

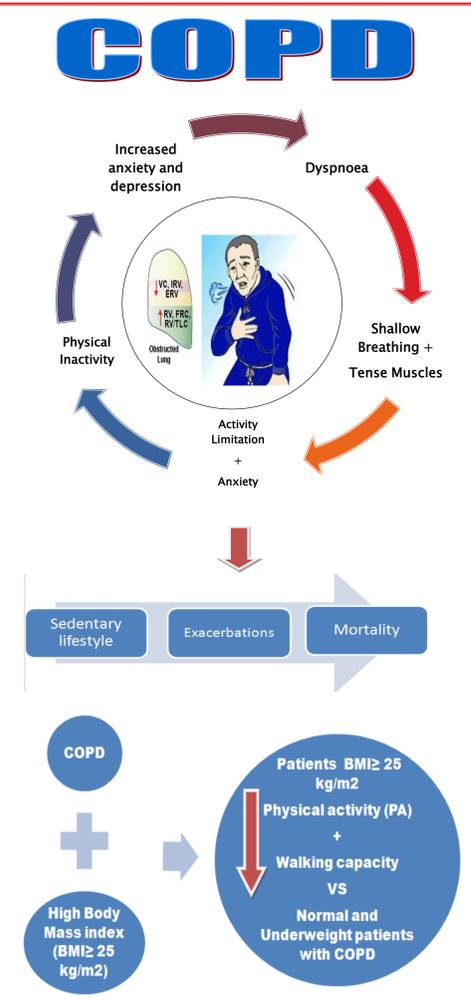


Impact of walking prescription on the effects of pulmonary rehabilitation in COPD patients with high body mass index.

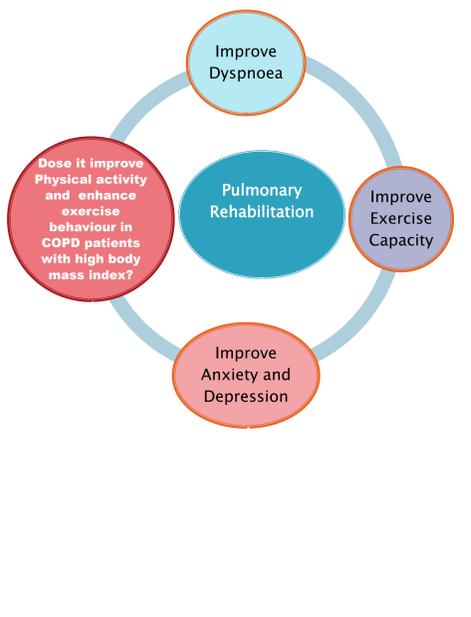
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Background



American College of Sports Medicine (ACSM) recommends an equivalent combination of at least 15 mins of moderate intensity (3 times per week) of physical activity would be the minimum amount to ensure health benefits in patients with moderate to severe COPD. But advice alone has a limited impact on modification of sedentary behaviour.



Objective

We evaluated the combined effects of walking prescription and pulmonary rehabilitation on exercise endurance, PA and QOL in COPD patients with high body mass index.

Methods

Retrospective Analysis

32 moderate COPD patients [(FEV₁: 63.06 (21.2) %] with high body mass index[30.94(5.089)]

8 weeks supervised exercise training/3 sessions per week/ 30mins per session

8 weeks education/2 session per week/60mins per session

Topics: Understanding COPD, Role of Exercise in Lung disease, Oxygen and Exercise, Inhaler and Nebuliser use, Energy conservation, Diet advice, Advance care planning and Entitlements.

Walking Prescription in Physical activity log(PAL)

Walking Prescription = 80% (2 * 6 min walking distance) at maximal intensity (Borg Scale)

Example: Mr. Tom, 70 yrs old, COPD stage 2, Exsmoker 2yrs and 3 chest infection per year referred for PR. On 6MWT, he is able to walk a distance of 400m with maximum Borg of 5.

Walking prescription for Tom = 80% (2 * 400) = 640m

Tom would reach 640 m in 9.6 mins (approximately 10 mins)

Therefore, the initial prescription for Tom would be 10 mins continuous walk at varying intensity (BORG SCALE) on PAL for 4-5 days per week and increase by 3 mins for following 7 weeks. Tom can achieve continuous 31 mins at end of 8 weeks.

Discussion

- ☑ This is the first study in Ireland, to evaluate the effects of walking prescriptions on PR outcomes in high body mass patients with COPD.
- ☑ Our major finding was incorporating walking prescription with shorter duration (30 mins) of supervised exercise session in PR is effective in improving dyspnoea, exercise endurance, physical activity and quality of life in high body mass patients with COPD.
- ☑ Our patients enjoyed the walking prescription and was well able to perform a mean of 21 mins of walking per day for at least 5 days per week. In sum, attained approximately 100 mins of moderate intensity physical activity per week.
- ☑ We felt the term prescription had effect on the patient exercise behaviour change and had a positive impact on physical activity.

Limitations

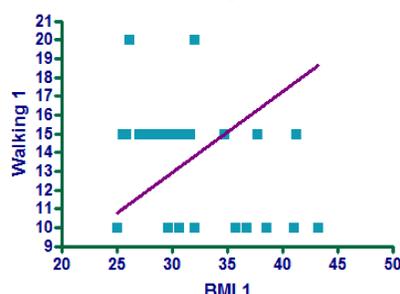
- ◆ Lack of control Group.
- ◆ Short term behaviour change.
- ◆ No physiological testing on training effects.
- ◆ Subjective data on physical activity.

Conclusion

This study supports a need for a walking prescription to be incorporated in pulmonary rehabilitation to improve PA in COPD patients with high BMI.

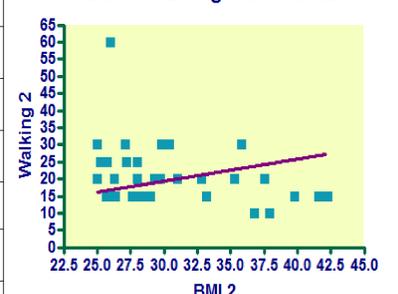
Results

BMI & Walking -Pre Rehab

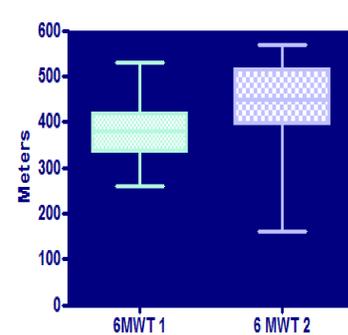


Parameters	Pre -PR	Post -PR	P-value
6 min walk distance	380(63.7)	438.4(95.4)	0.002
Leisure ground walking	13.91(2.8)	21.09(9.3)	0.0002
BORG	3.406(0.6)	2.59(0.7)	< 0.0001
CAT	22.28(6.1)	17.31(8.9)	0.01
BMI	30.94(5.089)	30.93(5.3)	0.9927
CRDQ	13.6(4.6)	20.5(4.4)	< 0.0001

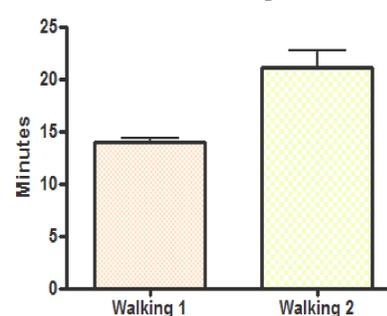
BMI & Walking -Post Rehab



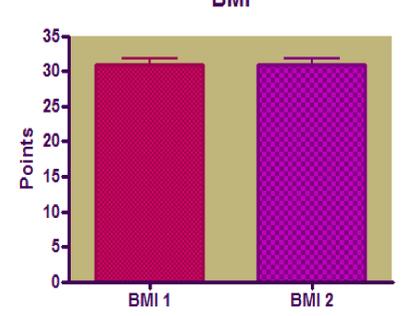
6MWT



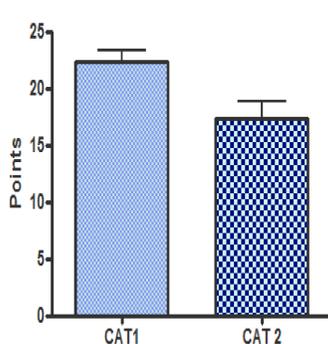
Walking



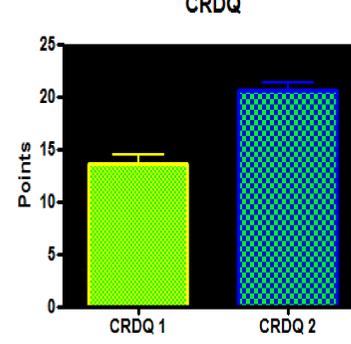
BMI



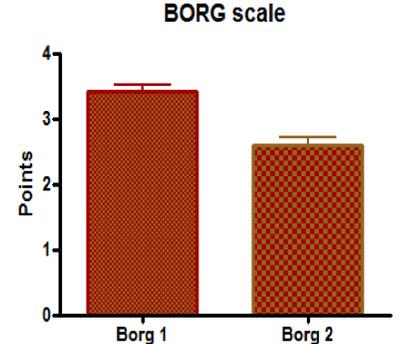
CAT



CRDQ



BORG scale



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