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**Title:** Intensity of daily activity may affect exercise capacity and peripheral muscle function in adults with cystic fibrosis

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**Body:** Introduction. Data obtained in young cystic fibrosis (CF) patients suggest that improving daily physical activity (PA) may have a positive impact on exercise tolerance, on nutritional status and on the rate of decline of FEV<sub>1</sub>; moreover, it seems to have beneficial effects on sputum clearance, respiratory muscle strength and quality of life. To date, less is known in adult patients about the role that PA intensity play to the patients' functional status. Methods. 20 CF patients (mean age 33±8SD yrs; FEV<sub>1</sub> 2.6±0.6 l; FEV<sub>1</sub> 68±16 % predicted) were studied at rest and during symptom-limited incremental exercise test (CPET). We measured hand-grip strength using a hydraulic hand dynamometer and we assessed daily PA using SenseWear (SW) accelerometer that subjects wore for 4 consecutive days. Results. A close relationship was observed between vigorous SW activities and both VO<sub>2</sub> peak and Watt max (r=0.545, p=0.01; r=0.547, p=0.01); a good relationship was observed between SW activities of moderate intensity vs VO<sub>2</sub> peak (r=0.503; p=0.02) and vs V'<sub>E</sub> peak (r=0.436, p=0.05). Hand-grip strength was significantly related with both SW daily physical activity of moderate (r=0.431; p=0.05) and vigorous (r=0.508; p=0.02) intensity. SW mild physical activity was not correlated to muscle and exercise variables. Conclusions: In adult CF patients with mild to moderate lung obstruction PA levels of moderate intensity and above are related to exercise tolerance. Specifically, only daily life activity above moderate intensity seems to maintain physical fitness and peripheral muscle function. Encouraging exercise with moderate intensity to be a part of therapy should be recommended.