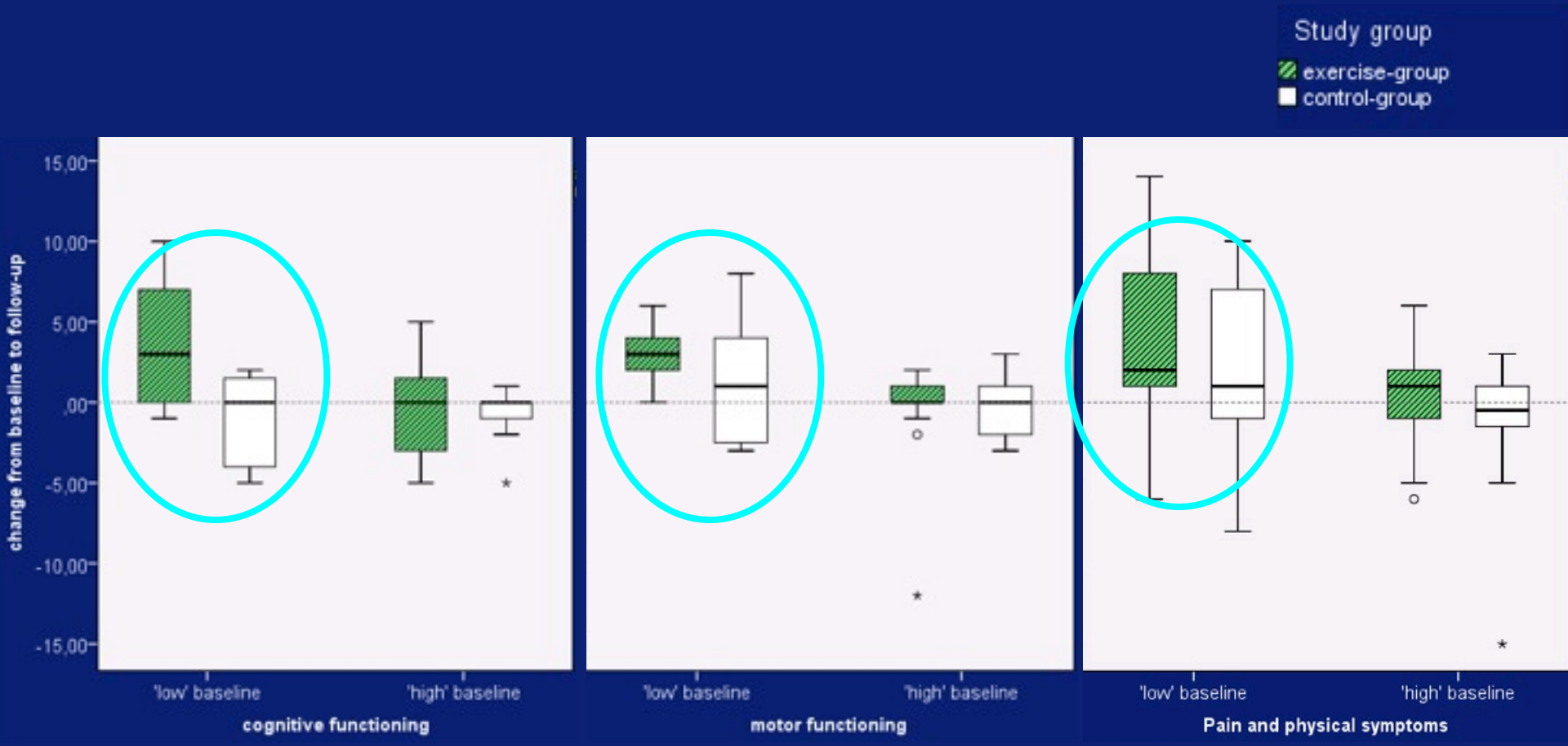
TACQOL - Parent Form



Which children benefited the most?

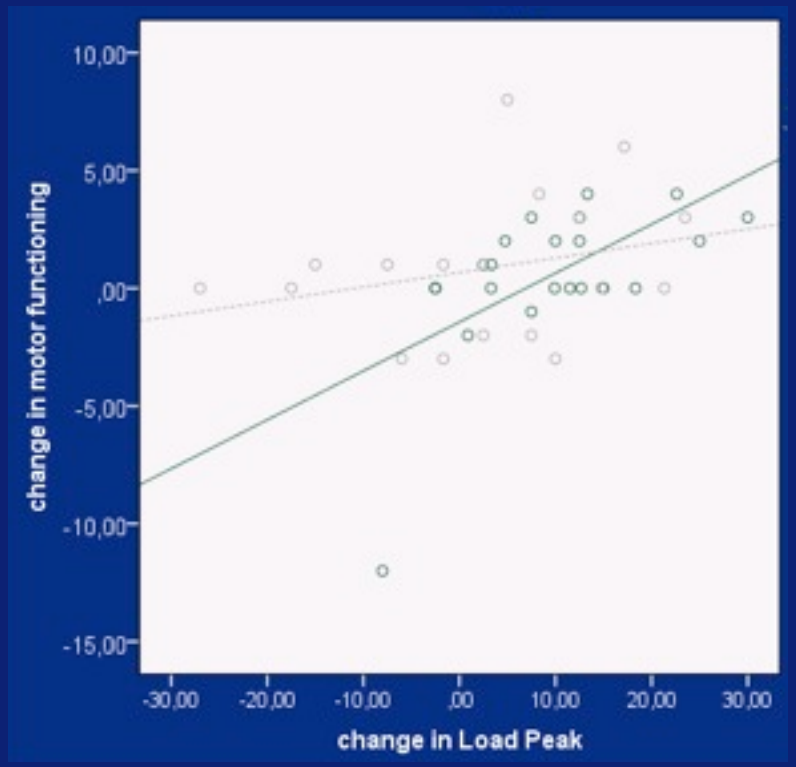
- No significant influence of congenital heart disease and gender
- Children with low QoL at baseline vs. children with high QoL



Associations improvements exercise capacity and QoL

- improvement peak VO2 ≠ improvement physical/psychosocial QoL

- But: change in peak load was associated with change motor functioning (r=.60)



Exercise-group
Control-group

Take home message

Exercise training improved: peak load

cognitive functioning (self)

motor functioning (parent)

Children with low QoL at baseline benefited the most

- No clear association exercise capacity improvements → QoL improvements
- QoL changes might be the result of psychosocial component of exercise-program.

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