

1

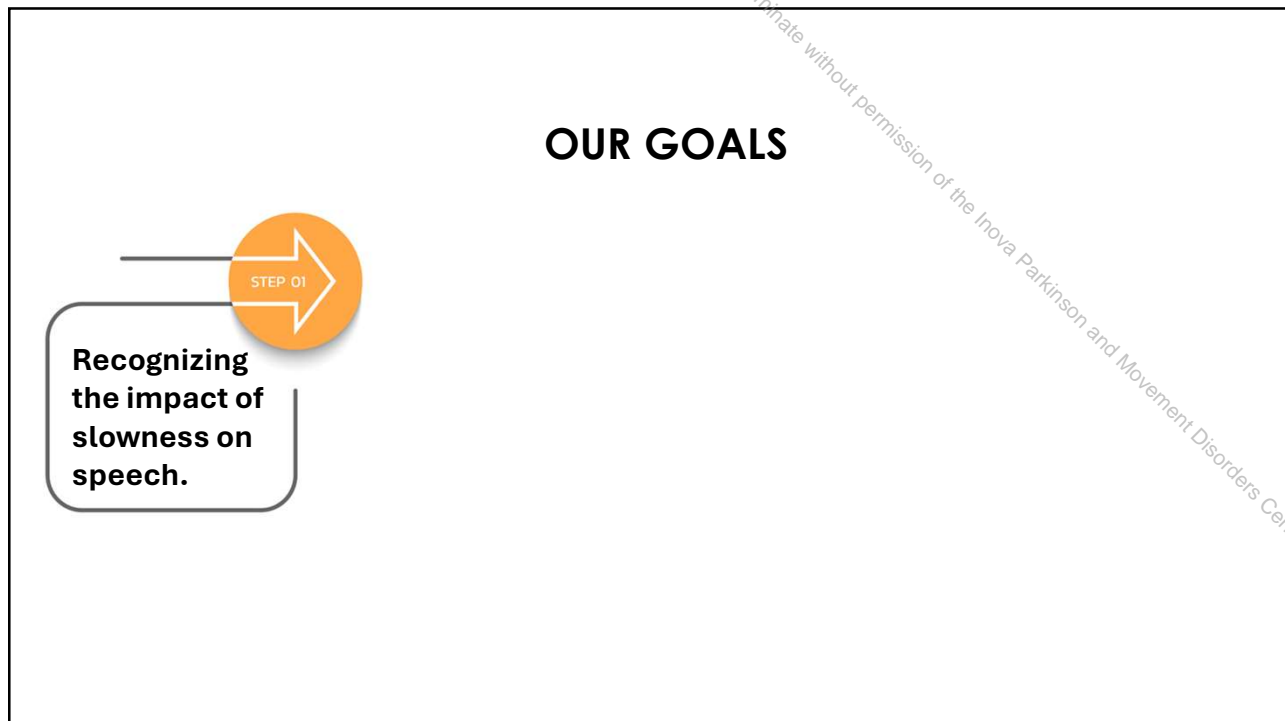
Bradykinesia

“brady”(slowness) + “kinesis”(movement)
One of the hallmark symptoms of PD

2



3



4

How does slowness* affect speech and communication?

Slower movement
+
Smaller movement = Quiet voice with reduced pitch changes

*Rigidity (i.e. “stiffness”) may also play a role

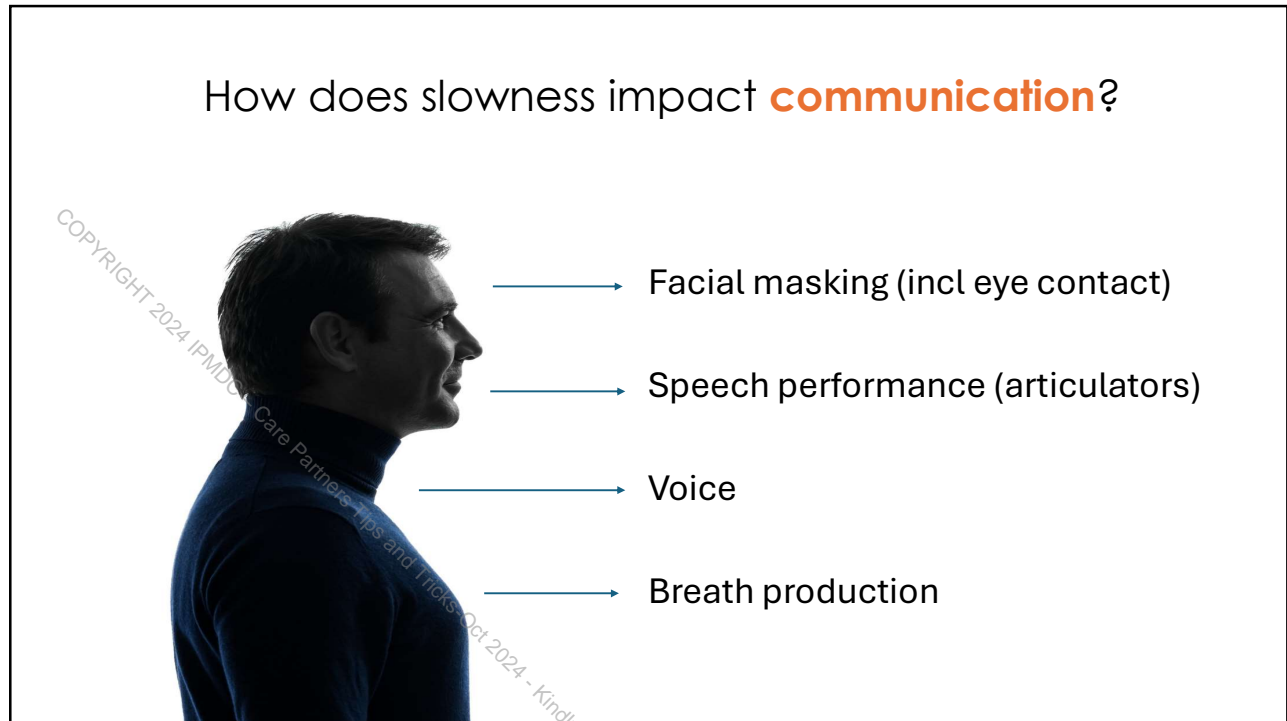
5

How does slowness* affect speech and communication?

Changes in “rhythm” and timing = Issues with prosody (i.e. the music of speech); possibly stuttering

6

How does slowness impact **communication**?

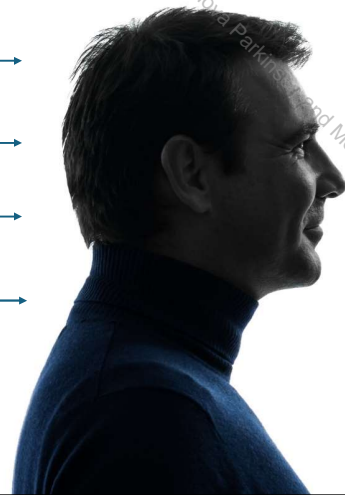


7

Slowness also impacts cognition & language

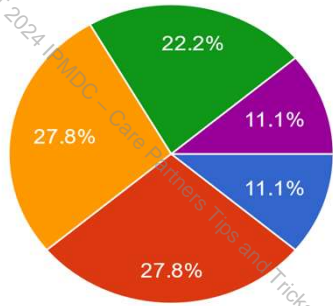
AKA – “bradyphrenia”

- Slowness of processing →
- Difficulty task switching →
- Issues with maintaining focus →
- Impaired word finding →



8

How has Parkinson's affected your or your loved one's SPEECH?

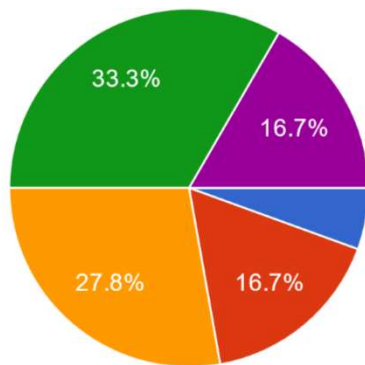


- I have no speech problems.
- I've noticed some loss of modulation, diction, or volume, but all my words are still easy to understand.
- I've experienced some loss of modulation, diction, or volume, with a few unclear words, but overall my sentences are still easy to follow.
- My speech is difficult to understand, and some, but not most, of my sentences are poorly understood.
- Most of my speech is difficult to understand or unintelligible.

Results from patient questionnaires – 20 responses

9

How often do you feel that you, or a loved one's speech has slowed down when talking to others?



- Never
- Rarely
- Sometimes
- Often
- Always

Results from patient questionnaires – 20 responses

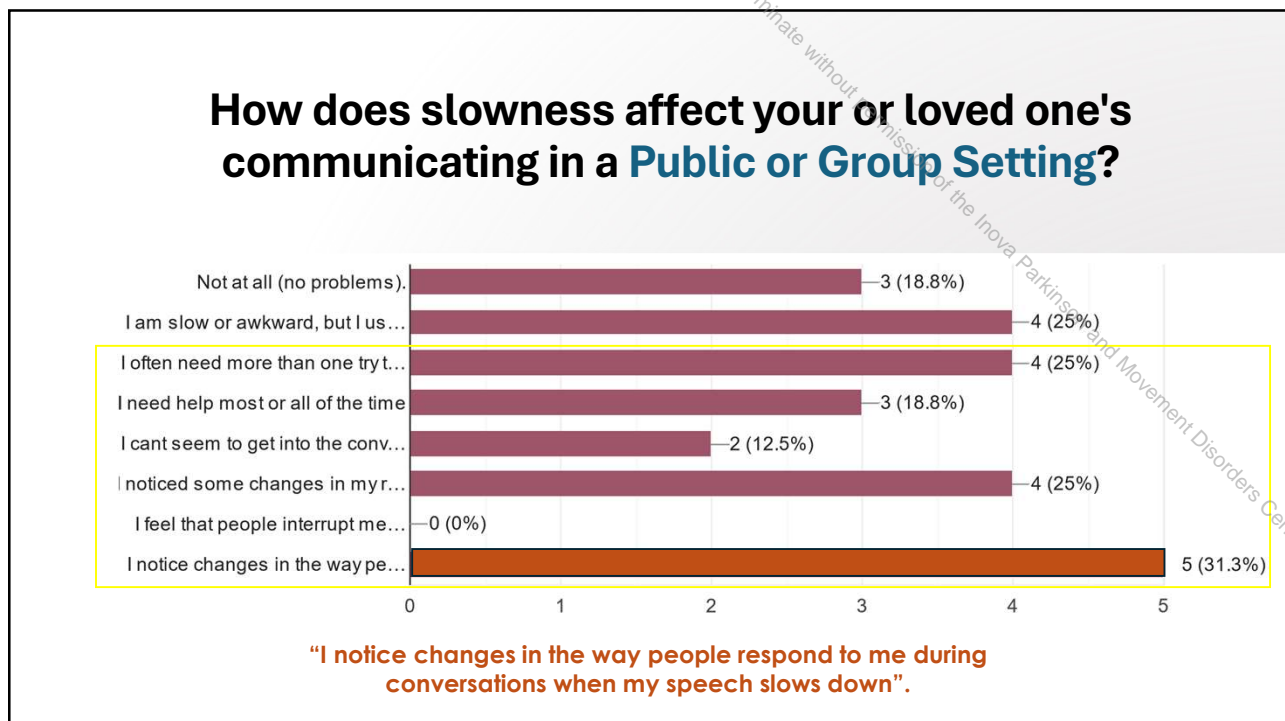
10

How has slowness affected communication with spouse, a loved one or close friends?

- Frustrating
- I have to guess what he is trying to say.
- Makes it harder
- Terrible
- Keeps quiet
- Very hard to understand.
- Its so hard to keep asking his to repeat himself because I was unable to understand him.
- I pause and think before I speak.
- Lots of repeating things and, from time to time, raised voices.
- They have learned to be patient with me

Results from patient questionnaires

11



12

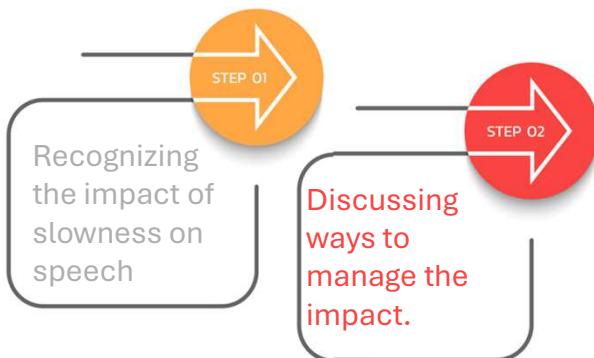
Do you find yourself avoiding certain social situations because you or your loved one is worried about your speech being slow?

- Yes
- Yes
- Yes. He does not want to be in groups.
- Sometimes
- Uncomfortable socially
- Doesn't initiate conversations at all.
- We cannot socialize because of the speech difficulties and volume.
- I used to enjoy meeting girlfriends for lunch. Now I avoid that because it is stressful for me. Sometimes I wonder who will still be my friends in the future.

Results from patient questionnaires

13

Managing Communication Issues




14



Rehab interventions (i.e. speech therapy) should be your first approach

- Can improve many aspects of communication, including speed
- Don't neglect "maintenance" activities such as regular follow-ups as well as attending classes

15

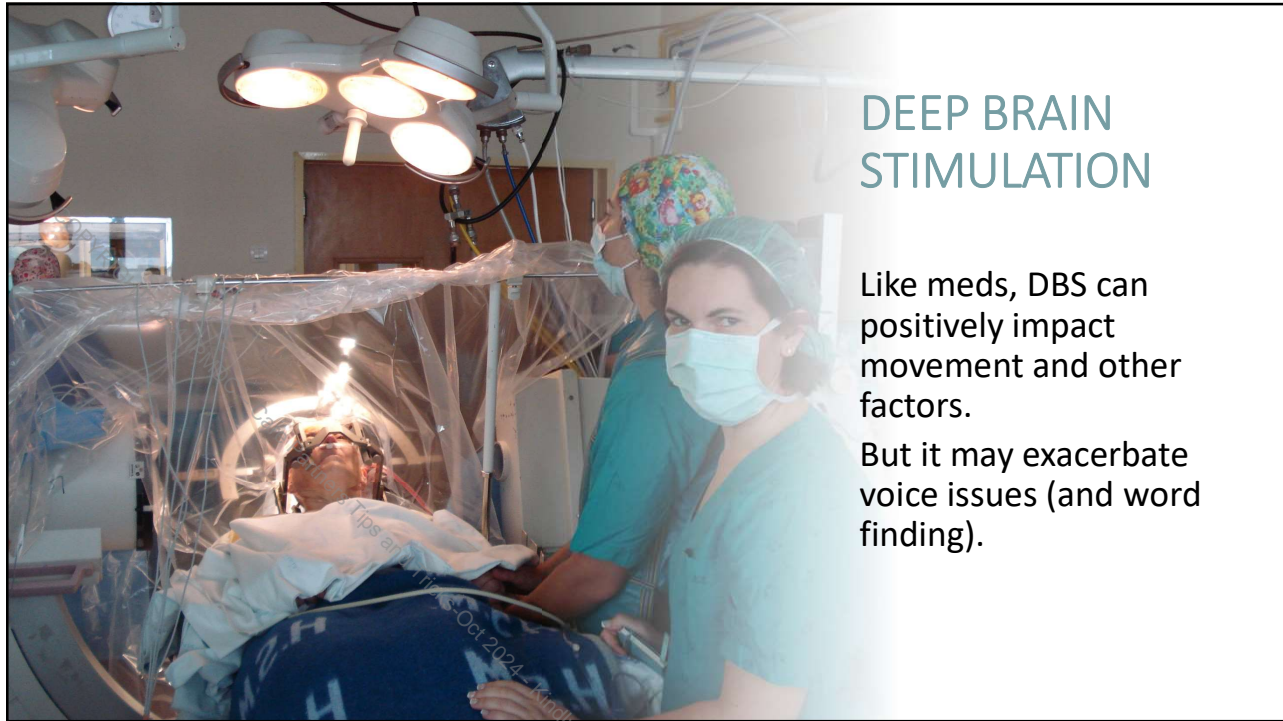


Medications may improve certain aspects

- Speed
- Articulation
- Volume?
- Intelligibility

But the **overall impact** is questionable

16



DEEP BRAIN STIMULATION

Like meds, DBS can positively impact movement and other factors.

But it may exacerbate voice issues (and word finding).

17

Be on the lookout for triggers



- **Food(s)** that interfere with medication absorption
- Sources of **stress**, including sleep difficulties as well as the presence of depression or anxiety
- Other factors such as **fatigue**

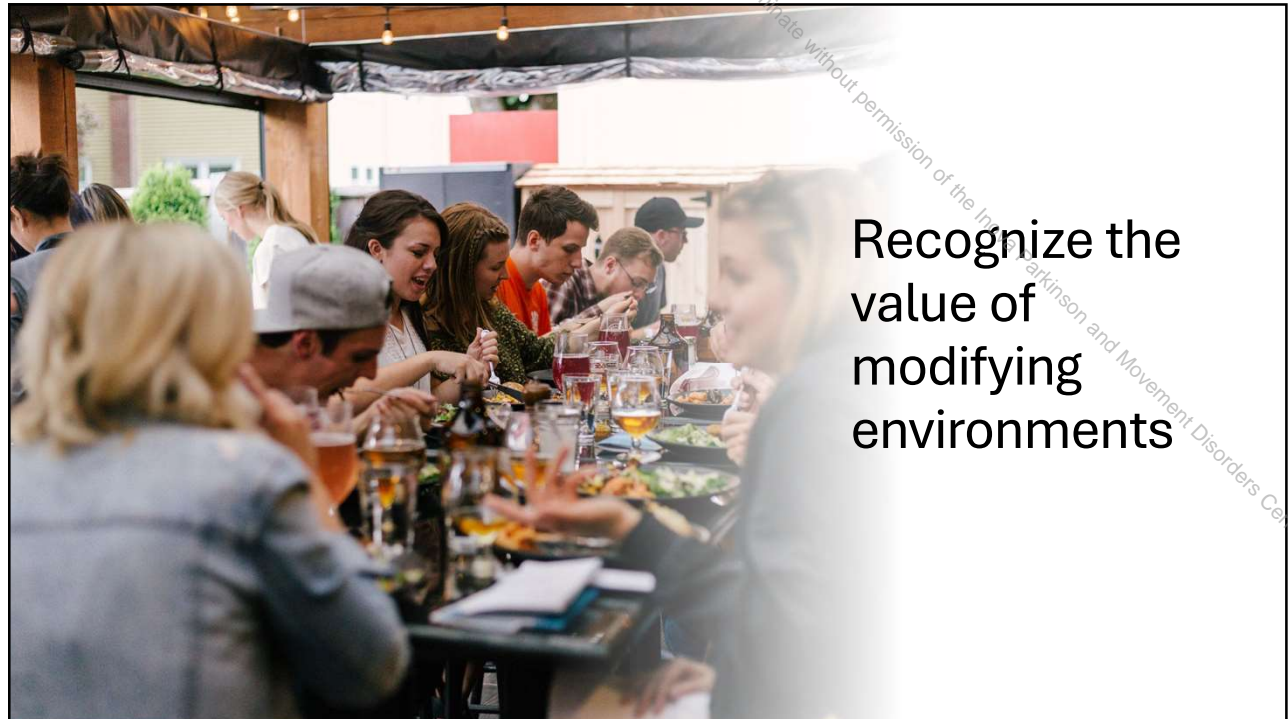
18

Are there any specific patterns or triggers that seem to make you unexpectedly become slower while you are talking with someone?


- Stress
- Tired. Meds wear off.
- Fadiga (Fatigue)
- Fatigue
- Can't determine for sure. It used to be in the evening but it has progressed to all the time.
- Stress, From not wanting my kids to worry.
- Poor diction always present.
- Forgetting to take a breath before speaking.
- Fatigue and speaking in English not his primary language. French is primary.
- Definitely fatigue and stress
- Fatigue
- Fatigue and stress
- Lack of good sleep, I seem to do better in the mornings (if my sleep was good) and late afternoon-evenings. I more easily run out of steam in mid-day.

Results from patient questionnaires

19




20



Reducing distractions & triggers

- **Noisy environments**
 - Background music
 - Noisy conversations
- **Don't neglect visual noise**
 - Activity in the background
 - Facing bright light sources
- **Shorten time at the table**

21



Don't ignore the impact of hearing loss & vision difficulties on swallowing.

Impaired hearing and vision can affect one's ability to perceive and respond to environmental cues, leading to potential safety risks during eating and swallowing.

22

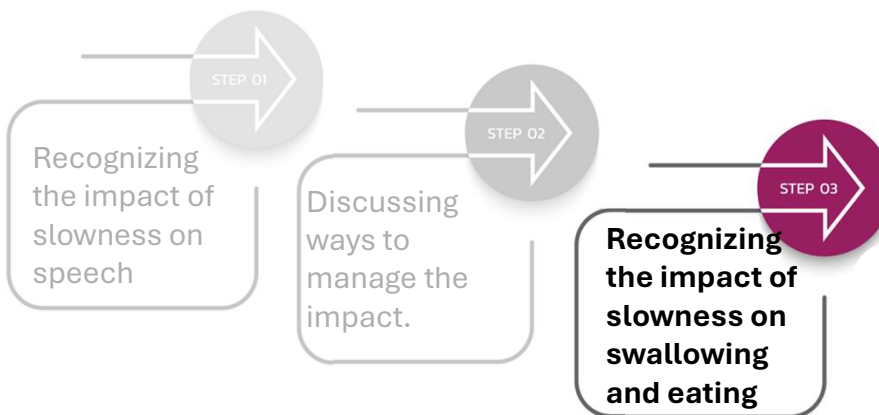
How do you or your loved one feel others can best support a person with PD in conversations when their speech is slow?

- Be **patient**
- Being **patient**.
- **Patience, patience, patience**
- Be **patient**
- Be **patient**. Let me ramble and avoid finishing my sentence.
- With **patience**
- To be **patient** or **repeat a question** giving time to think and catch the beginning of the sentence.
- Understand that I need more time to respond occasionally.
- Articulate
- He does not think there is anything wrong. Once in a while, he will say, "That didn't come out right. Forget it."

Results from patient questionnaires

23

Identifying the impact of slowness on mealtimes



24

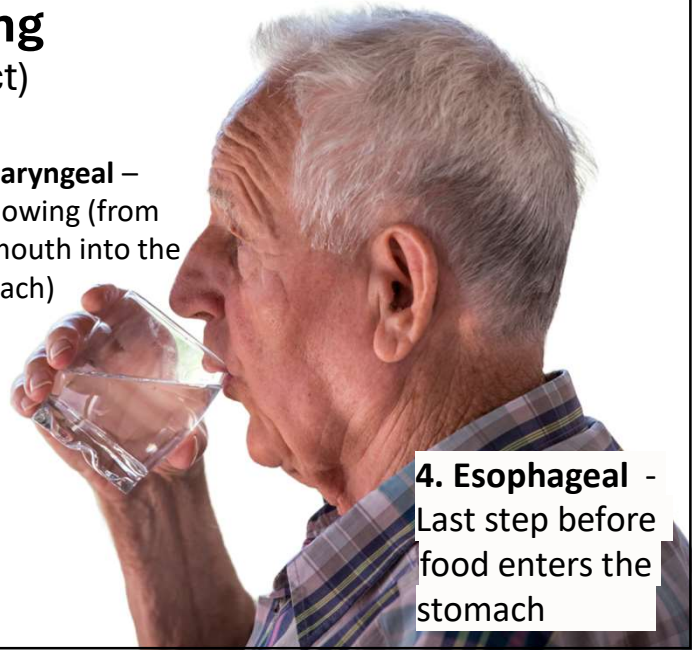
4 Phases of swallowing (and how slowness can impact)

1. Pre-oral –
From the plate
into the mouth

2. Oral –
Chewing and
preparing to
swallow

3. Pharyngeal –
Swallowing (from
the mouth into the
stomach)

4. Esophageal -
Last step before
food enters the
stomach



25

How does slowness impact **swallowing**?



Chewing food and preparing it for swallowing

Airway protection

Cough production

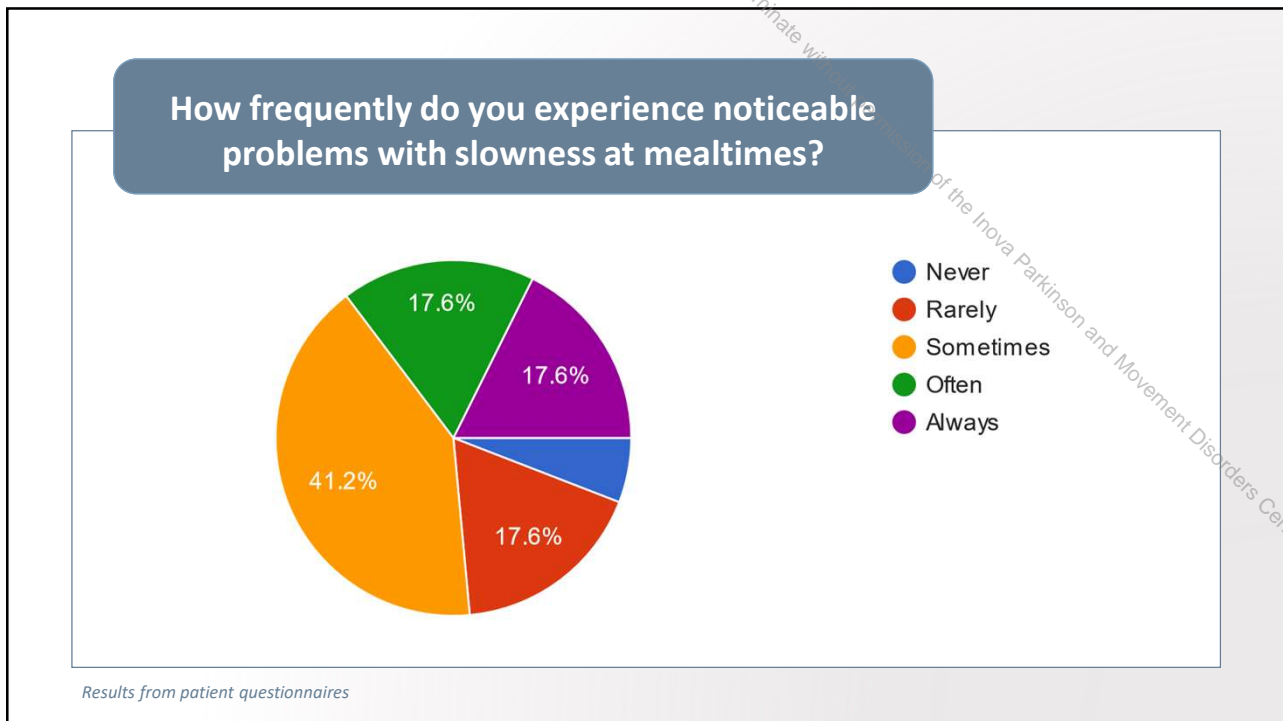
Gastrointestinal issues

26

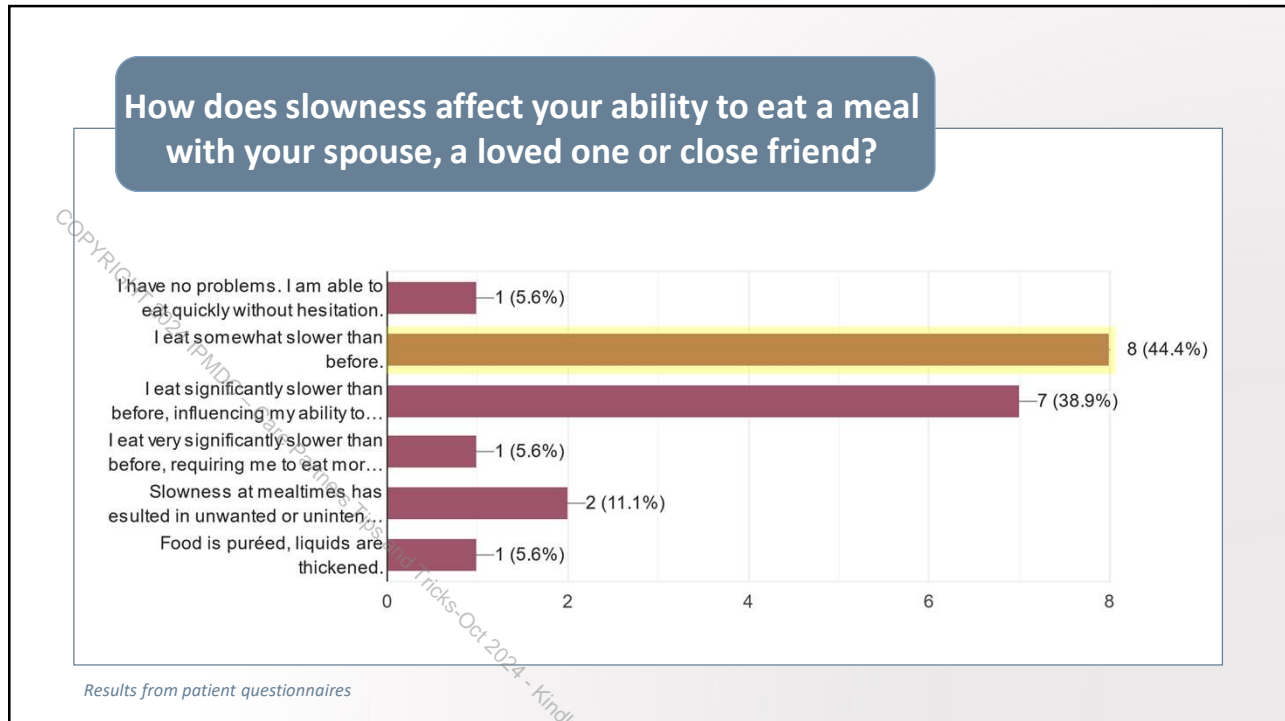
Indicators of a swallowing problem

<div style="background-color: #FFD700; padding: 5px; border: 1px solid black; display: inline-block;">Drooling</div>		<ul style="list-style-type: none"> • Associated with a higher risk of swallowing issues
<div style="background-color: #008000; padding: 5px; border: 1px solid black; display: inline-block;">Weight loss</div>		<ul style="list-style-type: none"> • Could be an indication of difficulties at mealtimes
<div style="background-color: #8B4513; padding: 5px; border: 1px solid black; display: inline-block;">Extended Mealtimes</div>		<ul style="list-style-type: none"> • Also signals mealtime issue, esp. with fatigue
<div style="background-color: #DC143C; padding: 5px; border: 1px solid black; display: inline-block;">Coughing</div>		<ul style="list-style-type: none"> • Your body's protective/early warning system at work
<div style="background-color: #005683; padding: 5px; border: 1px solid black; display: inline-block;">Unexplained fever</div>		<ul style="list-style-type: none"> • Could be the result of "aspiration" pneumonia

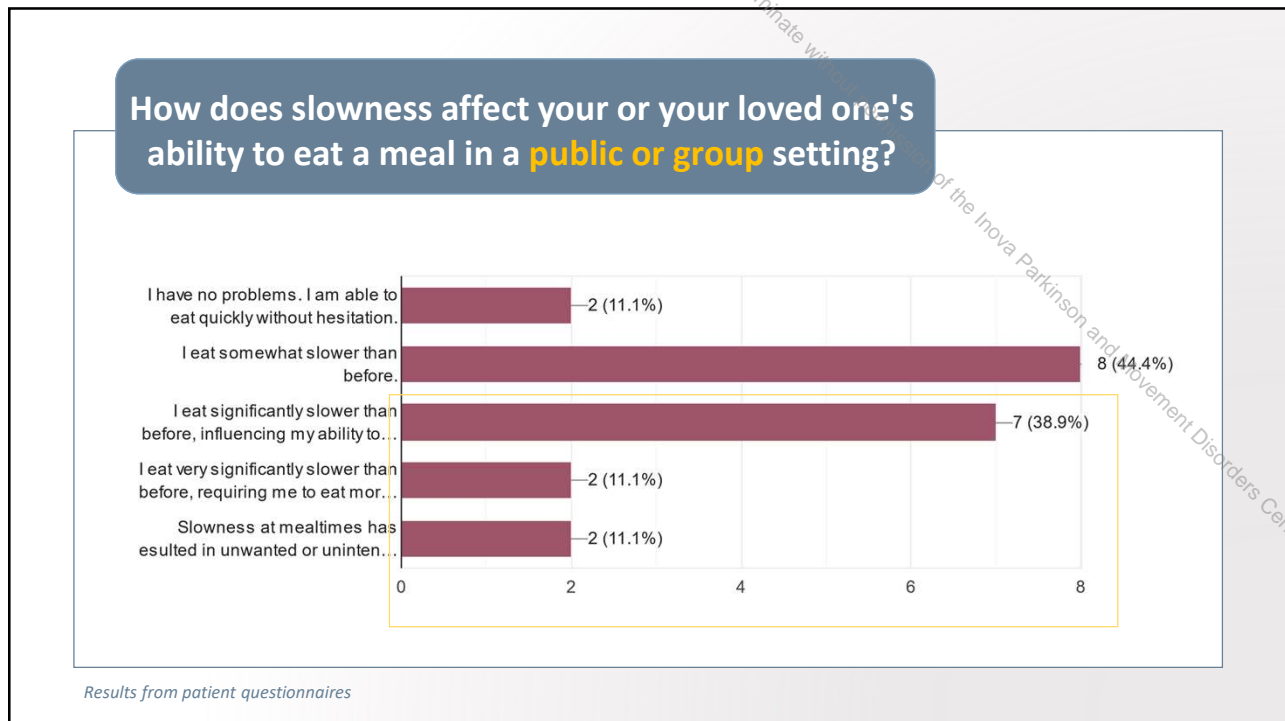
27



28



29




30

Do you find yourself **avoiding certain social** situations because of concerns about your swallowing?

- Avoiding social interaction
- Saliva dripping
- Eats in a group setting, but coughing does occur.
- Yes. Does not want to be in social events and dinners
- I frequently swallow poorly and have to cough a lot. I then have to reassure folks that I will be okay.

Results from patient questionnaires

31

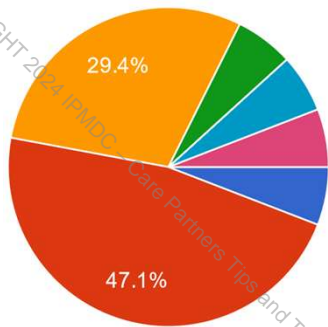


Mealtimes difficulties often extend beyond swallowing

E.g. handling your food and using eating utensils

32

How has slowness affected handling your food and using eating utensils?

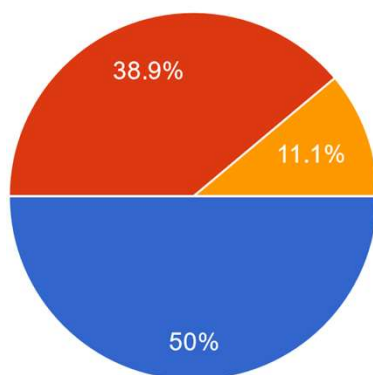


- Not at all (no problems).
- I am slow, but I do not need any help handling my food and have not had food spills while eating.
- I am slow with my eating and have occasional food spills. I may need help with a few tasks such as cutting meat.
- I need help with many eating tasks but can manage some alone.
- I need help for most or all eating tasks
- Hands are retracted, requiring help with...
- Will use spoon instead of fork

Results from patient questionnaires

33

How has slowness affected your ability to take your medications?

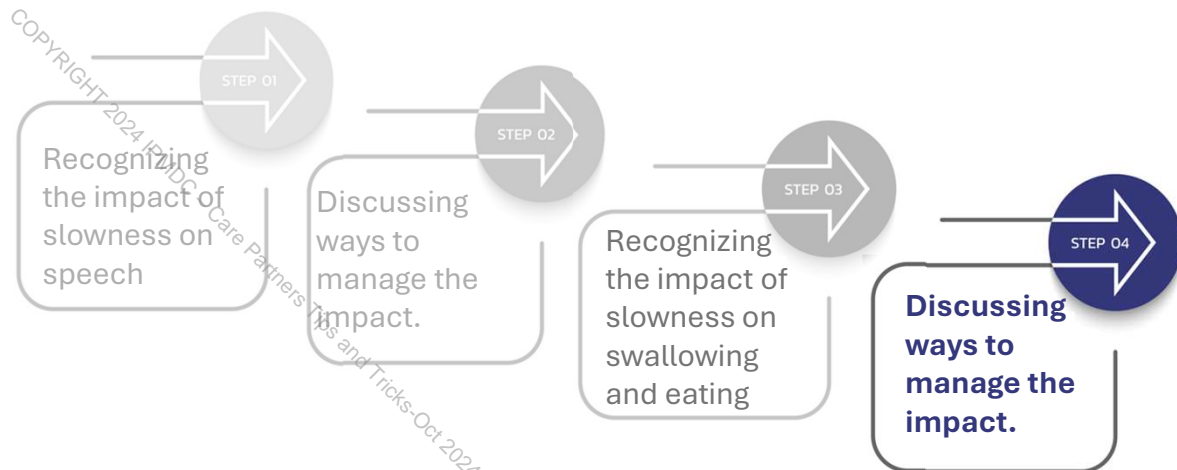


- I have no problems. I am able to take my medications without issue
- I need to pay special attention when taking my medications.
- I require adaptive techniques, such as crushing my pills, to take my medications.
- I have modified my medication routine such as changing to a patch or pump or even Deep Brain Stimulation (DBS) to...

Results from patient questionnaires

34

Addressing the impact of slowness on mealtimes



35

Again, **speech therapy** is a good first step...

- Identify areas of deficit
- Strengthen musculature
- Develop compensations for deficits



36



Managing the triggers

37

Are there any specific patterns or triggers that seem to make you unexpectedly become slower while you eat?

- Conversation
- Tired, meds wear off.
- Fatigue (Fadiga)
- Fatigue
- He doesn't do much anymore so not fatigue from moving.
- My grown children worrying about me.
- Refusal to eat can come at any time. Some inability to control tongue
- Coughing when eating
- Fatigue and stress
- Fatigue and talking the first thing in the morning or when waking up during the night.
- Fatigue, stress

Results from patient questionnaires

38

Difficult to cut = difficult to chew



AVOID

- Intact, heavy meats – steak, pork chop, prime rib
- Other items that are difficult to chew – raw vegetables
- Stringy or fibrous vegetables- asparagus, celery
- “Scatter consistencies” – rice, popcorn, nuts
- Dry foods – bread, dry cuts of meat

39



Consider these alternatives instead...

- Softer cuts of meat (fish, meatloaf, some poultry)
- Softer hors d'oeuvre options – olives, lightly steamed vegetables
- Incorporating moisture with gravy, sauces and condiments
- Pureed items (soup, squash, pumpkin pie)
- Substitute problematic items such as rice with mashed potatoes or serve with sauces for cohesiveness

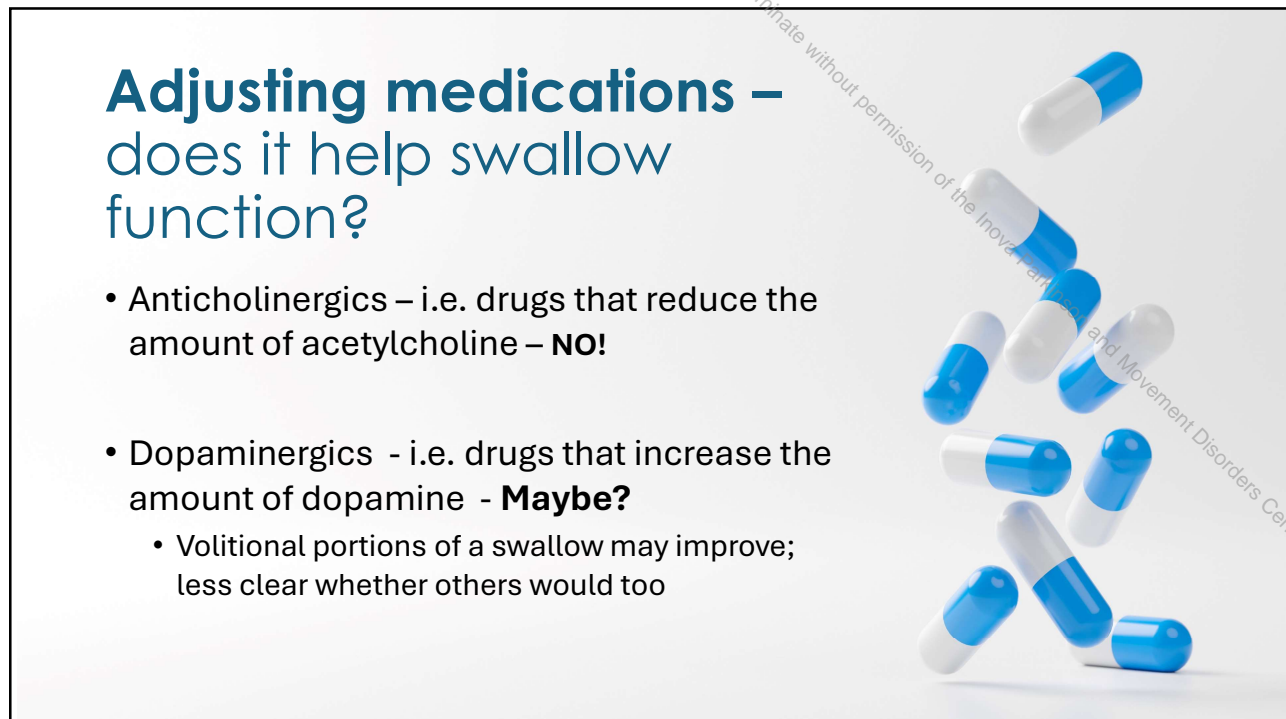
40



“Finger Foods”

- | ¼ cut sandwiches
- | Pieces of cheese
- | Pieces of fruit
- | Olives
- | Chips & dip
- | Vegetables & dip

41



Adjusting medications – does it help swallow function?

- Anticholinergics – i.e. drugs that reduce the amount of acetylcholine – **NO!**
- Dopaminergics - i.e. drugs that increase the amount of dopamine - **Maybe?**
 - Volitional portions of a swallow may improve;
less clear whether others would too

42

DBS also has mixed results

Just like medications, it's possible that the DBS may improve some volitional portions of the swallow but not necessarily the involuntary elements.

However, there are some reported side effects of DBS stimulation include dysarthria, increased drooling and dysphagia.

Trail, 2008



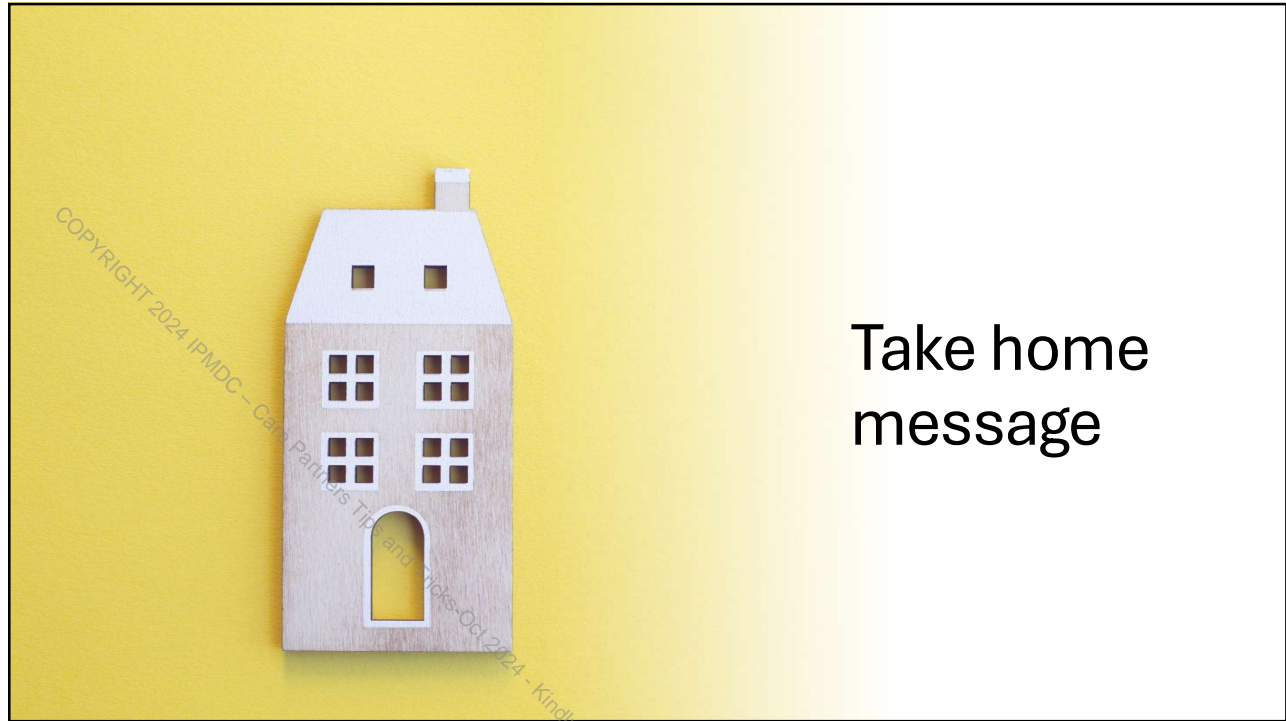
43

Have you developed any strategies or techniques to help manage slowness during meals?

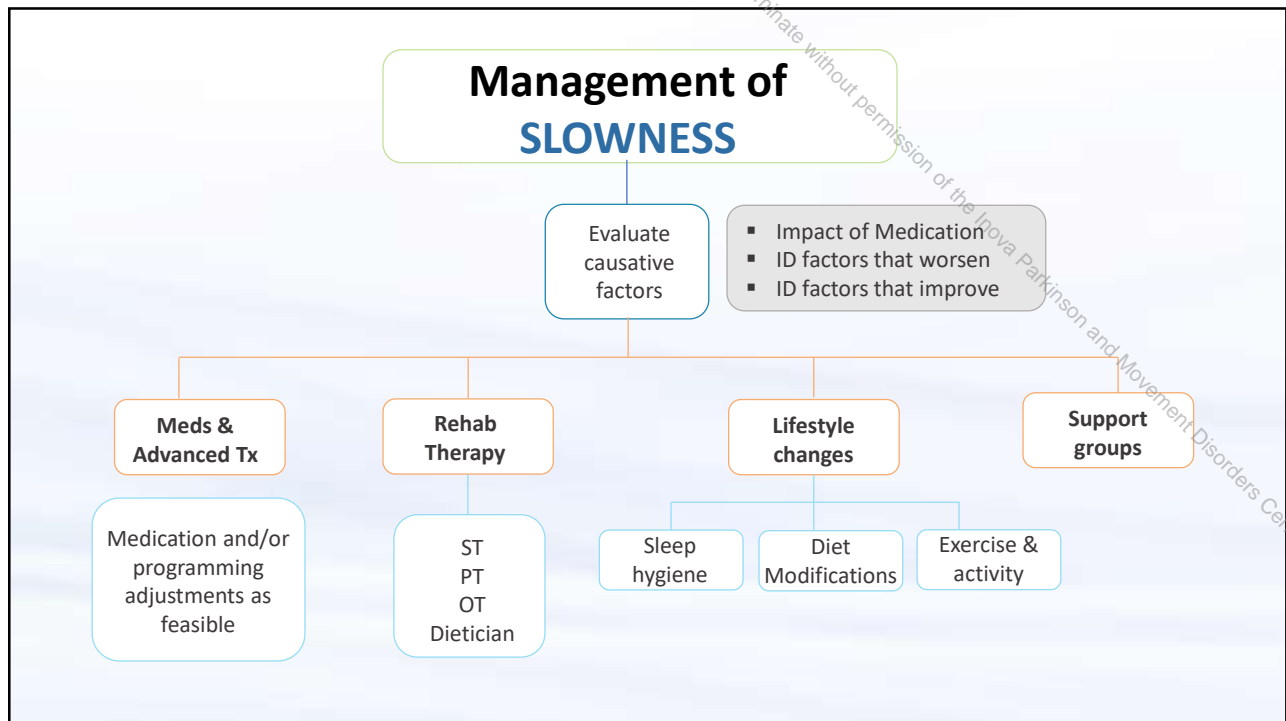
- I choose food that doesn't require as much effort, like hamburger instead of steak.
- Just do one thing at a time
- Being patient
- Be patient with me!
- Swallowing capsules
- Does speech therapy help with slowness?
- Do you recommend that we purchase LifeVac Home Kit ?

Results from patient questionnaires

44



45



46



47