physical activity, results obtained from a pilot study show us that 70% of our patients maintain their level three months after their discharge. 

**Conclusion:** This type of intervention could be used in other type of settings (rehabilitation or prevention): hospital, school, CLSC’s and community centers.

**An Incremental Shuttle Walk Test to Estimate Maximal Aerobic Functional Capacity**

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**Background:** The goal of the present study was to compare the maximum walking speed and peak oxygen consumption (VO_{2} peak) obtained during the 6-min walk test (6 MWT) and an incremental shuttle walking test (ISWT) in a trained older population.

**Methods:** A total of 22 older adults (16 female and 6 male) with a group mean age of 70±5.8 yr (range 58 to 79) completed the 6 MWT and ISWT within a 2 wk period. Heart rate (HR) and VO_{2} peak were measured during each test with a portable metabolic cart (Cosmed, K4B2). The VO_{2} peak, the maximum walking speed and the total distance walked measured during both tests (6 MWT and ISWT) were compared.

**Results:** A total of 110 recordings for the VO_{2} peak were obtained and analyzed. Strong correlations were found for the VO_{2} peak and the walking speed (r=0.91 and r=0.89, respectively, for 6 MWT and ISWT). VO_{2} peak values obtained with the ISWT were significantly greater (P<0.05) than with the 6 MWT (21.6 ± 5.3 vs 18.9 ml/kg/min ± 4.5, respectively). There was no difference between sexes. In addition, the maximum heart rate as predicted from age during the ISWT was reached by all participants while it was not during the 6 MWT.

**Conclusion:** Thus, the ISWT appears to a better tool to assess the maximal aerobic functional capacity in older healthy adults based on the higher VO_{2} peak values obtained in comparison to the 6 MWT.

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**Systemic Changes in Patients with Chronic Obstructive Pulmonary Disease (COPD): Two Years of Follow-up**

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**Background:** There is a lack of information concerning the natural evolution of the systemic manifestations related to COPD. The aim of this study was to observe the evolution of the systemic manifestations (muscle wasting, inflammation) related to COPD over a two-year period and to assess their relationships with clinical outcomes (exacerbations and worsening in quality of life) in a longitudinal prospective cohort.

**Methods:** Forty-eight patients with COPD (FEV_{1}: 42 ± 14 % predicted, lean mass: 49 ± 10 kg, 6-min walking distance: 422 ± 112 m, total SGRQ score: 45 ± 17) were included. Baseline and annual follow-up for body composition by DEXA scan, blood cytokines (CRP, IL-6), arterial blood gases, pulmonary function tests and quality of life were obtained. The number of acute exacerbations was recorded.

**Results:** Overall, FEV_{1}, lean body mass, 6-min walking distance and blood inflammatory markers did not change over the two years. During this time, the SGRQ scores decreased by 4 ± 11 points (P=0.021) and 2.7 ± 2.4 exacerbations per patient were observed. There was no relationship between the changes in physiological measures and the fall in SGRQ or the exacerbation rate. A loss in lean body mass > 3% was observed in 11 (23%) patients but this was not associated with any adverse clinical outcomes nor with fur-
ther loss in FEV₁, walking distance and inflammatory status.

**Conclusion:** This cohort of patients remained remarkably stable over a 2-year follow-up period. A small loss in lean body mass was observed in some patients but this could not be associated with adverse clinical outcomes during this period.

**Test-Retest Reproducibility of Constant Rate Step and Shuttle Walk Test for the Assessment of Exertional Dyspnea in Patients with COPD**

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**Background:** Alternatives for laboratory exercise testing are needed to better reflect symptoms of physical activities of daily living in chronic disease. Such a tool should accurately set the exercise intensity and show good reproducibility. This study examined the reproducibility of constant rate walking (CRWT) and stepping tests (CRST) to assess exertional dyspnea in patients with COPD.

**Methods:** Stable COPD patients (n=43; 65 ± 6.5 yr; FEV₁= 49 ± 16% pred.) equipped with a portable Jaeger Oxycon Mobile® metabolic system completed both the CRWT and the CRST. Each test included four 3-min constants rate stages separated by a 10-min rest period on two occasions separated by 7 to 14 days. For both exercise modalities the selected rates targeted intensities between 25 and 80% VO₂ peak for moderately-severe COPD patients. Ventilation (VE) and gas exchange were obtained during the third minute and the Borg dyspnea score at the end of each exercise bout.

**Results:** An equal proportion of patients (35%) completed stage 4 of the CRWT and of the CRST. The test-retest correlation coefficients for dyspnea scores ranged from 0.79 to 0.95 for stages 1 through 4 for theCRWTand from 0.88 to 0.85 for the CRST while those for VE (L·min⁻¹) ranged from 0.95 to 0.98 and 0.91 to 0.95 respectively.

**Conclusion:** These results show both the CRWT and the CRST to be highly reproducible for the assessment of exertional dyspnea in patients with moderate-severe COPD. However, a better linearity in VE and VO₂ with exercise stages was seen for the CRST than for the CRWT since patients complied more easily to the imposed external load with stepping than with walking.

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**Development of a Constant Rate Step Test to Assess Exertional Dyspnea in the Primary Care Setting in Patients with COPD Ashley Rycroft**

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**Background:** There is a need to develop a field test to evaluate exertional dyspnea in the primary care setting. This study examined the applicability of a 3-minute constant rate step test in patients with COPD.

**Methods:** This test involved 4 stepping rates (18, 22, 26, 32 steps.min⁻¹) equivalent to approximately 4.5, 5.3, 6.0, and 7.2 MET with the ultimate goal that in its final development, the assessment will be made a single stepping rate based on disease severity. Stable COPD patients (N= 43; 65 ± 6.5 years; FEV₁= 49 ±