

| Author Year; Country Score Research Design Total Sample Size | Methods | Outcome |
|---|--|--|
| Lopes et al. 1984; USA PEDro=2 RCT N=12 | <p>Population: 5 tetraplegia, 1 paraplegia; 6 control subjects.</p> <p>Treatment: Random assignment to active exercise (60 bilateral forearm flexion and extension movements per minute during the first and third minute of each tilt angle) versus no upper limb exercises during tilt from 0-70 degrees by 10 degrees increments at five-minute intervals until BP dropped below 70/40.</p> <p>Outcome measures: BP, hypotensive symptoms.</p> | <ol style="list-style-type: none"> 1. No significant difference between the active upper extremity exercise group versus the non-exercise group with reference to orthostatic tolerance to progressive vertical tilt. |
| Otsuka et al. 2008; Japan Prospective controlled trial N=30 | <p>Population: 10 men with tetraplegia, age: 29±6 years who were on a wheelchair basketball team and had physical training for at least 2hr/day, 2 days/week, for 2 years; 10 untrained men with tetraplegia, age 32±6 years and 10 able-bodied sedentary men, age 23±2 years were included as controls.</p> <p>Treatment: regular physical activity training</p> <p>Outcome Measures: HR, BP; electrocardiogram; autonomic nervous system activity in supine and 60° sitting position.</p> | <ol style="list-style-type: none"> 1. During supine rest, trained subjects with tetraplegia had significantly lower HR than the able-bodied controls. 2. Increase in HR from supine to sitting position in trained and untrained subjects with tetraplegia. 3. Untrained subjects with tetraplegia, but not trained subjects with tetraplegia demonstrated significant orthostatic responses (increased sympathetic activity and reduced vagal activity). |
| Ditor et al. 2005; Canada Pre-post N=8 | <p>Population: Sensory incomplete (AIS B-C) cervical SCI (C4-C5).</p> <p>Treatment: 6 months of body weight-supported treadmill training (BWSTT).</p> <p>Outcomes measures: HR, BP, and orthostatic responses, heart-rate variability.</p> | <ol style="list-style-type: none"> 1. Resting HR was reduced but no change in resting BP after BWSTT. 2. BWSTT did not improve BP or HR during head-up tilt (HUT). |