

Parkinson's Disease

Parkinson's Disease (PD) is a chronic and degenerative movement disorder that presents when neurons, primarily in the substantia nigra area of the brain, malfunction and die.

Clinical presentation of PD includes:

- Resting tremor
- Bradykinesia
- Postural instability
- Balance disturbance
- Rigidity
- Loss of automatic movements
- Flat affect
- Poor coordination
- Cognitive impairments
- Mood disorders
- Swallowing difficulty
- Orthostatic hypotension
- Pain
- Speech deficits including monotonous speech, soft voicing

Early intervention and symptom management are crucial in allowing a person with PD to maintain their highest quality of life. PT, OT, and ST practitioners are equipped to provide this intervention. For more information on practice guidelines and interventions, refer to *Reliant's Clinical Pathways – Parkinson's Disease*.

Perception versus reality is one of the biggest challenges for patients with PD.

Perception	Reality
Normal gait	Shuffled gait
Full range of motion arm swing	Reduced range with hesitation
Upright posture	Leaning forward or sideways
Normal speaking voice	Mumbled/soft speech
Normal speaking rate	Rapid clusters coupled with prolonged pauses

Many patients with PD perceive that they are shouting when whispering, and with gait, believe their arm swing and step height are normal despite tripping and dragging of feet. One way to combat the challenge of perception versus reality is to *recalibrate* the perception of normal by exaggerating the task.

Tips for Clinicians:

- Use of exaggerated movements lead to normal movements.
- Demonstrate the exaggerated movement - ensure that the patient understands that you look exaggerated, but they don't.
- Consider balance and environment and ensure safety throughout execution.
- Demonstrate over-articulation and phonation.
- Adjust cues to shape the desired movement.

Clinicians should offer verbal cues for limb movement and speech such as:



- Pretend to step over an object.**
- Take big or large steps.**
- Over-emphasize each syllable.**
- Over-reach for your toothbrush.**
- Make your words reach the other side of the room.**

Be sure to include the patient's family/caregivers in the therapy sessions so they too can encourage exaggerated tasks outside of therapy.