

Background & Purpose

Background

Alexander technique (AT) is a non-exercise approach that uses attention and inhibition to change functional patterns, reduce excessive muscular co-contraction, and improve coordination in everyday life.¹⁻²



Purpose

To test Alexander technique (AT)-based group interventions delivered in person and remotely for people living with Parkinson's (PWP) and their care partners to improve functional mobility, strengthen the PWP/Care Partner dyad, and counter social isolation.

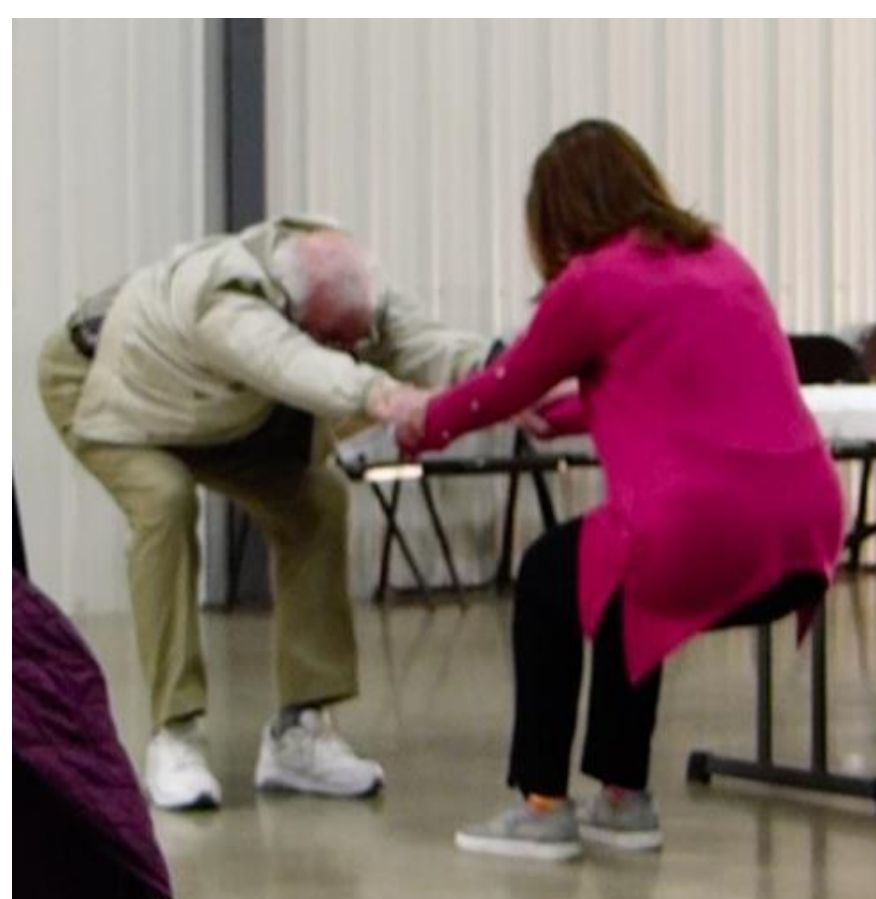


Design

In-person delivery: Non-randomized controlled trial. 90-minute AT group classes met two times/week over 8 weeks. Care partners participated where possible.

Online delivery via Zoom: Feasibility study with no control group. 120-minute AT group classes met two times/week over 8 weeks. Care partners were included and assisted with assessment.

Outcomes: Self-reports and motor performance were assessed pre and post course. For in-person class, we also assessed 3-6 months after AT class.



Participants

In-Person Delivery*

Completed course (Men/Women)	9/6
Age	69 ± 5.4
Race	White
Income	\$50,000-\$75,000
Employment	Retired (10) Disabled (4) Working (1)
Years Diagnosed	5.7 ± 3
Hoehn & Yahr	2.5 ± 0.8



Online Zoom Delivery

Completed course (Men/Women)	4/1
Age	74 ± 5.5
Race	White
Income	25,000-199,000
Employment	Retired (4) Disabled (1)
Years Diagnosed	3.6 ± 2
Hoehn & Yahr	2.6 ± 0.4

*Only the intervention group is described above. The control group was on average 8 years older and 2 years more recently diagnosed.³

Measures

- ❖ Symptom management survey: PWP and care partners
- ❖ Anonymous course evaluations: PWP and care partners
- ❖ Physical Performance Test (PPT): Assesses 7 domains of physical function
- ❖ BriefBEST: A short, validated version of the Balance Evaluation Systems Test
- ❖ Posture angles from photos (tragus-C7-sternal notch)
- ❖ Activities Balance Confidence (ABC) Scale

In-person and Online Results

Anonymous Course Evaluations (PWP)

	In Person	Online
Encountered new ideas	95%	96%
Learned practical tools for physical self-management	89%	88%
Likely to use this information	88%	70%
Enjoyed group interaction	98%	78%
Info was presented clearly	92%	86%
Would recommend to a friend	88%	84%
Better prepared for demands of daily life with Parkinson's	81%	78%

Attendance & Retention

	In Person	Online
Course Attendance	84%	96%
Study Retention	66%	100%
Course Retention	75%	100%

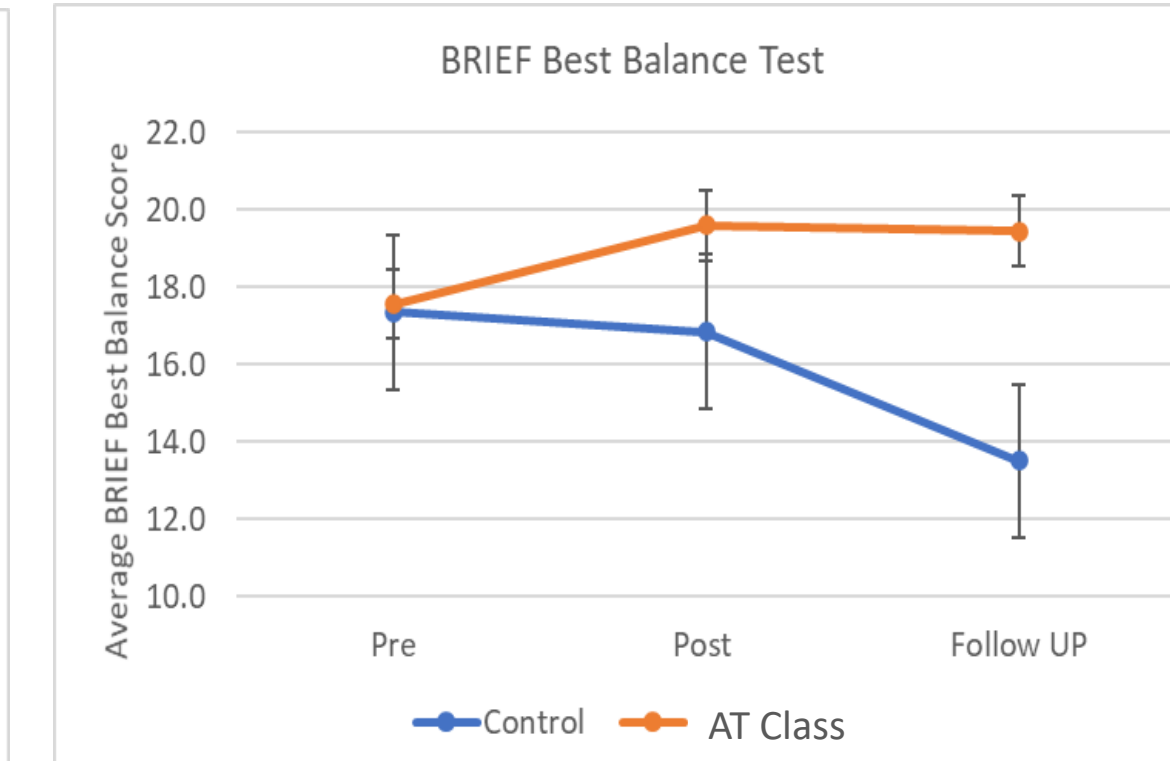
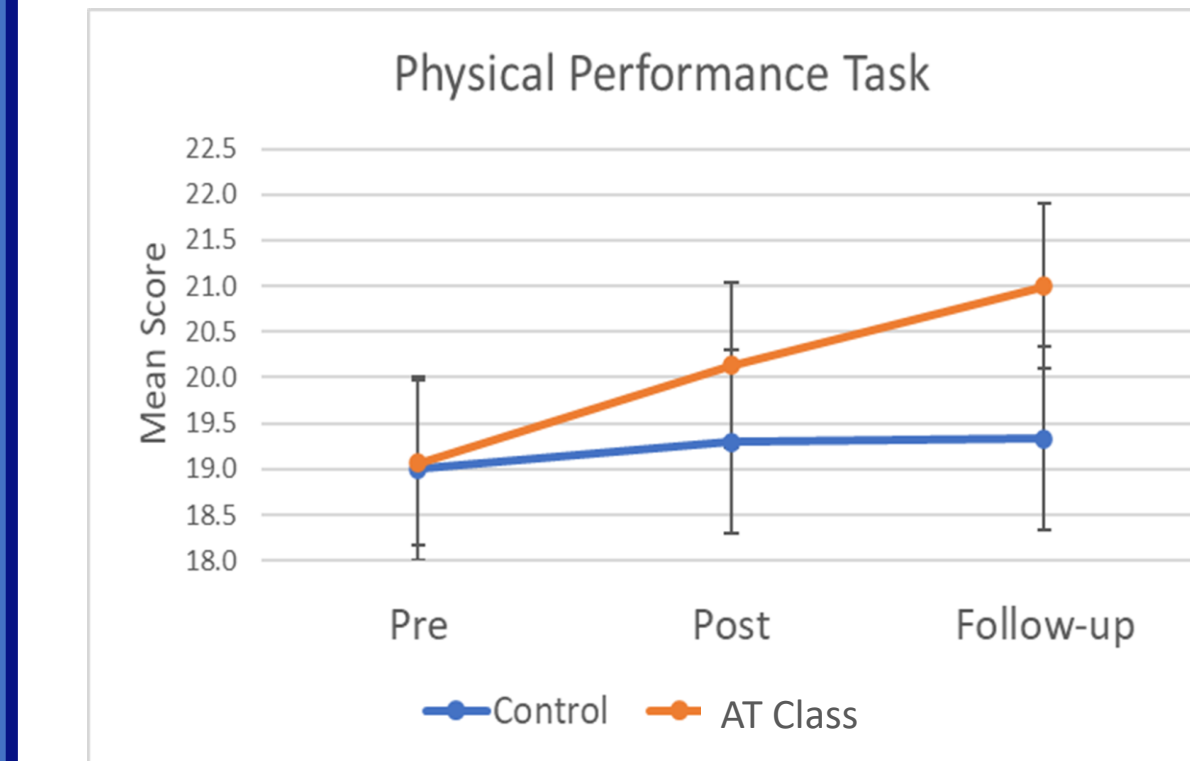
Percent reporting Improvement in ability to manage symptoms *

	In Person	Online
Anxiety	86%	67%
Shuffling	83%	40%
Bradykinesia	81%	100%
Rigidity	75%	100%
Rolling over	72%	50%
Pain	67%	20%
Fatigue	64%	40%
Upright posture	64%	80%
Balance	63%	40%

*Only analyzed PWP who reported having each symptom.

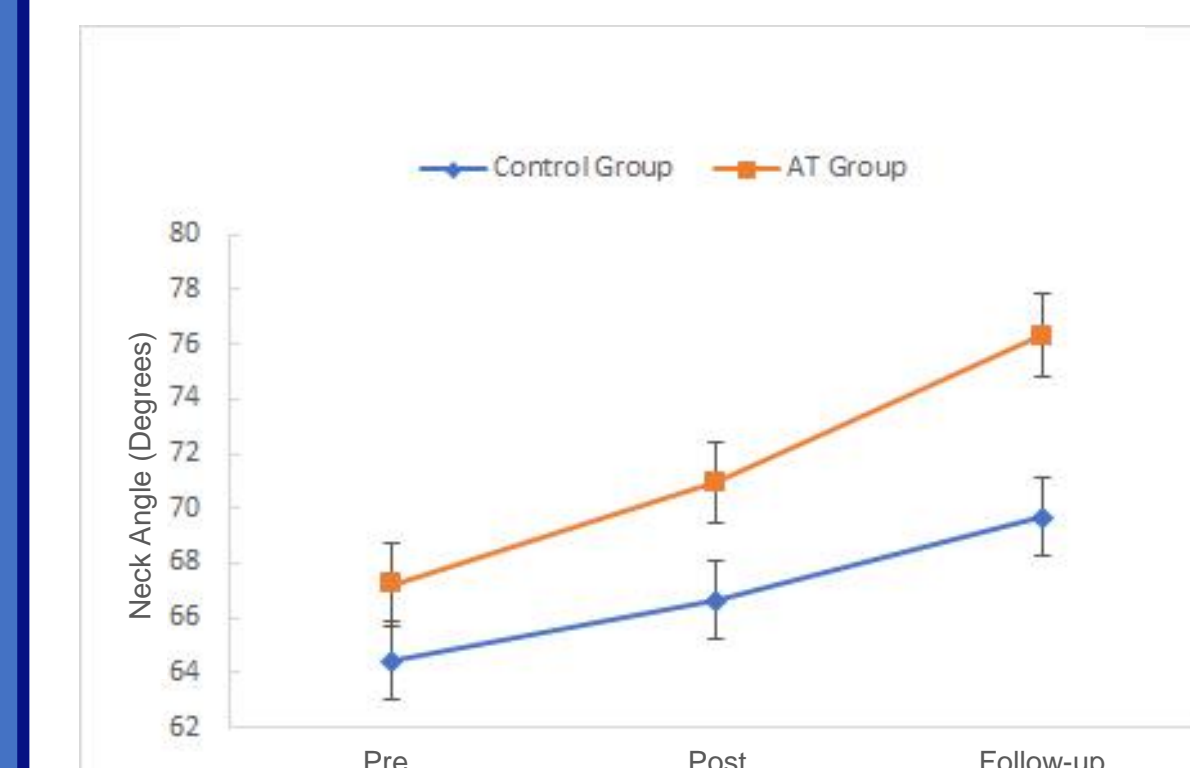
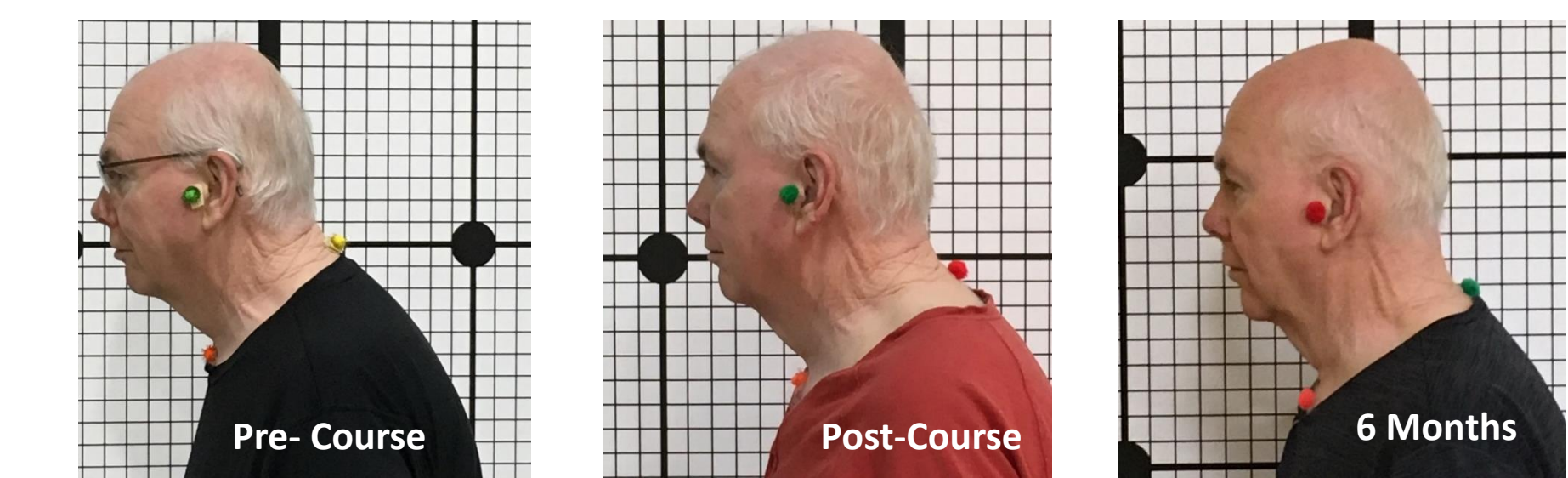


Motor Performance



- **In-person:** Physical performance improved after AT course ($p < .01$) while not changing in control group.
- **Online:** 4 out of 5 PWP improved in simulated eating.
- **In-person:** Balance improved after AT course while worsening in control group ($p = .02$).
- **Online:** 4 out of 5 PWP improved in functional reach.

Postural Alignment



- **In-person:** Postural alignment, as assessed by neck angle, became more upright after Alexander classes ($p = .01$) and remained more upright after 3 months ($p = .02$).
- **Online:** 4 out of 5 PWP became more upright after classes.

Conclusion

- Both in-person and online delivery of this innovative AT-based approach show similar results for PWP management of motor and non-motor symptoms, with potential for retention of benefits.
- Live stream group classes including PWP/care-partner dyads could reduce health risks of social isolation with additional dyadic relationship benefits during the pandemic and onward and increase access from rural areas or locations without an AT specialist.

References

1. Cohen, R.G., Gurfinkel, V.S., Kwak, E., Warden, A. C., & Horak, F.B.,(2015). Lighten up: Specific postural instructions affect axial rigidity and step initiation in patients with Parkinson's disease. *Neurorehabilitation and Neural Repair*, 29(9), 878-888.
2. Stallibrass, C., Frank, C., &Wentworth, K. (2005). Retention of skills learnt in Alexander technique lessons: 28 people with idiopathic Parkinson's disease. *Journal of Bodywork and Movement Therapies*, 9(2), 150-157.
3. Gross, M., Cohen, R., Ravichandra, R., Basye, M., & Norcia, M. (2019). Poised for Parkinson's: Alexander Technique Course improves Balance, Mobility and Posture for People With PD. *Archives of Physical Medicine and Rehabilitation*, 100(12), 193.

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Online Class

Quotes from PWP after online class:

- 12 • Recruited 12 couples via support groups.
- 10 • Excluded 2 couples for cognitive & gait issues
- 5 • 5 couples declined after interview: schedule problems, tech anxiety, etc.

"I'm aware of myself and I'm in control of myself."

"I was in a doctor's office after the class and I was getting antsy and I thought 'I am in control. I can walk out if I want to.'"

"I am much more aware of what I'm doing and trying to comprehend myself in the atmosphere."

"Even with Parkinson's, I have brain power."

"I was taking a pill this morning and it got stuck. And the first thing I thought was 'Giraffe Neck Balloon Head', and down it went. And I was fine. And I thought, 'Okay! I got that!'"