

# Flexibility Exercises

Produced by: Parkinson Disease Knowledge Translation Task Force

## Fact Sheet

Physical therapists may implement flexibility exercises to improve range of motion (ROM) in individuals with Parkinson disease.

*Evidence quality: Low; Recommendation Strength: Weak*

Flexibility may be a part of your PT intervention as a home program or part of your warm up/cool down, but the literature does not support it being the entirety of your intervention. The recommendations below are based on expert opinion due to the low quality of the evidence.

### Types of individuals with PD who would most/least benefit from flexibility exercise

1. Given that rigidity is a prominent symptom of PD that can lead to ROM restrictions, physical therapists may include general stretching and flexibility for individuals with PD at all stages of the disease.

### How to perform the intervention

1. Frequency: For optimal effectiveness flexibility may be performed daily.
2. Time: Incorporate into warm-up and cool-down activities, or first thing in the morning/before bed for general well-being.
3. Type: All major muscle groups, but particularly targeting trunk rotation. Consider dynamic stretching before exercise and static stretching after exercise.
4. **Best Practice Note: PTs should not provide whole sessions focused on flexibility exercise.**

### Recommended measures to assess change

1. Range of motion if there is a particular joint that they are addressing (straight leg raise or 90/90 for hamstring length, calf, shoulders).
2. Assess symmetry with un-cued compared to cued range of motion.
3. If goal is for improved posture, you should consider measuring Tragus-to-Wall, C7-to-wall, or Inclinatoric Kyphotic Measurements which are valid and reliable measures of posture in PwP.
4. See PD EDGE and ANPT Core Measures CPG for other outcome measure suggestions.

### Considerations related to safety (precautions, contraindications; when should you NOT choose the intervention)

1. There is limited data on risks of flexibility exercise specific to PD, but a general risk of flexibility exercise is the risk of overstretching.
2. Type of flexibility exercise and level of supervision should be chosen based on the individual's safety profile, including falls,



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osteoporosis/osteopenia, spinal stenosis, orthostatic hypotension, musculoskeletal problems, cognitive abilities, and ability to maintain a good biomechanical form.

### **Considerations for implementation across practice settings**

1. Outpatient, inpatient, home PT settings, and community-based exercise programs (e.g. yoga) will have different equipment, as well as participant ability and risk levels.
2. Equipment may assist with flexibility exercise (e.g. stretching strap, yoga blocks, physioball, foam roller, calf stretch wedge). These may be available in PT clinics, community fitness facilities, or for purchase. A skilled PT can help identify and progress appropriate stretches.
3. Physical therapists should provide written or video support to promote adherence and good form.
4. Availability of assistance or supervision if needed. The physical therapist should work with a local personal trainer or train the care partner to help the PwP safely learn and execute flexibility exercises.
5. Community-based exercise programs should provide personalized flexibility exercise adaptations, as needed.

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