

Author Year Country Research Design Score Sample Size	Methods	Outcome
<p>Vivodtzev et al. 2021 USA Case control Level 3 N = 21</p>	<p>Population: 21 patients with (< 2 years) high-level (C4 - T3) SCI who were enrolled in an exercise program employing FES - row training (FESRT) (as part of rehabilitation), were retrospectively divided into 2 groups: buspirone group (n = 10) and control group (n = 10). <i>Buspirone group:</i> mean (SD) age 32 (± 10), mean (SD) time since injury 1.0 (± 0.4) years, AIS A (n = 5), AIS B (n = 3), and AIS C (n = 2). <i>Control group:</i> mean (SD) age 28 (± 5), mean (SD) time since injury 1.2 (± 0.4) years, AIS A (n = 6), AIS B (n = 2), and AIS C (n = 3). Treatment: FESRT for 6 months with a naturalistic group division between those taking Buspirone or not.</p> <ul style="list-style-type: none"> • Buspirone group: Patients took an average of 29 ± 17 mg/day of Buspirone. • Control group: None of the participants had buspirone. <p>Outcome Measures: Cardiopulmonary exercise testing during FES-Rowing and a pulmonary function test before and after their 6-month FESRT program. VO_2, VCO_2, respiratory exchange ratio (RER), expired O_2 and CO_2 gas fractions, V_E, V_T, HR, peak lactate assessment, FEV_1, FVC each within 200 mL, and ERV.</p>	<ol style="list-style-type: none"> 1. After training, Buspirone group tended to have a significantly greater increase in VO_{2peak} than the control group ($+ 0.24 \pm 0.23$ vs. $+ 0.10 \pm 0.13$ L/min, $p = 0.08$), although in both groups ($p \leq 0.04$) this parameter increased. 2. There was also a significantly greater increase in V_{Epeak} after training in Buspirone compared to Control ($+ 6.5 \pm 8.1$ vs. $- 0.7 \pm 6.9$ L/min, $p < 0.05$). 3. Those on Buspirone improved V_T after training compared to baseline ($p < 0.01$), while it was not changed in the control group ($p = 0.63$). As a result, those on Buspirone tended to breathe deeper compared to Control ($p = 0.06$). 4. Furthermore, changes in FVC and FEV_1 were significantly correlated with those in V_{Tpeak} in Buspirone ($r > 0.66$, $p < 0.05$).

