Mental Well-being and Memory

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Poll

What best describes your connection to Parkinson’s disease (PD)?

- Person with PD
- Spouse/Partner
- Parent has/had PD
- Other family of person with PD
- Healthcare Professional
- Physician/Clinician
- Scientist/Researcher
- Nurse/Nurse Practitioner
- Other
Meet Your Presenters

Gregory Pantone, MD, MHS
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Johns Hopkins

Lisa Cone
Retired executive in healthcare services
Parkinson’s Research Advocate
People with Parkinson's Advisory Council
Disclosures

No financial relationships with commercial entities relevant to the content of this presentation

Dr. Pontone has been a consultant for the following companies:
    Acadia Pharmaceuticals
    Concert Pharmaceuticals
Learning Objectives

1) Describe normal, age-related, cognitive changes and strategies to stay well
2) Discuss the medications that may cause cognitive impairment in PD
3) Review how PD may affect memory as it progresses over time
WELLNESS AND MENTAL HEALTH
Wellness – What is it?

• The World Health Organization defines health as: "a state of optimal well-being, not merely the absence of disease and infirmity."

• Wellness: “the active pursuit of activities, choices, and lifestyles that lead to a state of health.”
Poll

How much does your mental well-being affect your quality of life compared to the degree of physical impairment?

- More
- Less
- The same
Wellness is a Verb

ILLNESS - WELLNESS CONTINUUM

WELLNESS PARADIGM

Disability

Symptoms

Signs

Awareness

Education

Growth

TREATMENT PARADIGM

Neutral Point
(No discernable illness or wellness)

Pre-Mature Death

High Level Wellness

© 1972, 1988, 2004, John W. Travis, MD
Mind Body Dualism

• Rene Descartes split the mind from the brain and body
• Today we know the mind and body function interdependently
• Stigma toward mental illness is a consequence
NORMAL AGE-RELATED COGNITIVE CHANGES
Cognition and Aging: What Stays the Same?

- Procedural and semantic memory are well preserved.
- Vocabulary, general knowledge remain stable or even improve 0.2 SD per decade through the 7th decade.
- Visual perception of objects remains stable and older people may be more accurate in judging distances.
- Language is stable, at least until age 70.
Cognition and Aging: What Changes?

- Focused and divided attention decreases
- Working memory
- Executive functioning
- Processing speed
- With ‘advanced age’ most cognitive domains change
Strategies to Stay Well

- **Exercise** – especially aerobic exercise, improves global cognitive ability and reduces medical risk factors for dementia
- **Cognitive leisure activities** – education and activities that require mental effort, e.g., education and cognitive reserve
- **Social interaction** – ‘meaningful’ interpersonal and community engagement
- **Sleep** – a minimum of 6 to 6.5 hours per night is the recommendation
Strategies to Stay Well

- Sleep is most important for attention and executive tasks
- Sleep also plays a role in memory stabilization and integration (i.e., new learning)
- Sleep is important for brain-metabolite clearance
- Older adults wake up more at night and have lower “quality” sleep; therefore the concept of ‘sleep opportunity’ and sleep efficiency is important
Reversible Causes of Cognitive Impairment

- Sleep disturbance, e.g., obstructive sleep apnea
- Vitamin B12 deficiency or hypothyroidism
- Depression
- Medication side effects
EXECUTIVE DYSFUNCTION
Influence of Task Demands in PD

Let’s Have Tea!
• Looked at how attentional demands during an everyday functional activity contributes to functional performance and gait disturbances

Study
• 20 mild to moderate people with Parkinson’s, 10 Controls
• Four Tasks
  • Simple walking: walk to kitchen
  • Dual-motor: walk and carry tray
  • Dual-cognitive: walk and recall a memory
  • Multiple motor-cognitive task: walk, carry tray and recall a memory

Results
• Increased task complexity → ↓ gait speed

MEMORY IMPAIRMENT
File Cabinet Example

Contrasts in memory function between Parkinson’s disease and Alzheimer’s disease
## Memory Impairment Parkinson’s vs. Alzheimer’s: retrieval vs. encoding

<table>
<thead>
<tr>
<th></th>
<th>Alzheimer’s</th>
<th>Parkinson’s</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recognition memory</strong></td>
<td>↓↓</td>
<td>-</td>
</tr>
<tr>
<td><strong>Free recall memory</strong></td>
<td>↓↓</td>
<td>↓</td>
</tr>
<tr>
<td><strong>Benefit for cueing</strong></td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>

- Parkinson’s memory impairment = poor retrieval
- Alzheimer’s memory impairment = impaired encoding

**Encoding** = process of putting info into memory

**Retrieval** = process of finding the info to remember
Impact of Cognitive Impairment on Daily Function

Memory loss
- Repeating same comment or question
- Difficulty learning new information

Difficulty performing familiar tasks
- No longer able to use remote control, microwave, computer, etc.
- Can’t organize medications

Language deficits
- Forgetting simple words or using wrong or non-specific words, e.g., give me the ‘thing’
- Difficulty following directions or conversations

Time and place disorientation
- Getting lost, especially in familiar places

Poor judgment
- Irresponsibility, forgetting appointments, ignoring risks
Action items

- Reduce distractions
- Focus on one task at a time
- Talk to your doctor about depression
- Exercise
- Quality sleep
- Social interaction
- Stress reduction
- Avoid medications that may worsen cognition
PD CHANGES COGNITION GRADUALLY

BEWARE OF SUDDEN CHANGES
Cognition Declines Gradually in PD

Sudden changes in cognition—over hours, days, or weeks—is usually not due to Parkinson’s disease.
Acute Change in Cognitive Function

- Delirium
- Depression
- Medication side effect
- Stroke or bleed
- …or anvil
Medications That May Cause or Worsen Cognitive Impairment in PD

• Parkinson’s disease results in loss of dopamine producing neurons
• Parkinson’s disease is also associated with lower levels of acetylcholine
• Up to 70% of people with PD have autonomic nervous system dysfunction, i.e., orthostatic hypotension
A guide for older people and health professionals for potentially inappropriate medication use.
Action Items

✓ Actively pursue your own wellbeing
✓ Allow for an 8-hour sleep opportunity
✓ Exercise
✓ Stay active and social
✓ Sudden changes in memory or thinking should be evaluated by your doctor
✓ Understand your medications and trade-offs


Post-Webinar Details & CEUs

CEUs

For Health Professionals interested in 1 free CEU from the American Society on Aging click on the link in the chat. Valid until May 20th, 2021.

RECORDING

This webinar is recorded for on-demand viewing in English within one-week of live event and available in Spanish on: ‘Canal en Español’ YouTube Channel with the month.

SLIDES

Download webinar slide deck via link in the chat.
That’s a Wrap!

Symptom Management: Is it PD, Medication or Aging?

Register at Parkinson.org/ExpertBriefings

These EBs will be available on: ‘Canal en Español’ YouTube channel

Register at Parkinson.org/ExpertBriefings
Related Resources

**Cognition Talk Series (Archived)**
New episodes every other **Tuesday** featuring Parkinson’s experts, treatments, techniques and research.
[Podcast: Substantial Matters](https://Parkinson.org/Podcast)

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**Fact Sheets**
Get the resources and information you need to start living a better life with Parkinson’s.
[Fact Sheets](https://Parkinson.org/Library)

**Medications: A Treatment Guide to Parkinson’s Disease**
Available for download, physical copy or purchase on Kindle.
[Medications: A Treatment Guide to Parkinson’s Disease](https://Parkinson.org/Library)

**Better Lives. Together.**
General Resources

Aware in Care Kit
The Aware in Care kit is filled with life saving tools and information to help a person with Parkinson’s during a planned or unplanned hospital visit. Find kit options at Parkinson.org/AwareinCare

PD Health @ Home
The Aware in Care kit is filled with life saving tools and information to help a person with Parkinson’s during a planned or unplanned hospital visit. Find kit options at Parkinson.org/PDHealth

National Helpline
Specialists answer calls about all aspects of Parkinson’s in addition to helping you locate your local PD trained allied health professional therapist.
1-800-4PD-INFO
Helpline@Parkinson.org
Mon- Friday 9 am to 8 pm ET

PDGENEration
Parkinson’s Foundation’s national initiative that offers genetic testing for relevant Parkinson's-related genes and counseling at no cost.
Parkinson.org/PDGeneration
Don’t go anywhere!

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Thank you
Parkinson’s Foundation

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