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**Title:** Improving physical activity in patients with severe COPD with urban walking circuits. A randomised trial

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**Body:** Patients with COPD are more inactive than healthy subjects of the same age. Even after a rehabilitation program, levels of physical activity progressively decrease unless strategies to encourage activity are implemented. We analyzed the adherence and effects of the implementation of urban walking circuits on levels of physical activity and exercise capacity of patients with severe COPD after a respiratory rehabilitation program. A total of 83 patients were randomized to either urban circuits (UCG) or usual care (NCG) after completing a 12-week rehabilitation program. Results were evaluated 9 months after completion of the rehabilitation program and were compared with a control group of 54 patients not enrolled in the rehabilitation program. UCG patients increased their physical activity by a mean of 38 minutes per day compared to 10.8 minutes of NCG ( $p < 0.001$ ) and increased the days walked per week by a mean of 1.41 days compared to 0.89 days of NCG ( $p < 0.001$ ). There was a significant positive correlation between the results of the 6-minute walking test and minutes walked per day in the UCG ( $r^2 = 0.52$ ,  $p < 0.05$ ) but not in the NCG ( $r^2 = 0.09$ ,  $p > 0.05$ ). Patients in the control group showed a significant decrease in exercise capacity and physical activity over the follow-up. The use of urban circuits is an easy, inexpensive strategy, which demonstrated to be useful to stimulate physical activity in our population of severe COPD patients and resulted in increased exercise capacity even 9 months after completion of a rehabilitation program. There was a significant correlation between exercise capacity and physical activity only in patients enrolled in the urban circuits.