



## Current Science of Rock Steady Boxing

When Rock Steady Boxing (RSB) was developed in 2006, the curriculum was based on addressing the primary symptoms of Parkinson Disease but there was very little in the scientific literature supporting exercise for Parkinson Disease. Now, years later, there is a growing body of scientific evidence supporting moderate-to-high intensity exercise as an essential intervention in the fight against Parkinson disease.

### Dose of Exercise

- 150 minutes of moderate to vigorous exercise per week and should include Aerobic, Strength, Balance, and Stretching (Parkinson's Foundation Exercise Recommendations 2021)
- Exercise for PD should be moderate to high intensity and include Aerobic, Strength, Balance, Gait, and Community-based exercise (American Physical Therapy Association Neuro Clinical Practice Guidelines)

### Improved Balance and Decreased Falls

- RSB participants improved balance on the Fullerton Assessment of Balance, Timed Up-and-Go, and with Sit-to-Stand testing<sup>1,2,3</sup>
- Reduced falls 87% in RSB participants<sup>4</sup>

### Improved Non-Motor Symptoms of PD

- Compared to non-RSB participants, RSB participants reported
  - 70% improvement in social life, 62% improvement in fatigue, 61% improvement in fear of falling, 60% improvement in depression, and 58% improvement in anxiety<sup>5</sup>
- Compared to non-RSB participants, RSB participants had a significantly higher Quality of Life score on the PDQ-39<sup>5</sup>

### Neuro Protection and Neuro Plasticity

- Exercise was shown on functional MRI to improve signal transmission in the PD brain, effectively demonstrating neuroprotection and neuroplastic changes related to exercise<sup>6</sup>
- High intensity exercise decreases chronic neuro inflammatory markers offering neuroprotection to those with PD<sup>7</sup>

### Decreased Risk of Hospitalization

- Greater exercise duration and intensity reduced the odds of a hospital encounter in the PD population<sup>8</sup>

Rock Steady Boxing was designed specifically for those with Parkinson disease as well as those with Atypical PD (Multisystem Atrophy, Dementia with Lewy Bodies, Progressive Supranuclear Palsy, and Corticobasilar Degeneration).

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