PD ExpertBriefing: Physical Therapy and Parkinson’s disease: What You Need to Know

Presented By:
Heather J. Cianci, PT, MS, GCS
The Dan Aaron Parkinson’s Rehabilitation Center

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Welcoming Remarks

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Physical Therapy and Parkinson’s disease: What You Need to Know

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Heather J. Cianci, PT, MS, GCS
The Dan Aaron Parkinson’s Rehabilitation Center
at Pennsylvania Hospital
Philadelphia, PA
Good Shepherd Penn Partners
Why Exercise?

For 2 Reasons:
1. You are not just dealing with PD, but also with the effects of Aging
   – Loss of tissue elasticity
   – Mineral loss in bones
   – Muscles mass loss
     • 1% per year over the age of 60!

*Exercise makes your muscles & bones stronger, increases your metabolism, strengthens your heart & lungs, prevents certain diseases, increases mental ability, and makes you happy.*
2. Research shows that exercise in those with PD:
   - can improve posture, strength, balance, & walking ability
   - can limit physical decline
   - reduces some symptoms
   - may slow disease progression
   - may be disease modifying
   - may protect your brain from cell loss

Make exercise as important as your medication.
You do not want to skip your medication...
so why do you skip your exercise?
"What fits your busy schedule better, exercising one hour a day or being dead 24 hours a day?"
Animal Research

*In rats with chemically-induced PD, exercise lead to:
  * Reversal of symptoms
  * Prevention of cell loss
  * An increase in neurotrophic factor ("feeds" the cells & helps with neurotransmitter transmission)
  * An increase in the number of blood vessels that help remove waste in the brain
  * An increase in the number of synapses* in the brain

*the part that allows nerves to communicate
“Never too Early or too Late”

The benefits of physical therapy & exercise can be seen at any stage of the disease.

The Four Stages of Intervention

1. Pre-habilitation: start before there is a problem
2. Rehabilitation: fix the problem
3. Preservation: do not lose what you have
4. Prevention: do not add any new problems
Therapy Intervention

Pre-habilitation
• See a PT & begin an exercise program even if you do not have difficulties with balance, stiffness, etc.

Rehabilitation
• Learn how: to get out of a chair/bed, to walk better, to get out of a freeze, to improve your posture, etc.

Preservation
• Find something you like & stick with it; Join a group – get social & have FUN

Prevention
• Home modifications, the right walking device, asking for help
The Million Dollar Question: “What Exercise Should I be Doing?”
What exercises are out there?

*Delaying mobility disability in people with PD using a sensorimotor agility exercise program.*

- framework of new agility exercises that focus on problems like freezing, slow & small movements, & difficulty with focusing
- uses movement principles from tai chi, kayaking, boxing, lunges, agility training, and Pilates exercises

King LA & Horak FB

LSVT®BIG

• Specialized rehabilitative exercises & strategies to help make everyday movements BIGGER & therefore faster.
• Developed by Becky Farley, PT, PhD & based upon principles of the Lee Silverman Voice Treatment.
• Performed by physical or occupational therapists.
• To find a certified clinician go to www.lsvtglobal.com & click on “Find a clinician” or call 888-438-5788
Forced Exercise

- Developed by Jay Alberts, PhD at Cleveland Clinic
- Initial study: people with PD who were helped to bike at a speed of 80-90 rpms by using a tandem bike showed a 35% improvement in symptoms
- Current study: initial study is being repeated using a significantly larger number of participants and a motorized bicycle
- Theracycle™ is a type of motorized bicycle currently available that can help you reach a speed of 80-90 rpms

Visit www.theracycle.com or 800-367-6712 for more details
Other Exercise Options

Research is showing exciting results in the use of different types of exercise:

• Body Weight Supported Treadmill
• Theater
• Boxing
• Dancing
• Tai Chi
• Training devices
A PD program should include:

1. Aerobic exercises – get that heart rate up!
2. Balance exercises
3. Strengthening exercises – especially for your posture (back & core) and your legs
4. Flexibility exercises – S*T*R*E*T*C*H
5. Mind exercises – look for types that challenge your attention, reasoning, and timing
How to Find a Physical Therapist

www.APTA.org or 800-999-2782
American Physical Therapy Association

– Click on link to left: Professional Development
– Click on Specialist Certification (ABPTS)
– Click on Directory of Specialists
– Click on Find a Specialist
– Choose Specialty Area of “Geriatric” or “Neurologic”
– Type in your information
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• Click on link to Left for “Consumers”
• Click on link “Find a PT”

*once you locate a PT in your area, you will need to ask them about their experience with PD
How to Find a Physical Therapist

www.parkinson.org

• Click on link to Right – Find Local Resources
• Click on Health Professionals & choose Physical therapist
• Type in you zip code & how far you are willing to travel

*You can also look under the list of ATTP Graduates – it does not list specific therapists, but rather facilities
How to Find a Physical Therapist

• Call your local Movement Disorder center
• Call the department of Physical Therapy at the closest university
• Call your local Hospital

Ask for a referral to a therapist with geriatric or neurological experience. Explain that you are looking for someone with experience working with individuals with Parkinson’s disease.
Top Tips #1

If you fall back in your chair when you try to stand, you are likely doing 1 of 2 things incorrectly.

1-you have not moved far enough to the front of the chair

2-or (as in this photo) you have not leaned your trunk forward enough before pushing to stand.
“Nose over Toes”

Feel weight on the front of the feet – not the heels

Forward Lean

Bottom lifts up

Feet Wide Apart

Correct Technique
Top Tips #2

If you often freeze when trying to turn and sit in a chair, you are likely doing 1 of 2 things incorrectly.

1- you are not focusing on taking big, full steps

2-or (as in this photo) you are reaching for the chair too soon.

By reaching before turning, you are placing your weight on the front of your feet which leads to freezing.
Top Tips #3

To help avoid falls in the kitchen when opening cabinets, refrigerator, or oven:

1-stand to the side of what you are opening, never directly in front of it

2-keep feet wide apart

3-keep one hand on a stable surface
Top Tips #4

Be honest with your care-partner, your doctor, and your therapist.

• If you are holding/touching furniture, walls, street signs or others’ hands – you need a walking device.

• If you land on anything other than your feet, it is considered a fall.

• If you cannot recall or do not use the tips you’ve been given, accept that you need reminders or help from others.
Top Tips #5

Remember the 4 S’s* to Break a Freeze

1. **Stop**
2. **Stand tall and breathe**
3. **Shift your weight side to side**
4. **Step out BIG**

**Caution:**

– The more you try to push or fight a freeze, the worse it becomes.
– Reaching forward to break a freeze often leads to a fall

*Created by M. Walde-Douglas, PT of Struther’s Parkinson’s Center, MN
Insurance Information

Medicare

• For physical therapy and speech language pathology services combined, the limit is $1,870 for 2011.
• Exceptions may be made when the therapist applies for an exception.
• 12/15/10 - President Obama signed into law The Medicare and Medicaid Extenders Act of 2010, which extends the exceptions process for outpatient therapy caps.
• There is no cap for PT/OT/ST services when provided at a hospital-based outpatient center

Other Providers

• May place restrictions on the # of visits and where you can receive treatment
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<th><strong>Resources</strong></th>
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<td><strong>Parkinson Disease Foundation</strong></td>
<td><strong>800-457-6676</strong></td>
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<td><a href="http://www.pdf.org">www.pdf.org</a></td>
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<tr>
<td><strong>National Parkinson Foundation</strong></td>
<td><strong>800-473-4636</strong></td>
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<td><strong>American Parkinson Disease Foundation</strong></td>
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<td><strong>National Resource Center for Rehab</strong></td>
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Resources

www.rescueproject.org  Information handouts & tips
   *Click on Publications, then information sheets

www.johnargue.com  Exercise and activity videos

www.danceforpd.org  Mark Morris Dance Group
   718.624.8400

www.1800wheelchair.com  Walking & adaptive equipment

www.davisphinneyfoundation.org  Exercise resource guide
   Victory Summits
• Don’t forget, we physical therapists need volunteers for our clinical trials too!

• Please consider getting involved in a study, it is a great way to help us learn more and provide better treatments & care.
Thank you for your time and attention!

*It is my hope that this lecture inspires you to take control of your Parkinson’s through the help of physical therapy and exercise.*

Feel free to contact me at [heather.cianci@uphs.upenn.edu](mailto:heather.cianci@uphs.upenn.edu)

*(please allow for up to one week for return messages)*
Closing Remarks

Robin Elliott
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