

Exercise Professional Quick Reference Chart

Cardiac Autonomic Dysfunction and Exercise in Parkinson's Disease

Key Autonomic Issues in PD and What They Mean for Exercise

1. Blunted Heart-Rate Response (Chronotropic Incompetence)

What is it? HR does not rise normally during exercise.

Exercise Implications:

- HR zones unreliable
- Undertraining risk
- Slower warm-up required

What to use instead:

- RPE
- Cadence targets
- Talk test

2. Orthostatic Hypotension (OH)

What is it? BP drops when standing or after exercise.

Exercise implications:

- Dizziness
- Fall risk
- Risk highest during transitions
- Symptoms may appear during cool-down

Key strategies:

- Slow transitions
- 8–10 min warm-up and cool-down
- Hydration plus electrolytes
- Compression garments
- Prefer recumbent cycling or seated exercises

3. Supine / Nocturnal Hypertension

What is it? High BP when lying down or at night; low BP during the day

Exercise implications:

- Morning exercise may require more warm-up
- Evening exercise may require BP monitoring

Key strategies:

- Schedule exercise at optimal BP times for the individual
- Monitor symptoms (headache, chest pressure, fatigue)

4. Reduced Heart-Rate Variability (HRV)

What is it? Impaired autonomic adaptability and slower recovery

Exercise implications:

- Longer rest periods needed
- Higher perceived fatigue
- Avoid overtraining

Key strategies:

- Use interval training with adequate rest
- Monitor recovery quality (breathing rate, RPE, talk test)

2. Exercise Modes: Safety and Effectiveness

(Alberts et al., Cycle II, 1-10)

Most Tolerated or Recommended

- Recumbent cycling
- Seated strength training
- Treadmill with handrails (send to pt)
- Rowing (if no severe OH)
- Walking poles or Nordic walking
- High-cadence cycling programs (e.g., CYCLE II, as taught in this guidebook)

Use With Caution

- Standing resistance exercises
- Floor-to-standing transitions
- Heat exposure

- High-intensity intervals without supervision

Avoid if Symptomatic

- Rapid positional changes
- Large overhead loads (BP spikes)
- Stationary standing for long periods

Because heart rate responses may be blunted or unpredictable in individuals with Parkinson's disease and autonomic dysfunction, intensity should be guided by:

- RPE scale
- Talk test (ability to speak in full sentences)
- Cadence targets (RPM or stride rate)
- Symptom monitoring, including dizziness, orthostatic sensations, visual dimming, or sudden fatigue

Helpful Tools

- BP cuff (before/during/after if needed)
- Hydration log (client keep)
- Compression wear for OH
- 24-hr BP monitoring results (if available)
- Medication timing chart (client keep)