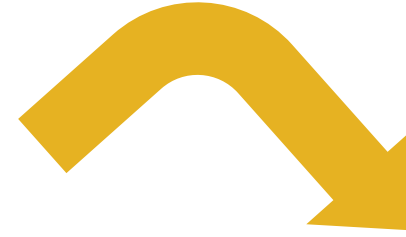


Punching Back at Parkinson's with Exercise

Michael Braitsch PT, DPT, Texas Woman's University (Dallas, TX)

Session Objectives

- Reminder on the importance of exercise
- Explore key elements of an exercise program for people with PD
 - Aerobics
 - Strength
 - Balance
 - Flexibility
- Examine key concepts for people at different stages
- Discuss the role of Physical Therapy for people with PD



Why exercise?

For people with PD, Exercise:

- Keeps joints more mobile
- May aid in slowing the progression of symptoms
- Promotes better sleep
- Maximizes independence and function
- May reduce the impact of dystonia and rigidity
- Helps with coordination

- Helps minimize the impact of blood pressure issues
- Promotes a sense of well-being
 - Reduces stress
 - May reduce non-motor symptoms that impact mood
- Helps with breathing problems
- Keeps things moving better for bowel and bladder function

Strong muscles make life easier by reducing the energy expenditure necessary for every-day tasks!



Physical Activity

Pharmacological approach (medication) will help with motor symptoms of PD but **cannot** always address all symptoms.

- Luckily, we have Physical Activity!

Many studies have shown that more **complex and demanding physical activities** (sensorimotor training, endurance, resistance, and dance) were the most effective physical activity interventions for mitigating PD motor symptoms.

- Keep on moving!
- Use your MEDS to help you EXERCISE

(Álvarez-Bueno, et al. 2023)

What kind of exercise is best?

There are 3 kinds that are best...




Find a Group!

Groups create:

- **Consistency**
- **Motivation**
- **Empowerment**
- **Community**

Groups impact non-physical impairments:

- Camaraderie
- Support
- Sharing: ideas, success, tips, struggles



STRENGTH in NUMBERS means
we all do better together!

Your Program Should Consist of:



AEROBICS



STRENGTH



FLEXIBILITY



BALANCE



To **SLOW** the progression of PD – **aim for 300 minutes each week of physical activity**



Aim for 150 minutes each week of aerobic exercise!

Aerobic Exercise

(Think
CARDIO!)

- Walk (briskly) or Run
 - over ground
 - treadmill
 - Bike
 - Stationary
 - Outdoor cycling (if you have good balance)
 - Recumbent (for back pain or dizziness)
 - Elliptical
 - Pole Walking (Nordic Walking)
 - Rower
 - Zumba
-
- Step aerobics
 - Water Aerobics
 - Dance
 - Box
 - Kickboxing (maybe)
 - Other Aerobics Group Classes
 - The list goes on.....

Intensity matters!

**Modified RPE
4/10 - 7/10
is ideal**

*Target Heart Rate (HR) for moderate to intense exercise = 60-80% of age-adjusted max HR

10	Maximum Effort feels almost impossible to continue no conversation possible
9	Very Hard difficult to maintain exercise intensity conversation becomes difficult
7-8	Vigorous on the verge of becoming uncomfortable breathing heavily but still able to speak
4-6	Moderate feels like you can maintain activity for hours breathing heavily but can carry on a conversation
2-3	Light feels like you can maintain activity for hours easy to breathe and carry on a conversation
1	Very Light little to no activity

http://wiki.ggc.edu/images/c/cd/RPE_scale.jpg

Let's Try!

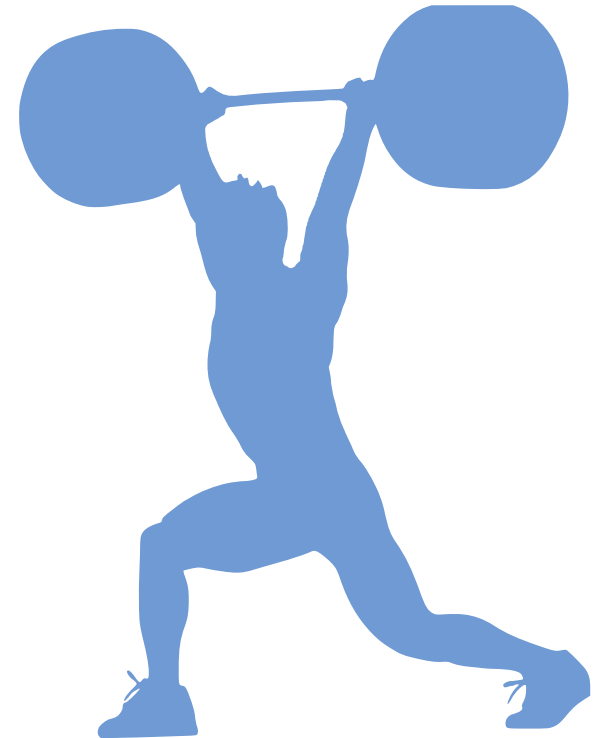
Strength training - Pump Yourself UP!

Build Strength with:

- Weight Lifting/Resistance Training
 - Beginner - Weight machines
 - Intermediate – Resistance Bands, Free Weights
 - Advanced – Kettlebells, Body-weight
- Olympic Weight-Lifting, Cross-fit (USE A COACH)

Other ways:

- Yoga
- Pilates
- PWR! Moves



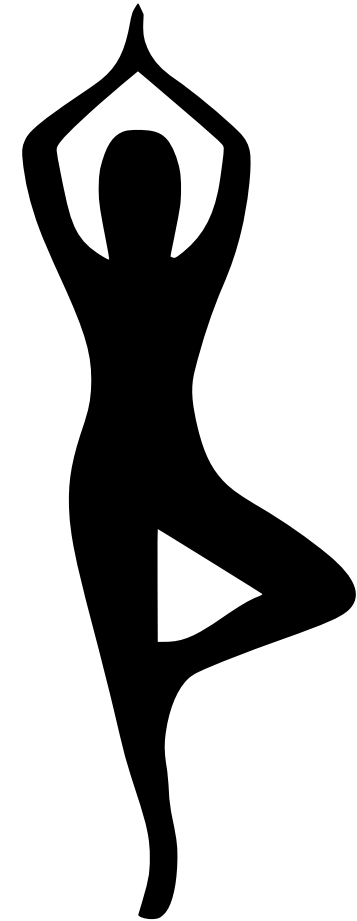
Common Themes for Strength Training



- 2-3 days/week (try for non-consecutive days)
- Aim for sets of 10-15 repetitions
 - If you can't do 8 reps, REMOVE some of the weight
 - If you can easily do more than 15 reps, ADD some weight
 - 3 sets/exercise is a common practice
- Focus on major muscle groups
- Try to keep it functional where possible
 - Push
 - Pull
 - Squat
 - Hinge from the hips
 - Pick up/Put down
 - Carry
- **DON'T SKIP LEG DAY!**

Balance Training Ideas

- Tai Chi
- Yoga
- Dance
- Pilates
- PWR! Moves
- LSVT Big/Big for Life
- Clock Yourself App
- Virtual Reality Games



Let's Try!

Balance, Agility, & Multi-tasking Tips

- Keep it safe
 - Target zone of discomfort
 - If too EASY, there's no point
 - If too DIFFICULTY, it's dangerous
- 2-3 days/week minimum
 - if possible, do this daily
- Multi-Directional Stepping
- Weight Shifting
- Add coordination and rhythm or cognitive challenges (if tolerated)



Flexibility

Stretching every day (min 3 days/week) helps!

Flexibility can improve from certain workouts, such as

- Tai Chi
- Yoga
- Pilates
- LSVT BIG
- PWR! Moves

Or flexibility can be a process including:

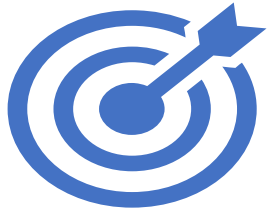
- Dynamic stretching
- Static Holds
- Partner Stretching
- Mobility drills (think – FOAM ROLLER)



Photo by Unknown Author is licensed under CC BY-ND

Goals for people with Parkinson's at different stages

Pre-clinical and Early Stages



Goal: Neuroprotection

Using exercise to slow disease progression

Build a “Functional Reserve”

Use it or lose it (maybe use it and improve it!)

*Adapted from EU Physiotherapy Evidenced-based Guidelines 2014 2nd Annual Allied MDS Allied Health Professional Summer School in Torres Vedras, Portugal Keus SHJ, Munneke M, Graziano M, et al. European Physiotherapy Guideline for Parkinson's disease 2014. KNGF/ParkinsonNet, the Netherlands (www.ParkinsonNet.info)

Early/Middle stages

GOAL: Maintain function

Fight to slow progression

Take advantage of principles of neuroplasticity

- Optimize brain function
- Repair what you can
- Adapt and strengthen other neural pathways

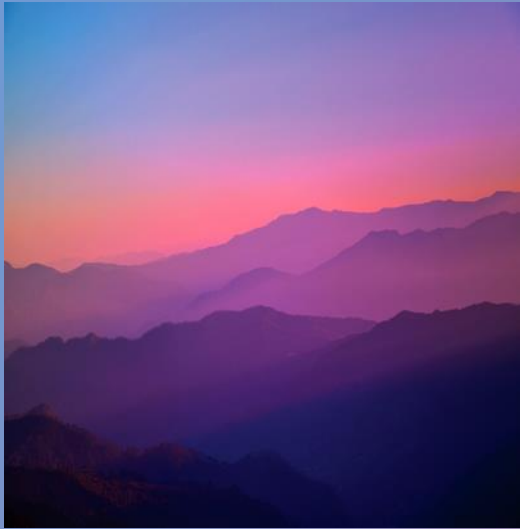


Late stages



GOAL: Adaptation

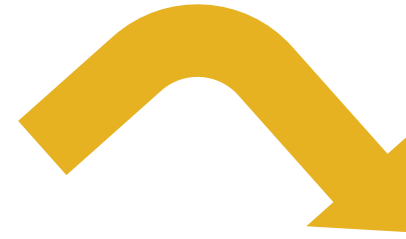
- Maximize function
- Working **AROUND** some problems (if needed)
- Prevent further problems associated with sedentary lifestyle



Summary

Exercise has far-reaching, beneficial effects for mobility and quality of life, but please:

- Stay **SAFE**
- Try not to over-do it
- Remember consistency matters more than performance
- Try to do **SOMETHING** every day
- Ask for help
- **Consult a Physical Therapist!**



What's Physical Therapy?

Common Reasons for Physical Therapy

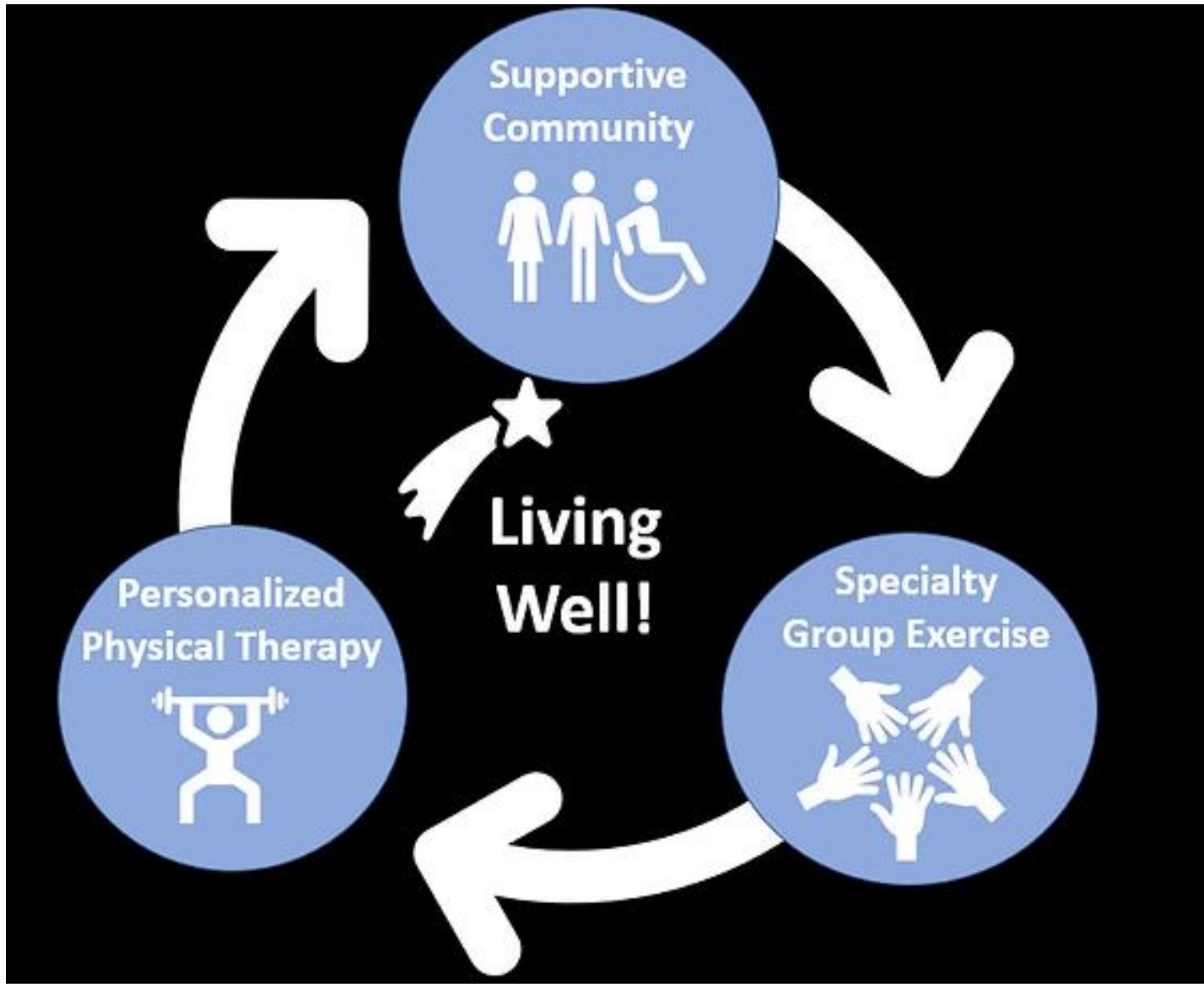
- 1) Annual “Tune Up”
- 2) Recent change in status/symptoms
- 3) You’re starting to fall
- 4) To work on walking (Freezing of Gait episodes)



The list goes on....

- every victory counts*®
- 5) Feeling weak
 - 6) To boost balance
 - 7) To ADAPT a task
 - 8) Chronic pain
 - Tennis/golfer’s Elbow
 - Back, Neck, Knee, Hip pain
 - Tendonitis

The Perfect Model



Physical Therapy		Group Exercise
Addressing specific impairments with specific interventions to aid in healing and improve function in daily life	Primary Role	Encouraging whole body movement to help people prevent the need for therapy and to keep them active
Based on individualized: <ul style="list-style-type: none"> • Biomechanics • Available range of motion, Line of pull, force • Target muscle groups • Stages of healing • Comorbidities • Desired physiological change 	Exercise Selection	Based on general principles for groups: <ul style="list-style-type: none"> • Aerobics • Flexibility • Strength • Balance
Maximizing movement and function for individuals based on their specific needs, injuries, etc.	Primary focus	Keeping groups consistent, fun, and widely applicable to many different backgrounds
Objective Outcome Measures: <ul style="list-style-type: none"> • Selected based on impairments, goals etc. • Based on clinical research data • Needed to justify payment to Medicare, insurance, etc. 	Measures of Success	Success measured by: <ul style="list-style-type: none"> • Class attendance • Participation during class • Feedback from participants
At least annually, or as needed	When?	Hopefully, EVERY DAY!
Physical Therapy Clinics with Licensed PTs	Where?	Local Support Groups, Community Centers
To maximize function in activities of daily living, to manage injuries. to create an activity plan. or	Why?	Fun, Affordable, Preventative, Relieves stress. Encourages better sleep

It's not what you
do **SOME** of the
time that counts.
It's what you do
ALL OF THE TIME
that counts!

Jack Lalanne

**Thank
you,
Green
Bay!**

