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Exercise Concepts

Considerations for People with Parkinson's

Presentation by

Dr. Michael Braitsch PT, DPT

Tribe Wellness - Richardson, TX

Disclosure slide

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- The presenter is an avid exercise enthusiast, a licensed physical therapist, and martial artist and is extremely biased in terms of promoting exercise, physical therapy, and martial arts training.
- All forms of exercise are not appropriate for all people. Topics covered should not be used as a blanket treatment method or an individual exercise prescription. Each person must rely on their own judgement and reasoning to determine the suitability of physical exercise along with consultation with medical professionals prior to initiating any new exercise activity.
- Research findings presented represent only a sample of the universe of research available on exercise and treatment concepts for Parkinson Disease and should not be taken as a definitive or complete representation of all available research on this topic.
- Resources provided in today's session are educational in nature and should not be your only source of information for the assessment or treatment of any condition.
- There is no financial compensation or conflict of interest with the speaker and any entity or product mentioned unless otherwise noted.

Bio Highlights–

Dr. Michael Braitsch PT, DPT

Doctor of Physical Therapy (DPT) –
UT Southwestern Medical Center

Parkinson's PT with LSVT Big Certification

Former amateur fighter & champion martial artist

Founder:
Tribe Wellness –
a place for people with PD

Clinical research: for Parkinson Foundation - Boxing for PD

Creator of PD Exercise groups:

- South Paws boxing club
- Tai chi balance
- Peak Performers Hiking Group

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Why Exercise?

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6 benefits of exercise for ANYONE

1. Exercise controls weight
2. Exercise combats health conditions & diseases
3. Exercise improves mood
4. Exercise boosts energy
5. Exercise promotes better sleep
6. Exercise can be fun … and social!

https://www.mayoclinic.org/healthy-lifestyle/fitness/in-depth/exercise/art-20048389

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Why does it matter for People with Parkinson's?

Locus Of Control

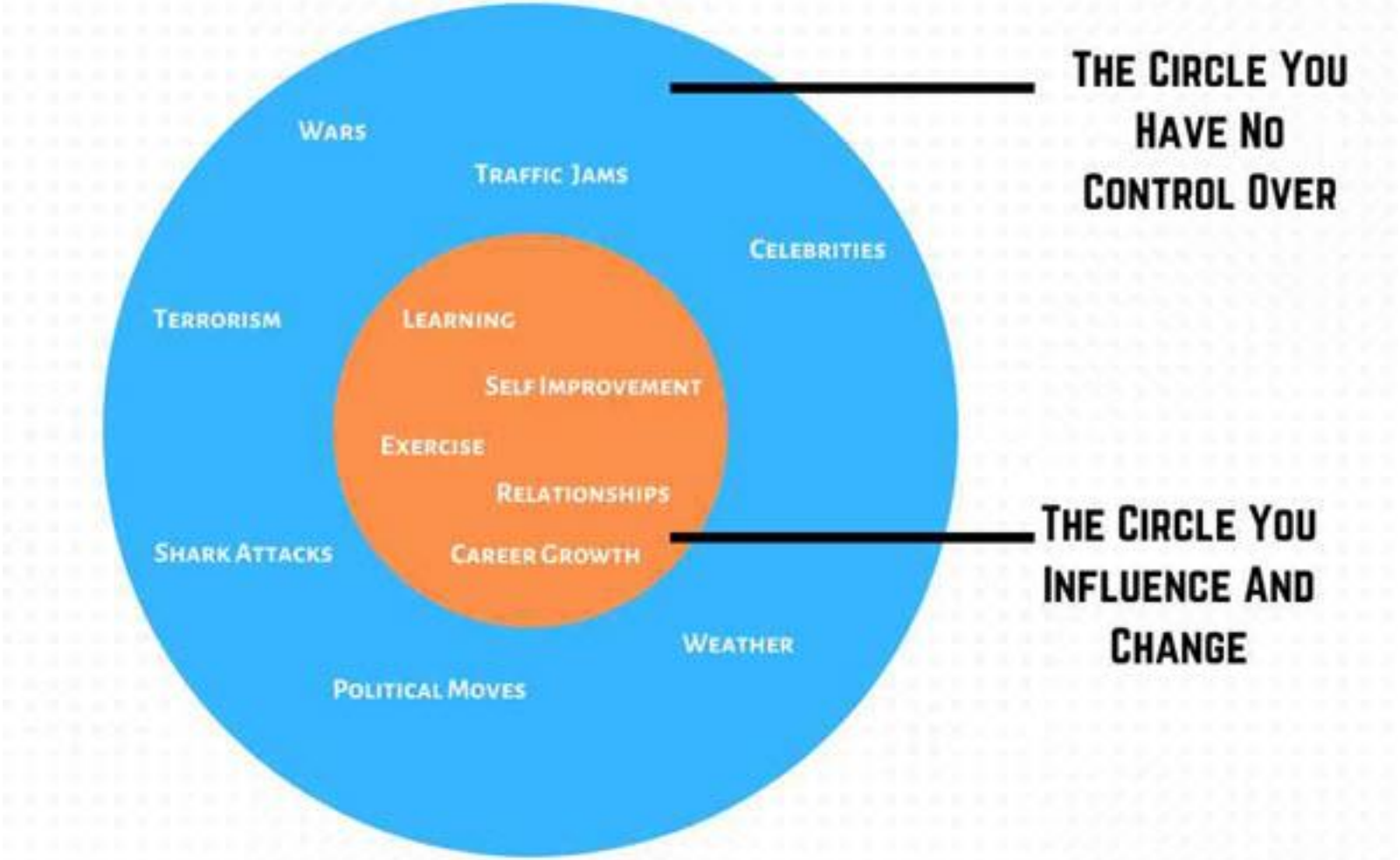

Image - https://www.dumblittleman.com/wp-content/uploads/2020/04/locus-of-control.jpeg

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Exercise EMPOWERS YOU

…

to FOCUS
on the things

that YOU can
CONTROL!

Cardinal Motor Symptoms of Parkinson Disease (PD):

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- **Bradykinesia** (slowness of movement) – slowing down and loss of spontaneous and voluntary movement
- **Rigidity** – unusual stiffness in a limb or other body part
- **Resting tremor** – a movement that affects a limb when it is at rest and stops for the duration of a voluntary movement
- **Postural instability** – problems with standing or walking, or impaired balance and coordination

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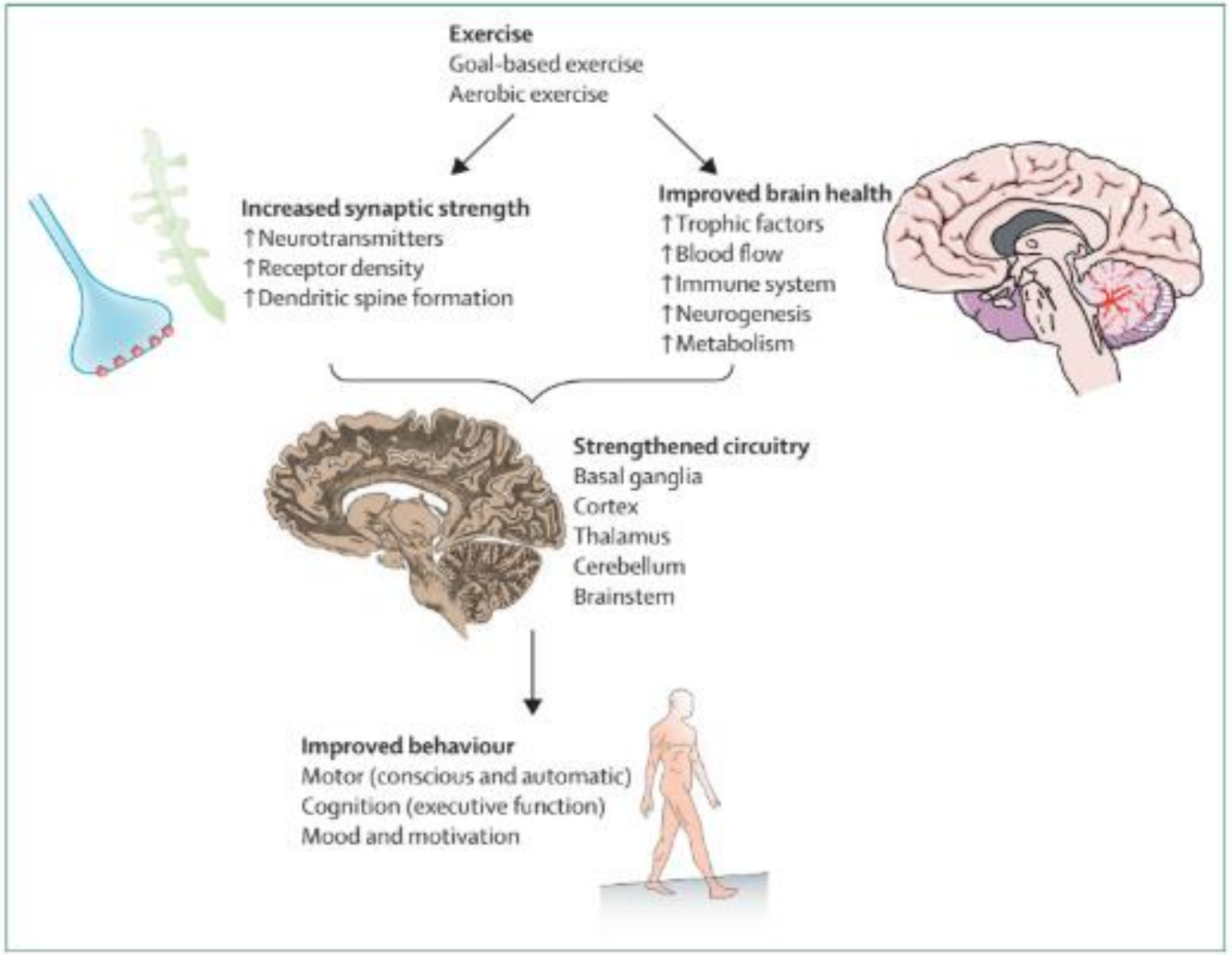
How does exercise help?

2-year long RCT found that exercise helps people with Parkinson's:

- Reduce the amount of levodopa necessary to manage symptoms
- Increase the timeframe medication is effective
- Slows progression of Parkinson's symptoms

David, Fabian J. et al. "Progressive Resistance Exercise and Parkinson's Disease: A Review of Potential Mechanisms." *Parkinson's Disease* 2012 (2012): 124527. *PMC*.



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Exercise improves:

- expression of neurotrophic factors
- blood flow
- immune response
- neurogenesis
- metabolism (i.e. mitochondrial health)

For better motor and cognitive performance!

(Petzinger, 2013)

(Petzinger, et al.) "Exercise-enhanced neuroplasticity targeting motor and cognitive circuitry in Parkinson'sdisease,"The Lancet Neurology, Volume 12, Issue 7, 2013, Pg 716-726,ISSN 1474-4422.

Why does it work?

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- Keeps ***everything else*** in your body working well
- Makes the brain ***more excitable***
- Improves motor performance almost IMMEDIATELY
- Strengthens connections in the brain
- Helps to preserve or improve function

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How often should I exercise?

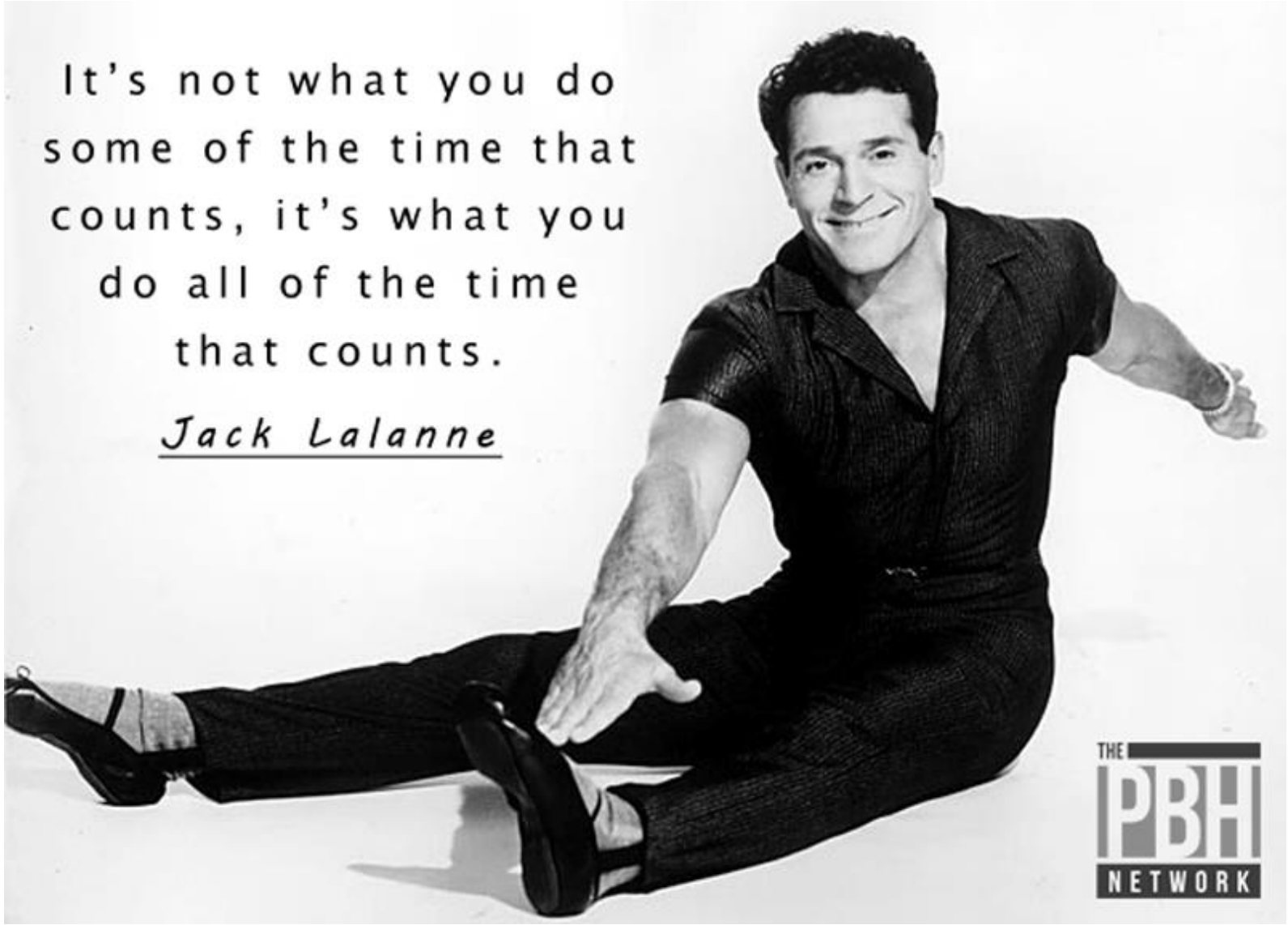

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Image credit https://www.pinterest.com/pin/560557484857253860/

As often as possible!

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<u>Aim for 300 minutes each week</u> of physical activity

- ✓**Minimum 150 minutes** of weekly physical activity
- ✓At least 75 minutes of ***vigorous activity***
- ✓Spread out your workouts throughout the week

Vary your activities

- ✓Spice things up with a new workout
- ✓Add a cognitive challenge
- ✓Move in multiple directions

- Warm up, Cool down, and please, STRETCH!
- Keep it fun and social

https://www.mayoclinic.org/healthy-lifestyle/fitness/in-depth/exercise/art-20048389

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What should I be doing?

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Start with a realistic workout plan

- Something you'll do safely
- Something you will do consistently
- Involve others for accountability and motivation

REMEMBER:

This is a LIFESTYLE, not a FAD. Ease your way in if you must.

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What goes into a good plan?

Key Themes of Exercise for People with Parkinson's

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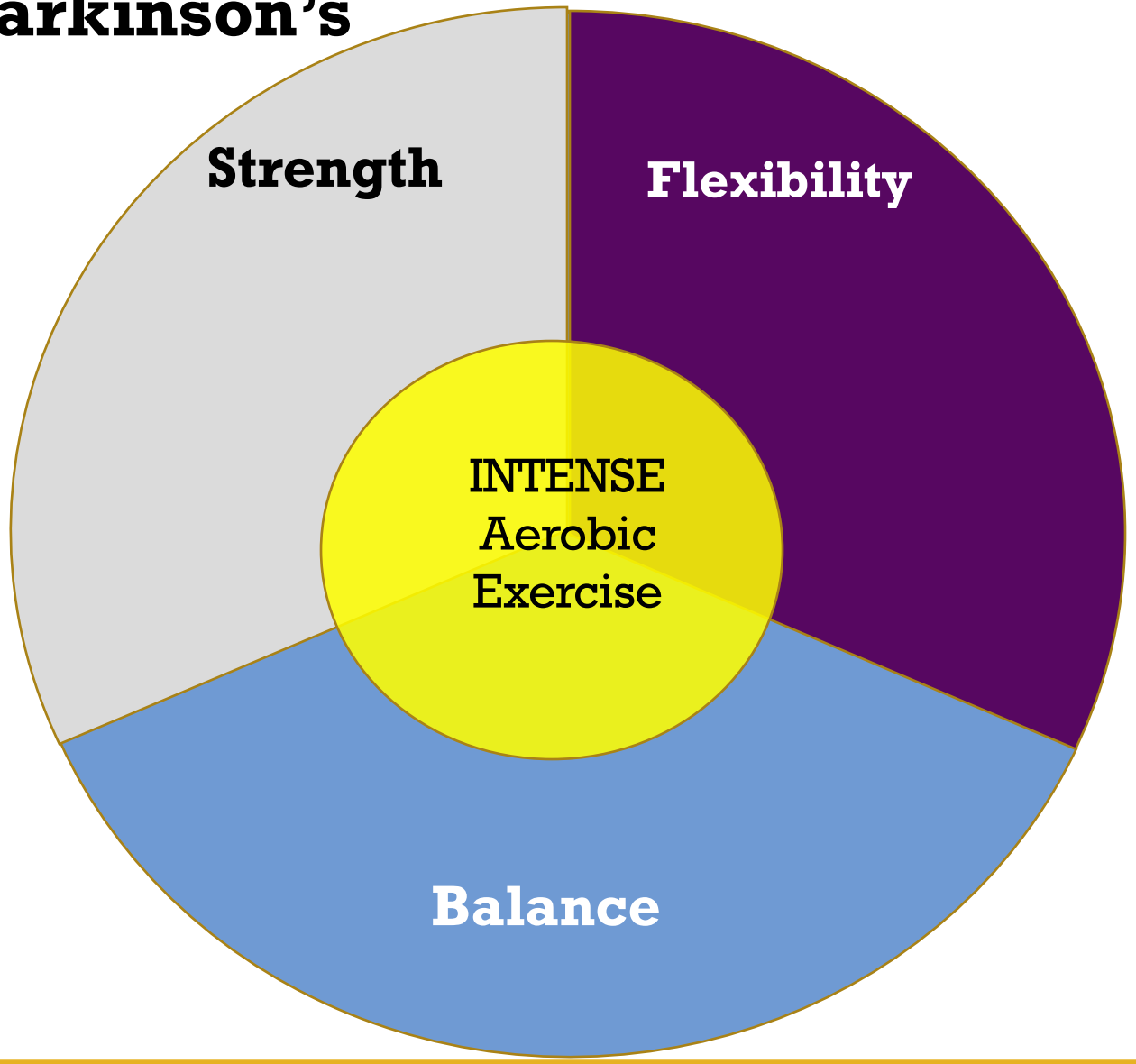

Other components:

- "Big," Large Amplitude Movements
- Axial/Trunk Rotation
- Cognitive Training or Skill Acquisition wherever possible

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Strength Ideas

https://networthbio.net/wp-content/uploads/2015/02/Jack-LaLanne.jpg

- Free weights
- Weight machines
- Body-weight
- Yoga
- Pilates
- CrossFit (maybe)
- PWR! Moves

Challenge: if possible, under supervision, try to master the "Turkish Get Up."

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Flexibility Ideas

http://2.bp.blogspot.com/-UR4jplU3zWk/UP5PKftxYZI/AAAAAAAAAm8/TqWDnx8m8yI/s1600/ShiFu+YanLei+Shaolin+Sml.jpg

- Tai Chi
- Yoga
- Pilates
- PWR! Moves
- Stretching

Balance Ideas

Image - https://www.thetimes.co.uk/article/how-to-improve-your-balance-as-you-age-w7np3h7sq

- Tai Chi
- Qi- gong
- Yoga
- Pilates
- Dancing
- Boxing
- Martial arts
- Feldenkrais
- LSVT BIG
- PWR! Moves
- Dual task performance
- Balance boards
- Stand-up paddling

Intensity (Think CARDIO!)

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https://ourfitness.life/fitness/fat-burning-cardio-exercises/

- Boxing
- Cycling
- Dancing
- Elliptical
- Stair-stepper
- Running
- Walking
- Pole walking
- Zumba!
- Water Aerobics
- Step Aerobics
- Rowing
- Jump rope
- Kickboxing (maybe)

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

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Modified RPE

4/10 - 7/10

is ideal

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

Rating of Perceived Exertion
Borg RPE Scale

6		How you feel when lying in bed or sitting in a chair relaxed. Little or no effort.
7	Very, very light	
8		
9	Very light	
10		
11	Fairly light	
12		Target range: How you should feel with exercise or activity.
13	Somewhat hard	
14		
15	Hard	
16		
17	Very hard	How you felt with the hardest work you have ever done.
18		
19	Very, very hard	
20	Maximum exertion	Don't work this hard!

https://www.ivyrehab.com/wp-content/uploads/2013/10/Borg-scale-1.png

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But how can I monitor intensity?

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Heart-rate

Max Heart Rate = 220 - age

Target HR for moderate to intense exercise

= 60-80% of age-adjusted max HR

<u>Example: 70 year old in a spinning class</u>

Target minimum: (220-70) x 0.6 = 90 BPM

Target max: (220-70) x 0.8 = 120 BPM

So, this person would aim for a range of 90 – 120 Beats Per Minute

Simple Action Steps

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- Get a coach (a Parkinson's PT or OT; a trainer with Parkinson's experience)
- Come up with a plan to exercise (build it into your calendar)
- Involve a friend, care partner or family member!
- Have some FUN!

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Thank you!

References

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