



Mental Health in Parkinson's Disease

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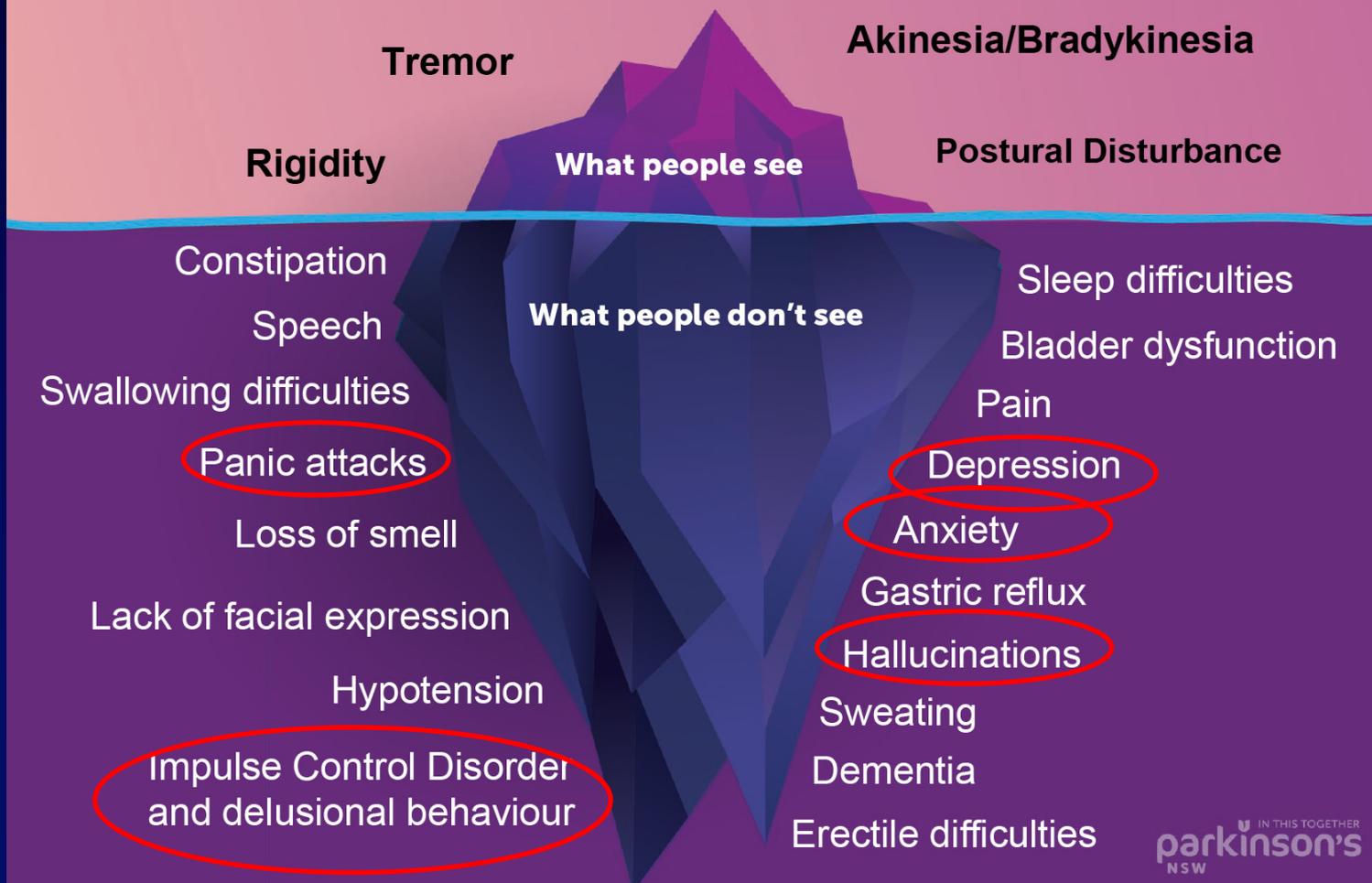
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Parkinson's disease

- Motor symptoms
- “Non-motor” symptoms

The Parkinson's Iceberg



IN THIS TOGETHER
parkinson's
NSW

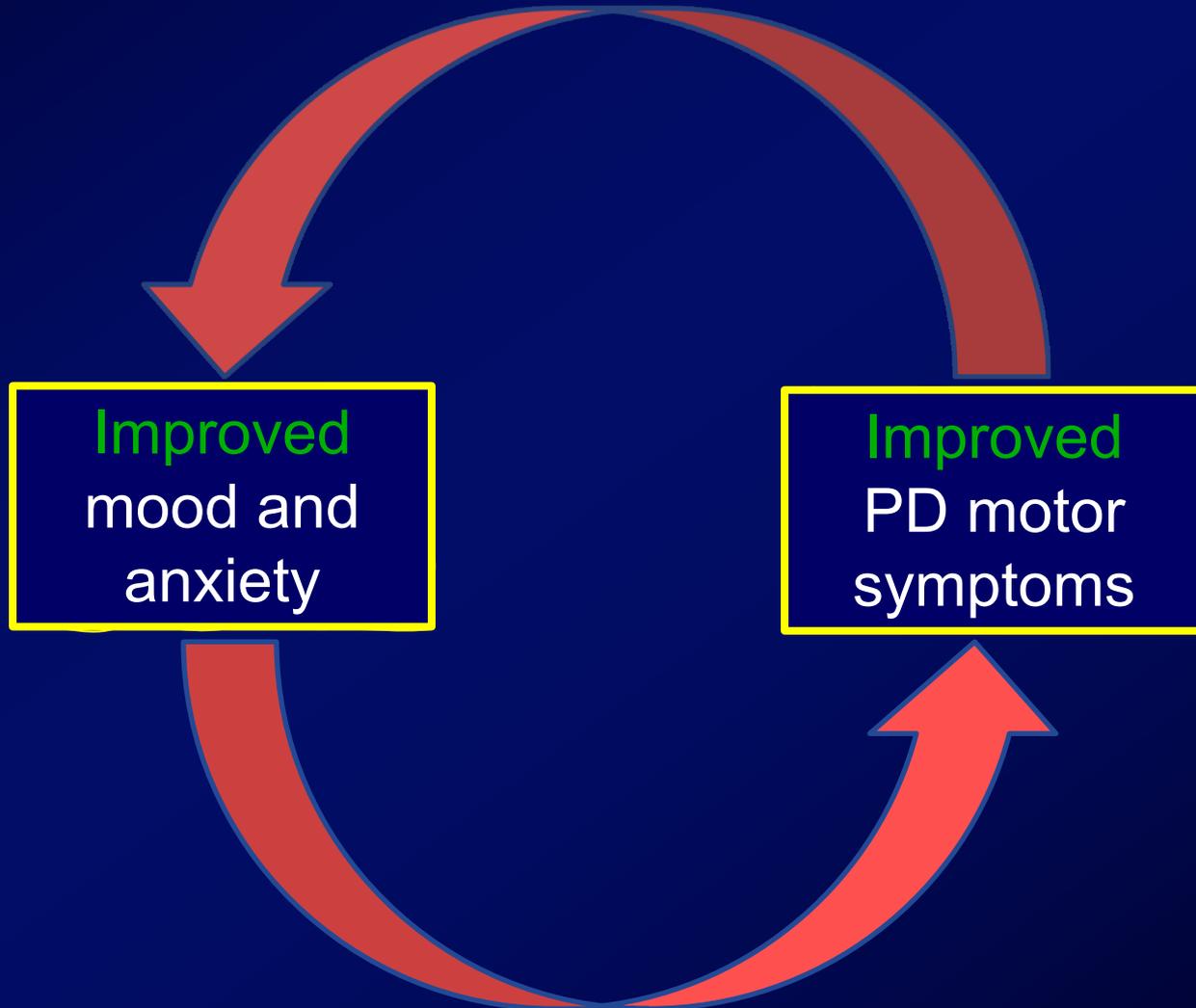
Mental health

- “Non-motor” symptoms
 - Mental health changes can start before PD diagnosis and motor symptoms
 - Today I will cover:
 - Common mental health concerns
 - Strategies for treating and living well

Common Mental Health Concerns in PD

- Depression
- Anxiety
- Apathy
- Hallucinations
- Impulse control disorders

Maintaining emotional health is as important as working on physical “motor” symptoms



Depression in PD

- Occurs in about 20% of people with PD at any given time
- May affect 30-50% of people with PD over a lifetime
- Depression can be one of the first symptoms in PD

Symptoms of Depression

- Feelings of persistent sadness
- Losing interest in usual activities
- Fatigue or decreased energy
- Feelings of guilt and worthlessness
 - Thinking about dying
 - Feeling sad, hopeless, helpless
- Impaired sleep – too much, too little
- Changes in appetite and weight



"Depression/The Blues" by Joana Rojas - still here is licensed under [CC BY-NC 2.0](#).

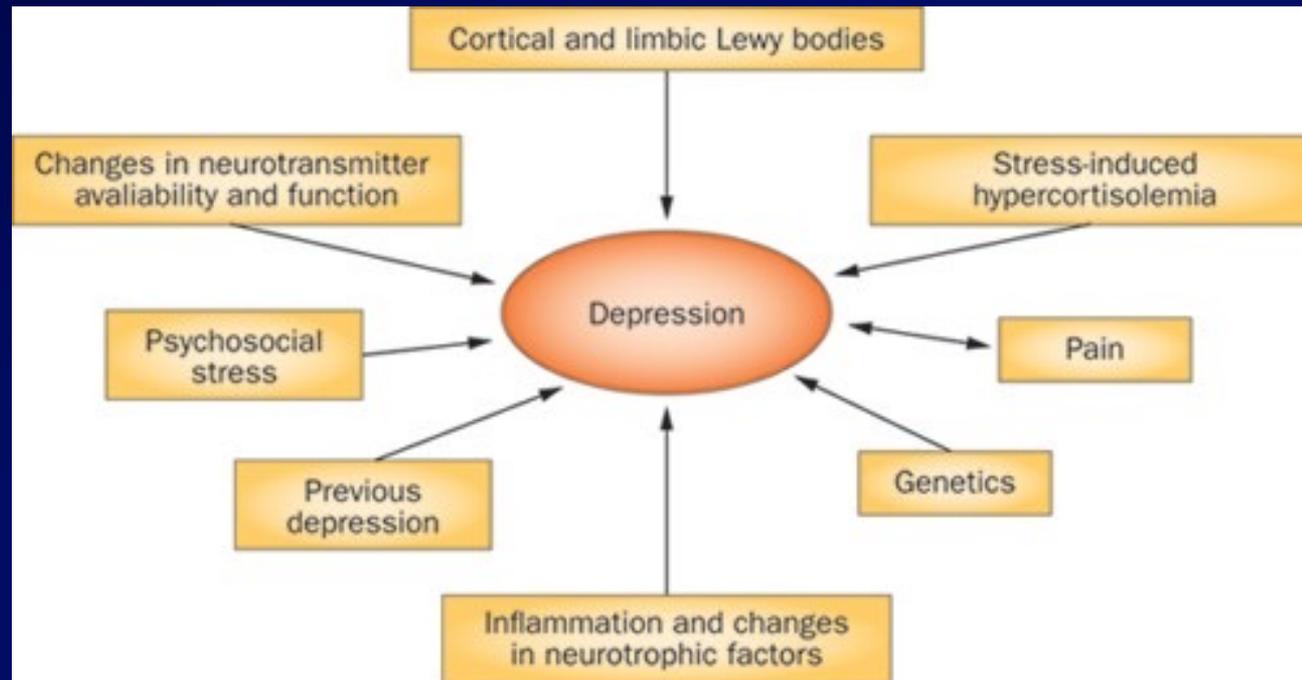
Depression in PD

- Can be misdiagnosed:
 - slowness, fatigue, sleep changes
 - PD symptoms
 - OR depressive symptoms
- Depression and anxiety
 - can be features of PD medications wearing off
 - up to 35 % of people

Depression in PD

- Depression can be a response to a PD diagnosis
- But depression is also related to the biology of PD

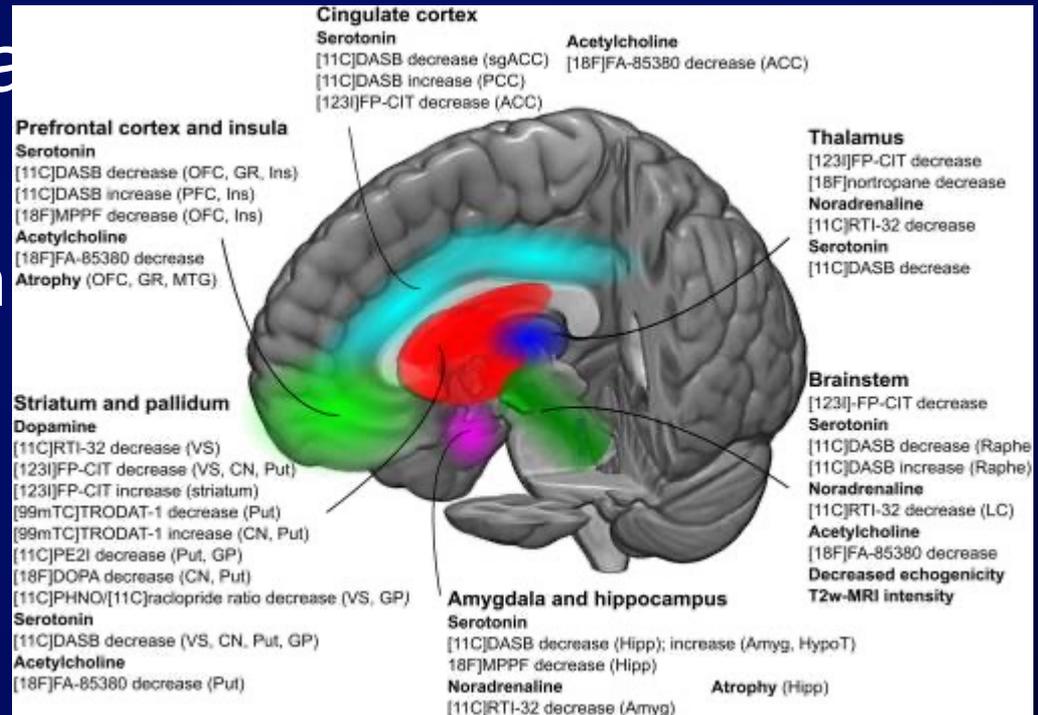
Biological factors influencing depression in PD



From Aarsland et al, **Depression in Parkinson disease—epidemiology, mechanisms and management.** *Nature Reviews Neurology* (2012)

Neurobiology of PD Depression

- Examples of neurotransmitter changes that can occur in PD, linked to depression
- Other factors may include
 - Inflammation
 - PD pathology in

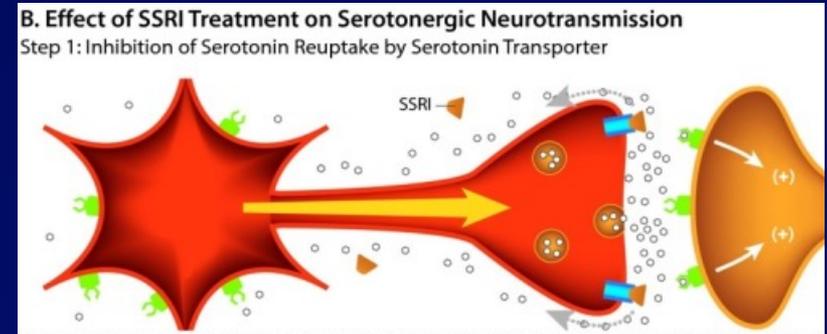


Treating Depression in PD

- Cognitive Behavioral Therapy (CBT)
 - Shown to be beneficial in several good studies

Medications to Help with Depression

- Selective Serotonin Reuptake Inhibitors (SSRI)
 - e.g. citalopram, sertraline
- Serotonin and Norepinephrine reuptake inhibitors (SNRI)
 - e.g. venlafaxine, duloxetine
- “Tricyclics”
 - e.g. nortriptyline
- Dopamine medications
- Others still being studied



Modified from Pierz KA, Thase ME (2014)

All of these classes of medications can be helpful.

- No clear ‘best’ one
- Side effects, individual responses

Improving Depression Symptoms

- Importance of good sleep!
 - Sleep disorders and poor sleep contribute
- Exercise!
 - MANY studies find a benefit of exercise on depression in PD
 - No clear ‘best’ exercise
 - Aerobic exercise, yoga, dance, boxing, etc – all seem to be beneficial
 - The ‘best’ exercise may be the one you enjoy doing!



Npr.org

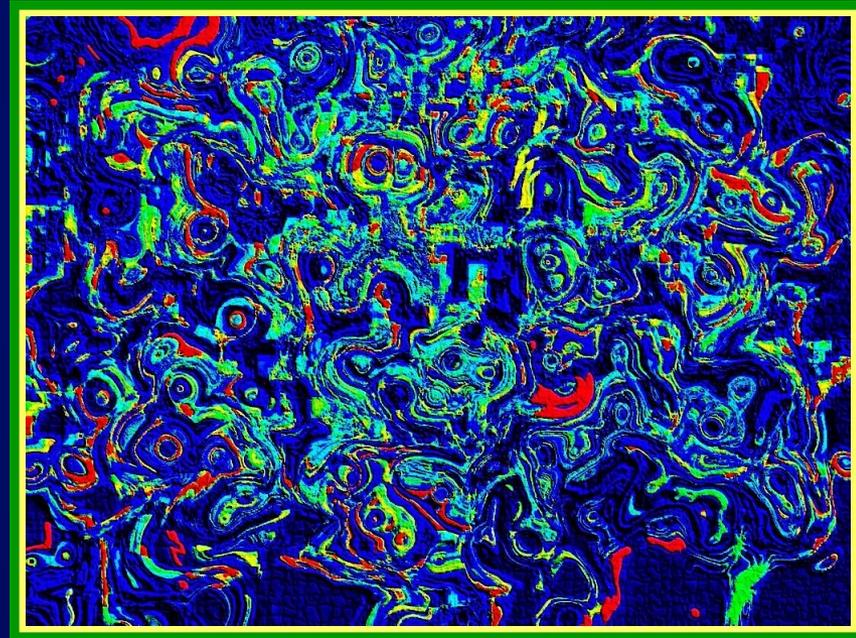
Improving Depressive Symptoms

- Support Groups
- Scheduling enjoyable activities
- Social connections
- Complementary therapies
 - Music therapy, acupuncture, meditation, etc

Anxiety in PD

Symptoms of anxiety:

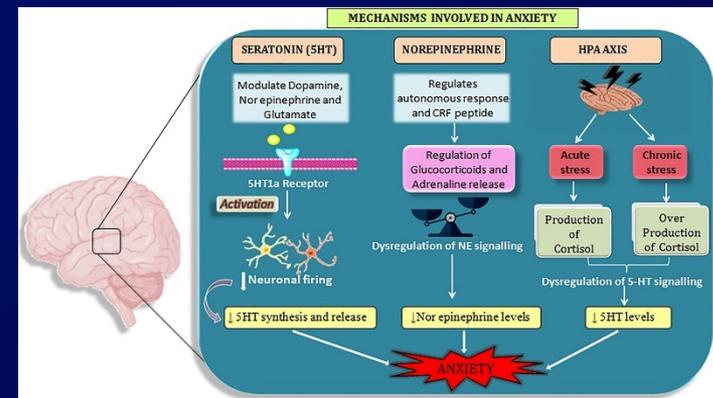
- Excessive worry or fear; sudden panic
- Worry about upcoming events
- Intrusive, unwanted thoughts
- Restlessness
- Irritability
- Nausea
- Racing heartbeat, shakiness, sweating
- Sleep problems
- Muscle tension



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Anxiety in PD

- May affect 40% of people with PD
- Like depression, can be a response to the diagnosis and/or a biological part of PD
- May or may not co-exist with depression
- May be early symptom



Khatri et al, *Biomedicine & Pharmacotherapy*, 2020

Improving Anxiety in PD

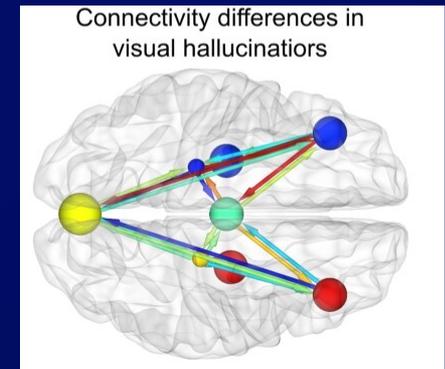
- Similar to treatment of depression
 - Surprisingly few good studies of medications for anxiety in PD
 - SSRIs most common
 - Careful use of benzodiazepines (alprazolam, lorazepam) when necessary
 - CBT
 - Mindfulness, yoga found to be beneficial
 - If due to “wearing-off” of PD meds, medication adjustments

Improving Anxiety in PD

- Exercise
 - Evidence supports benefits to anxiety
 - TYPE of exercise not as clear
 - both aerobic and non-aerobic exercise found to be helpful
- Other therapies being studied:
 - Example: Probiotics?
 - Possibly beneficial, but we need to understand the types of ‘probiotics’ important in PD

Hallucinations in PD

- Most commonly visual, but not always
- Illusions
 - Misperceptions
- Hallucinations
 - May be out of the corner of one's eye; flitting objects
 - Often fully-formed people, animals
- Estimates between 15-40% of people with PD may experience these
- Usually later in disease, unless caused by meds
- Researchers working to understand the biology
- “Delusions” - persistent beliefs not based on reality – can also occur



*Modified from Thomas et al,
Brain Commun 2023*

Hallucinations in PD

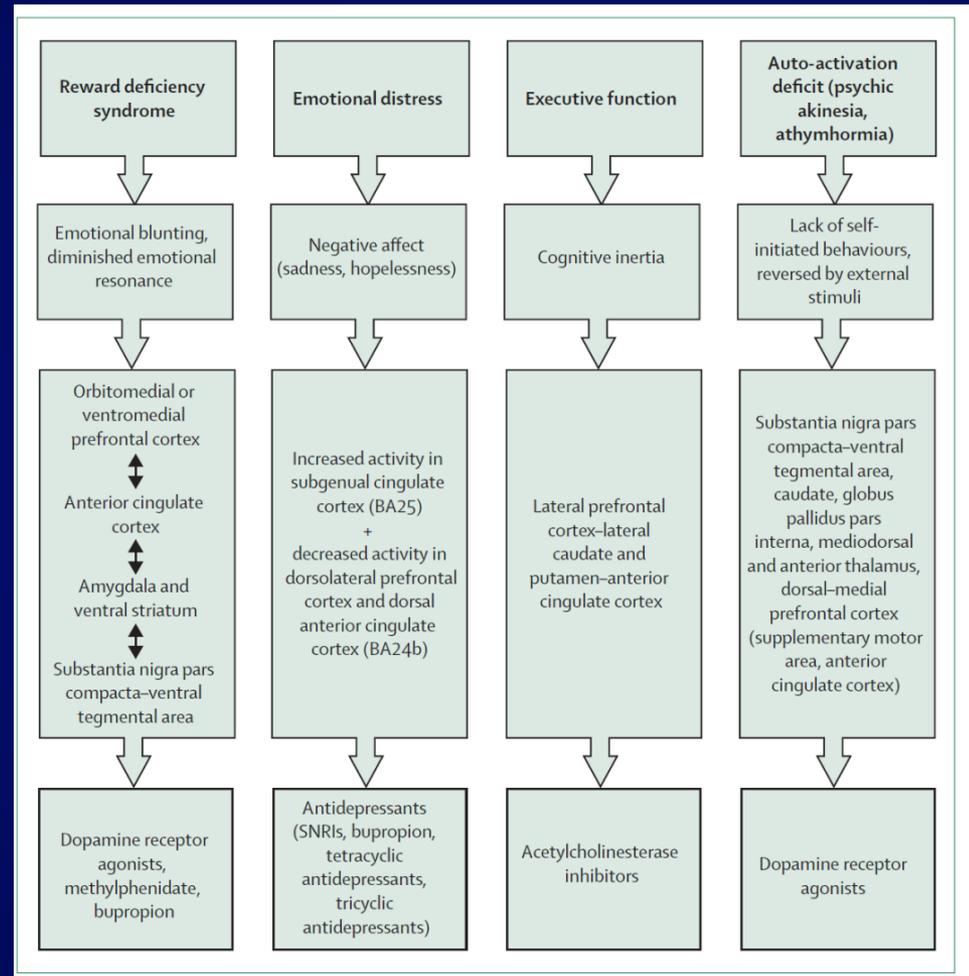
- If not bothersome, and mild, don't necessarily need to treat!
- Rule out delirium – check for infection
- First step in treatment:
 - DECREASE dopamine medications if possible
- Remove other contributing medications
 - “anticholinergics”: some sleep medicines, bladder medicines
- Medication treatments
 - Cholinesterase inhibitors like donepezil – helpful with hallucinations in PD
 - Pimavanserin – FDA approved, mixed experience with it
 - Quetiapine (Seroquel)

Apathy in PD

- Lack of interest, initiative, motivation
- Common in people with PD
 - Different than depression
 - Biologically driven
- Can be frustrating
 - Can impede participating in healthful activities

Apathy in PD

- Apathy probably involves several different brain pathways
 - Medication treatments try to target these areas



Apathy in PD

- No proven medication treatments
 - In some cases related to dopamine
 - Involved in reward system in brain
 - Cholinesterase inhibitors?
 - Donepezil/Rivastigmine
 - Approved for memory problems
 - CBT?
 - Exercise beneficial
 - Mindfulness, coaches

Strategies for Improving Apathy

- Schedule activities
- Set small goals each day
- Keep social/family connections
- New learning/new hobby?
- For family:
 - Encouragement and praise
 - Try to avoid being critical
 - Plan things to do together

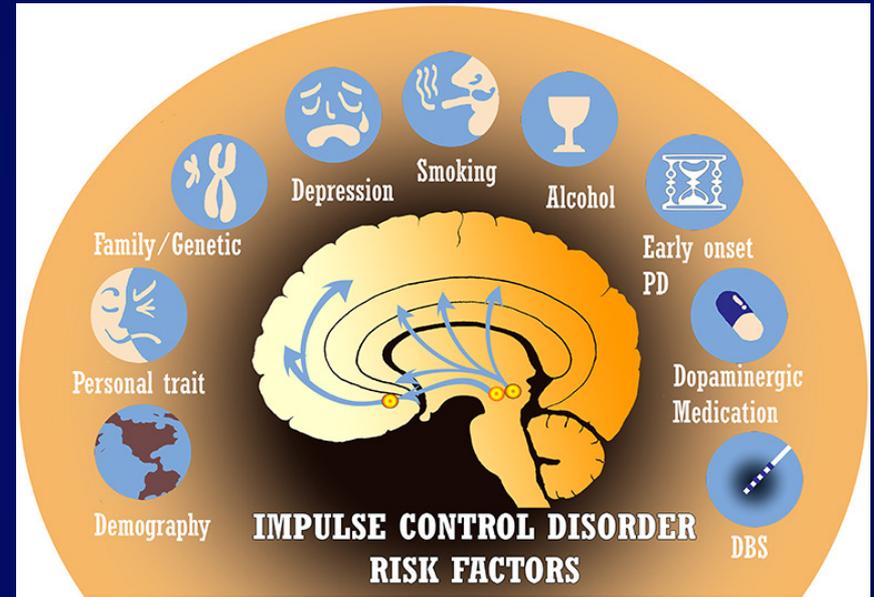
Impulse-control Disorders

- Compulsive gambling, shopping, sexual behaviors, eating
- “Punding”
 - Compulsive repetitive behavior
- Dopamine dysregulation syndrome

Impulse-control Disorders

Dopamine agonists
increase risk

- Ropinirole, pramipexole, rotigotine

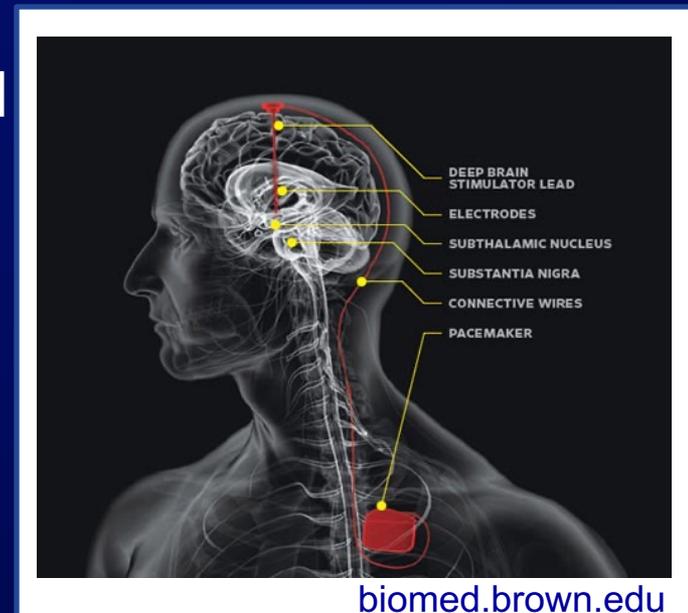


Eisinger et al, Frontiers Neurology 2019

Impulse-control Disorders

Management

- Discontinue (or decrease) dopamine agonists
 - Can increase levodopa if needed
 - Deep Brain Stimulation (DBS)
 - can be helpful by reducing medication usage



Mental Health in PD

- Recognize that mental health changes can be caused by PD just like tremor or shuffling
 - Although treatments are not perfect, medications, exercise, lifestyle changes, really can make a difference
- Don't be afraid to ask for help
- Give yourself a break; be patient with yourself
- Control what you can control, allow things to take more time

Questions?

