

7 versus 12 weeks of exercise in hospital-based COPD rehabilitation. Does it make a difference ?



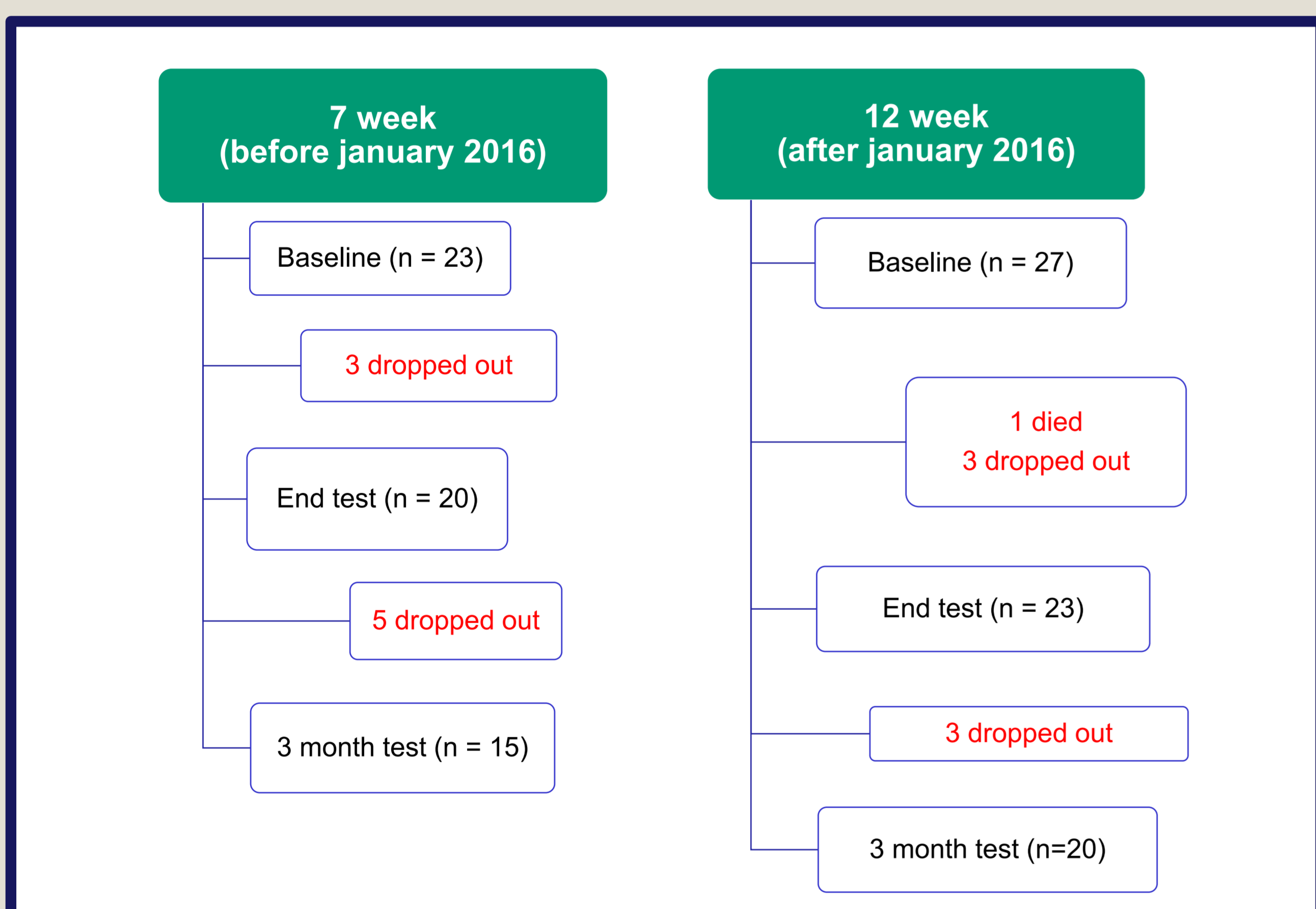
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Introduction: The exercise recommendations in the Danish guidelines for rehabilitation of patients with COPD are primarily based on studies using exercise interventions that last minimum 10 weeks. The aim of this study was to investigate whether changing the duration of our COPD rehabilitation program from 7 to 12 weeks would correspondingly increase the effect.

Methods: The study design was a before-after study with 3 months follow-up. The study population consisted of 43 patients with COPD (MRC 3-5, FEV1<50%), participating in either a 7-week group (7 weeks of rehabilitation) or a 12-week group (12 weeks of rehabilitation).

Outcomes were Endurance Shuttle Walk Test (ESWT); 30 sec Sit to Stand test (STS); and COPD Assessment Scale (CAT)



Numbers are median (range) if not otherwise specified	7 week group (n=23)	12 week group (n=27)
Age, mean (SD)	68.7 (12,2)	71.6 (8,3)
Male gender, n (%)	12 (52%)	16 (59%)
MRC 2	1 (5%)	4 (15%)
MRC 3	10 (47%)	10 (37%)
MRC 4	9 (43%)	6 (22%)
MRC 5	1 (5%)	7 (26%)
FEV1 (% of estimated)	41 (17-66)	36 (16-76)
ESWT (minutes walked)	3.6 (1.6-7.4)	3.4 (1.1 – 13.3)
STS (number of repetitions)	10 (5-17)	10 (0-14)
CAT (0-40 points /best-worst)	18 (9-28)	18.5 (9-32)

Figure 3. Results for Endurance Shuttle Walk Test
Numbers are number of minutes walked.

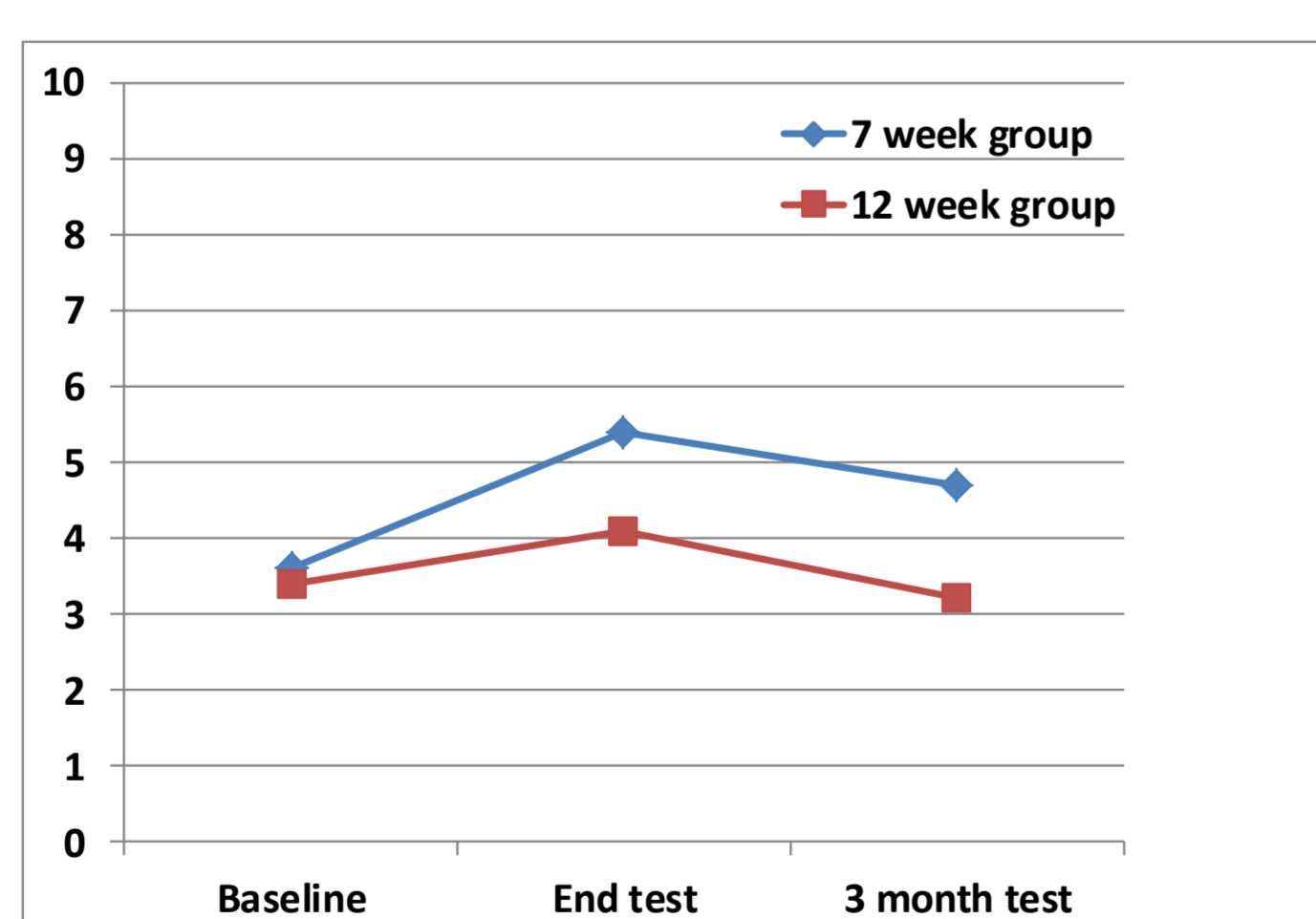
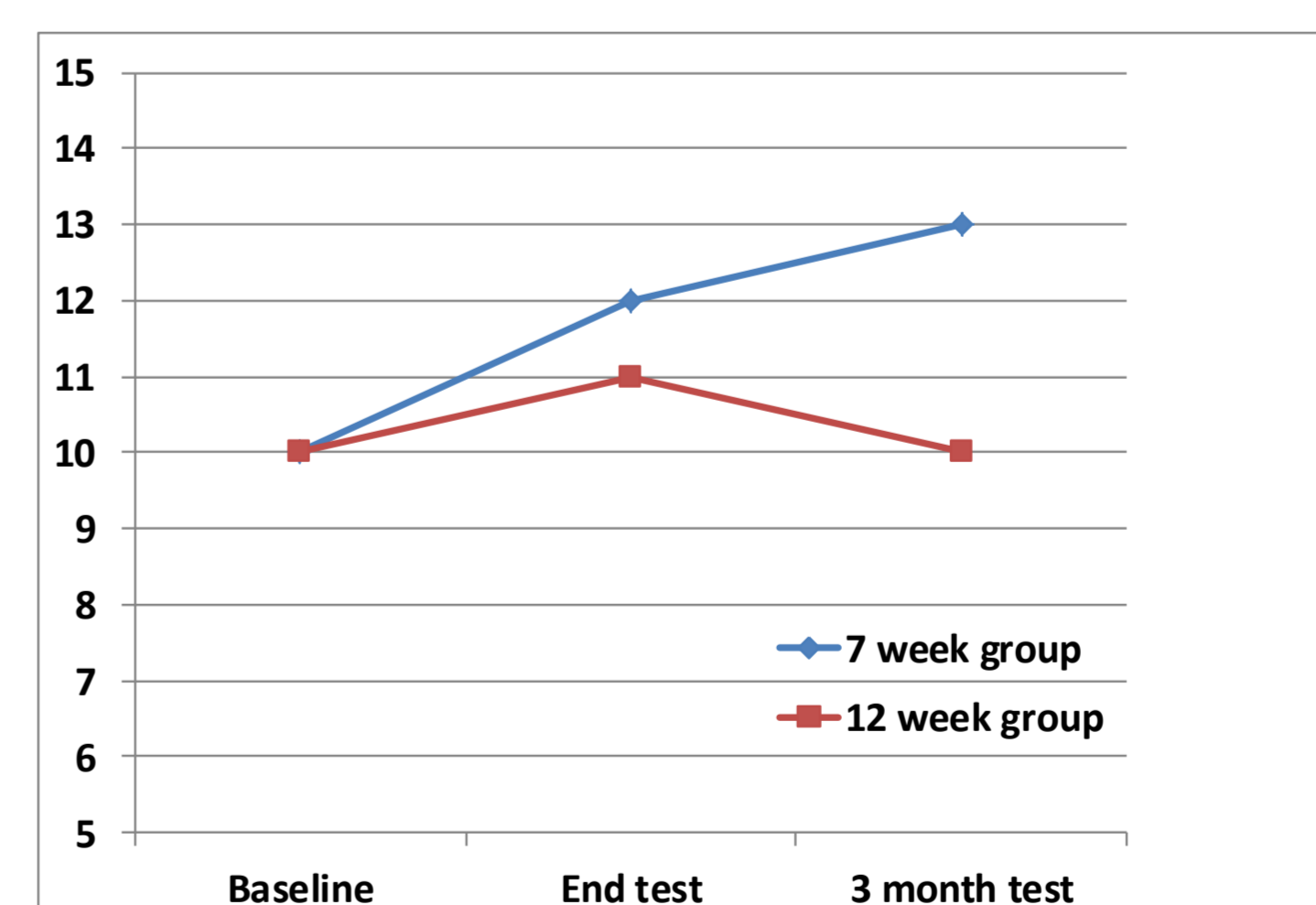


Figure 4. Results for 30 second Sit to Stand Test
Numbers are number of repetitions sit to stand.



Conclusion and perspective

Both groups improved significantly from baseline to end of rehabilitation, both in terms physical ability (ESWT and STS) and COPD symptoms (CAT) (data not shown). However, both groups similarly deteriorated from the end of rehabilitation to 3 month follow-up on all outcomes, except for STS in the 7-week group.

Despite prolonging rehabilitation with 5 weeks of exercise, it did not significantly improve the outcomes of patients in the 12-week group. Neither did it lead to maintaining the achieved improvement after termination of the exercise programme. The study is of course limited by a relatively small number of patients and the non-randomised design.