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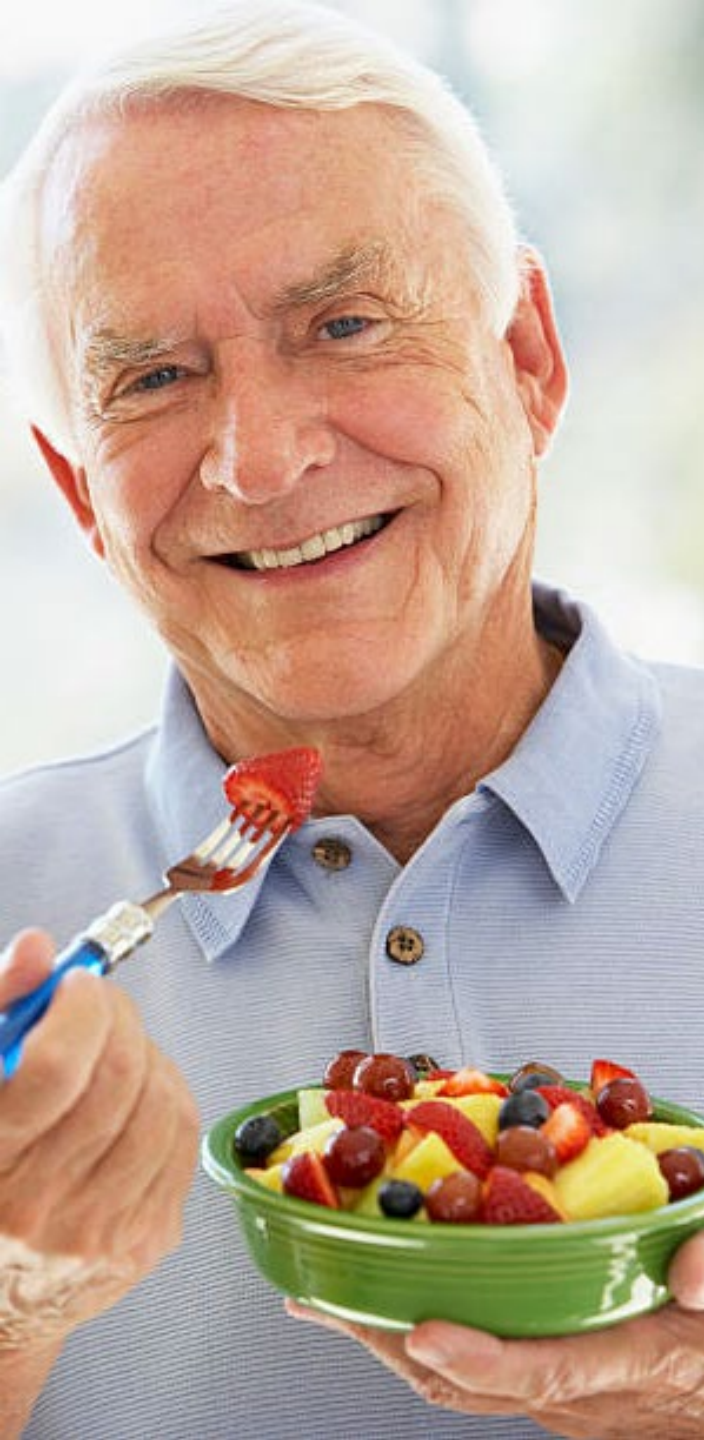
WEXNER MEDICAL CENTER

UNDERSTANDING THE DISEASE SYMPOSIUM
Saturday, April 30, 2022

Adaptive Eating

Enjoying meals with Parkinson's Disease

Presenter: Christine Perko Kennedy, OT
OSU Assistive Technology Center



Outline

What is the need for adaptive eating equipment?

Eating challenges with Parkinson's Disease

Equipment options and strategies

Adaptive equipment from utensils to robots

Evidence behind the equipment

Recent research supporting equipment use

Resources for trialing adaptive eating equipment

Where to go to try them out



What is the need for adaptive eating equipment?

Eating challenges with Parkinson's Disease

Symptoms of PD can be widespread across the body and mind

Adaptive Equipment can be useful when the ***symptoms affect function***

Strategies can be useful when ***function affects lifestyle***

What is the need for adaptive eating equipment?

Mealtime Challenges with PD:

- Tremor
- Rigidity
- Difficulty with coordination
- Difficulty swallowing
- Changes in sense of smell

*All of these can increase **risk of malnutrition***



Risk Factors for Malnutrition



- Decreased appetite related to depression, constipation, nausea, apathy, medication side effects
- Tremor or dyskinesia (difficulty moving) can increase calorie requirements and make meals difficult to eat
- Dysphagia (difficulty swallowing) usually leads to decreased food intake

Reference: <http://home-care-plus.com/2016/08/making-nutrition-a-priority-for-your-aging-loved-one/>

Prevalence of Malnutrition

Up to **24%**
Experience
Malnutrition

Up to **60%**
At Risk of
Malnutrition

- We don't really know how many people with PD experience malnutrition
 - *The younger and more active you are, the better your nutritional status*
- Weight loss combined with malnutrition can contribute to worse dyskinesia, cognitive decline, and orthostatic hypotension
 - *This makes it hard to figure out how much disability and mortality arise from symptoms vs malnutrition*
- **One thing we do know:** Improved nutritional status is related to improved quality of life in PD!

Strategies for Symptom Management

Energy Conservation

- Decreased energy and fatigue affect more than just meal times
- Adaptive equipment can help conserve energy
- Can improve safety, independence, and energy for highest possible participation in meaningful life activities
- Talk to your OT if you have more questions about how to plan a routine that works for you

Ways to conserve energy:

- 1) Schedule your day:
 - a. Plan out scheduled rest breaks
 - b. Plan your daily activities around important daily activities
 - i. Ex- if you have a long day filled with doctors' appointments, sit down during dressing and bathing in the morning to save your energy
- 2) Sit when able:
 - a. Sit to groom
 - b. Sit to dress
 - c. Sit to bathe
 - d. Sit to complete simple meal preparation
- 3) Use adaptive equipment:
 - a. Reachers to grab items too low or too high
 - b. Kitchen carts to decrease the amount you have to carry
 - c. Dressing aides: Button hooks, sock aids, elastic shoe laces and dressing sticks
 - d. Bathing: Long-handled sponge, shower chair and hand held shower head
 - e. Household work: use long-handled cleaning supplies (such as Swiffers or dust brushes)
- 4) Ask for help and divide up household responsibilities to others that can help



Equipment Options

Adaptive equipment from utensils to robots

- Most adaptive feeding equipment is not available to be funded by medical insurance, but there are many options available for self purchase
- Equipment can be trialed with occupational therapy to help you make the best decision for you



Plate Guards

Can be removed for easy washing or easy install to plates at restaurants
Stops food from sliding or popping off the plate



Scooper Bowl and Plates

Integrated design can be less clumsy
Easy to clean
Suction cup base assists from tipping over



Weighted Utensil with Built-up Handle

Assists with low grip strength AND tremor
Best for use when more motor function is impacted



Weighted Utensil with Standard Handle

Assists with tremor but requires normal grip strength
Looks like any standard utensils

Adaptive Utensils

Low-tech options for tremor

Poll Question

Swivel Spoon

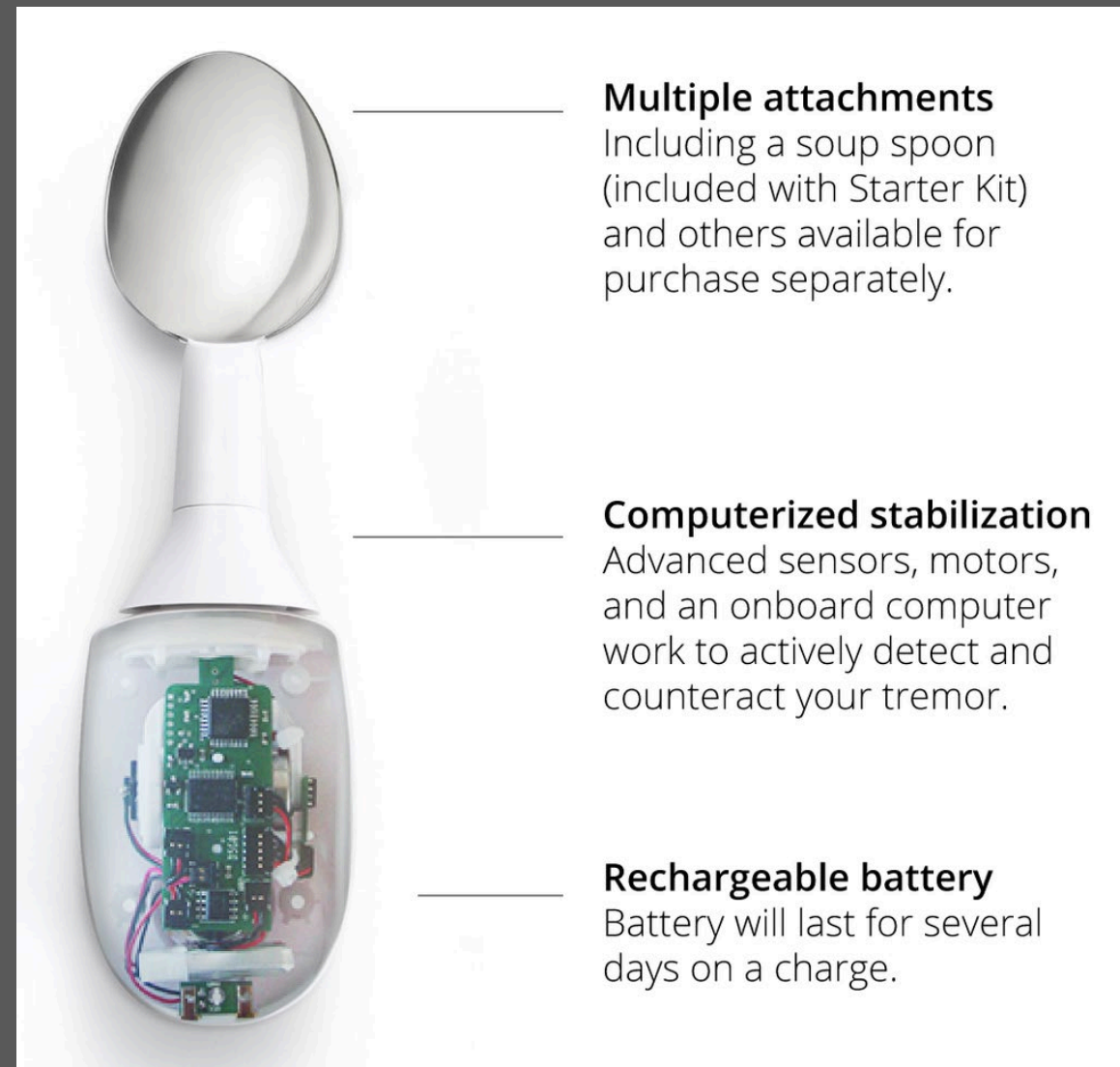
A Mod-Tech Option



- Swivel mechanism keeps utensil level
- Helps compensate for restricted or uncontrolled wrist movement
- Do not have to pronate or supinate hand during travel from plate to mouth
- Can be purchased with standard or built-up handle

Lifeware Steady

A High-Tech Option



Multiple attachments

Including a soup spoon (included with Starter Kit) and others available for purchase separately.

Computerized stabilization

Advanced sensors, motors, and an onboard computer work to actively detect and counteract your tremor.

Rechargeable battery

Battery will last for several days on a charge.

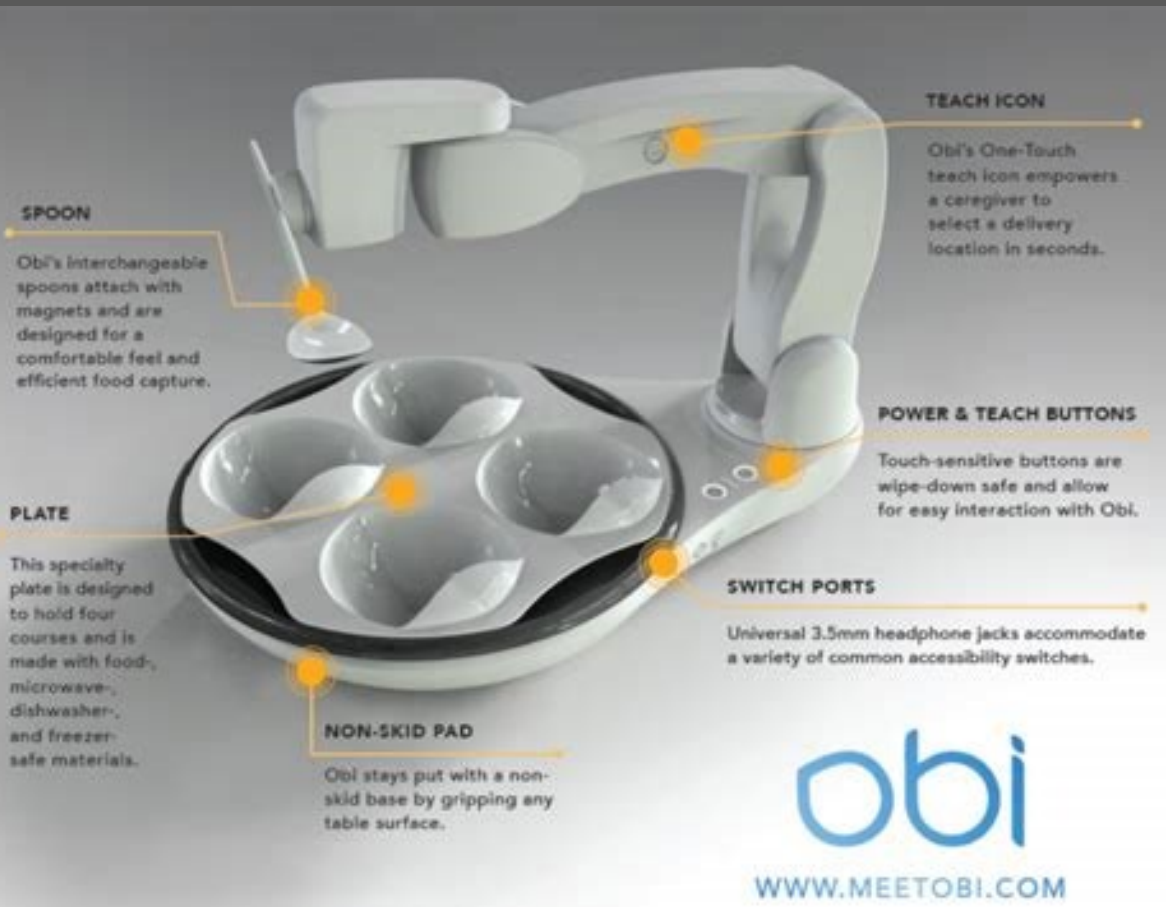
Liftware Steady

A High-Tech Option



Obi Self Feeder Robot

A High-Tech Option



- Easy to set up and use – “learns” how you eat and where you position your body
- All the user has to do is select which bowl to eat from and open their mouth – **Obi** does the rest!
- Best for users with more movement problems, especially those who are currently totally dependent on someone else for feeding
- May be funded by state-funded insurance

Obi Self Feeder Robot

A High-Tech Option



Adaptive Equipment

Even more options may exist for you!



- There's no such thing as a be-all, end-all device!
- What works well for one person may not work for everyone
- Always try before you buy
- Work with your occupational therapist for a full assessment



Evidence and Support for Adaptive Utensils

Research on equipment use

- If you are curious about the latest research for adaptive equipment, visit your therapists!
- Evidence for benefits of equipment can help drive better funding options

Adapted Feeding Utensils for People With Parkinson's-Related or Essential Tremor

Sabari, Joyce; Stefanov, Dimitre G.; Chan, Judy; Goed, Lorraine; Starr, Joyce [Author Information](#)

Abstract

OBJECTIVE. Our objective was to evaluate the effectiveness of four adapted feeding utensils with participants with essential tremor (ET) or tremor related to Parkinson's disease (PD).

METHOD. Participants performed a simulated feeding task under five conditions: (1) standard spoon (control condition), (2) weighted spoon with standard handle, (3) weighted spoon with built-up handle, (4) swivel spoon, and (5) Liftware Steady™ spoon, a product using active tremor cancellation technology. Participants rated each adapted utensil in comparison with the standard spoon regarding performance, ease of use, speed, neatness, and aesthetics.

RESULTS. Participants preferred the Liftware Steady spoon and weighted spoon with standard handle. Friedman's test did not reveal statistically significant differences in ratings between the two preferred utensils.

CONCLUSION. Participants had varied reactions to the different adaptive utensils and gave different reasons for preferences. These findings support the need for people with tremor related to ET or PD to have access to trial use of all four devices assessed in this study.

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Resources for Trialing Adaptive Equipment

Where to go to try them out



Seek

Seek a referral for **Occupational Therapy** from your MD

Trial

Trial adaptive feeding equipment at **The OSU Assistive Technology Center**

Borrow

Borrow equipment and devices from **Assistive Technology of Ohio**

Consult

Consult online forums on the **American Parkinson Disease Association (APDA)**

Visitor policy update: As of April 5, our standard visitor policy is in effect. Masks must be worn at all our health care locations. [View visitor policy](#)

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Outpatient Rehabilitation Assistive Technology at Ohio State's Wexner Medical Center provides customized assistance for people with physical, cognitive or sensory disabilities. Our goal is to help each person regain function and achieve a higher level of independence at home, work, school and play through the improved use of technologies.

We specialize in helping people use these assistive devices, which are customized to meet each individual's needs:

- Wheelchairs
- Scooters
- Specialized computer equipment
- Communication devices
- Vehicles with modifications



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About AT Ohio

Refurbishing Update

Computer Refurbishing COVID Update: The pick-up option of \$30 is currently suspended until COVID is over. All computers will be shipped and cost \$60 until further notice.

Library Update

Device Lending Library COVID Update: In-person pick-up and return option is now open on Mondays, Tuesdays, Wednesdays and Thursdays from 9:30 a.m.-3:30 p.m., and Fridays by appointment.

We are back on campus Monday-Friday, 9:00 a.m.-4:00 p.m. (The building is locked at 4:30 p.m.) We are not open on weekends.

We are not yet working on computers, but hope to have that up and running very soon.

We are open to visitors and for device demonstrations by appointment. If you wish to visit us for a device demonstration, please call 800-784-3425 or 614-292-2390 or email atohio@osu.edu to make an appointment.

Virtual Office Hours

With schools back in session and disability professionals returning to the workplace, we are still available for virtual consultations for disability professionals across the state via Zoom.

To schedule a virtual consultation, please email us at atohio@osu.edu, or call us at 1-800-784-3425.

WHERE TO FIND US

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ASSISTIVE TECHNOLOGY VIDEOS

[Ohio DD Talks, Season 2 Episode 2](#)

[Assistive Technology and Everyday Life](#)

In April 2021, [Governor Mike DeWine](#) declared April 14 as Assistive Technology Awareness Day! In the spirit of AT, Ohio DD Talks welcomed William Darling from [Assistive Technology of Ohio](#) who discussed the benefits of [assistive technology](#) & how it supports people with disabilities in their everyday life!

And, in case you missed it, welcome Nathan Turner as Ohio DD Talks' new co-host!

References

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Ma, K., Xiong, N., Shen, Y., Han, C., Liu, L., Zhang, G., ... & Wang, T. (2018). Weight loss and malnutrition in patients with Parkinson's disease: current knowledge and future prospects. *Frontiers in aging neuroscience*, 10, 1.

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<https://parkinsonsassociation.org/eating-with-parkinsons/>

[Energy Conservation for Parkinson's patients » Movement Disorders & Neurorestoration Program NORMAN FIXEL INSTITUTE for NEUROLOGICAL DISEASES » UF Health » University of Florida](#)

Thank you!

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Ask your doctor, PT, OT, or SLP for a referral to the OSUWMC Smart Clinic!

Getting Started Is Simple

- Ask your physician for a referral to Occupational Therapy/ATP for “EADL Assessment” through the Ohio State Wexner Medical Center’s Assistive Technology Center Smart Clinic. This referral should be completed and faxed to **614-293-9002** by your physician. Referral must include all diagnoses, demographics, insurance card and most recent office notes.

We are located in the Assistive Technology Center on the 3rd floor of Martha Morehouse.

