



# Parkinson's Perspective

Newsletter of the Colorado Springs Parkinson's Support Group  
Colorado Parkinson Foundation, Inc.  
www.co-parkinson.org | (719) 884-0103

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**Vice President:** Jill Reid

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Carole Henrichsen, Steve Locke,  
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Mary Sauvain, Rich Sauvain

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**Membership:** Carole Henrichsen

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Bill Hicks [redacted] or  
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Dr. Brian Grabert, MD

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**Sunshine (Cards):** Sharon Carlson  
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The Colorado Springs  
Parkinson's Support Group  
(part of CPF) meets the second  
Saturday of each month at 10AM  
First United Methodist Church  
(with exceptions to be noted  
in this newsletter).

## May Meeting: Saturday, May 13th – 10:00 am – 1:30 pm

*We will NOT be Zooming OR recording this meeting*

**Location:** First United Methodist Church, 420 N Nevada Ave, downtown just south of St. Vrain.

9:30am – Come early for a group sing-along with music therapist, Heather Johnson.  
*See more about Heather's business under 'Other Opportunities' later in this newsletter.*

9:45am – Everyone else come a few minutes early to check in,  
greet other members and ask questions.

*First time visitors:* Be sure to sign in, get a name tag and proceed to the visitors'  
table for some special attention and information.

Knowledge is power and enables us all to live well, so plan to attend  
the meetings at First United Methodist Church.

## Program - Break-Out Sessions

**Moderators:** *Parkinsonians - Steve Locke*

*and for the caregivers - Jill Reid & Julie Pfarrer*

The Parkinsonians get together in one room and the caregivers in another to discuss  
their questions and concerns about their PD journey.

*The program will be followed by a potluck.*

## The May Potluck Main Dish – Pasta Dishes!

*Such as: Lasagna, spaghetti & Meatballs, ziti, etc.*

If you would like to sign up to be a provider of the main dish, a side dish or dessert for  
the May meeting, you can contact Bill Hicks at [redacted] or [potluck@co-parkinson.org](mailto:potluck@co-parkinson.org),  
no later than Wed. May 10th and tell him what you would like to bring.

Remember that bringing food for the potluck is voluntary.

**We look forward to seeing you there!**

## The President's Corner

| Jill Reid - Acting President, CPF & CSPSG



**BREAKING NEWS: We will meet at First United Methodist Church for the last  
time on the on May 13 and move to a new home in June.**

At last month's support group meeting, we found out that we have to start paying  
the salaries of the security person and the facilities person who man First United  
Methodist Church for us on our meeting days. In addition, the large kitchen at-  
tached to Fellowship Hall is now deemed by the state of Colorado to be a commer-  
cial kitchen that we can no longer use. While we normally make a generous dona-  
tion to the churches that host us, the new costs are more than three times what we  
have given in the past. We simply can't justify spending that kind of money. Conse-  
quently, the executive committee looked for a new home and quickly found one,  
thanks to Janet Adams - **the Fellowship Hall at Central United Methodist**

**Church** located at 4373 Galley Road, just east of Murray Blvd. Besides the afford-  
able cost, an ad-  
vantage to this change is that the Fellowship Hall is the first room you come to when you walk through  
the front door, making it a much shorter walk than we've had in recent times. There is a **second big  
change, though: we will have to meet on the first Saturday of each month**, rather than the second,  
since our new home is already fully booked on the second Saturday. Starting with our June meeting, we  
will meet in our new home and on a new Saturday: Central United Methodist Church at 10 am on the first  
Saturday of the month, June 3rd.

In last month's newsletter, I promised to tell you about the more expensive tools that can make a person  
with Parkinson's life much easier.

1) The most expensive of these tools are cars with built-in lane assist function. These cars automatically  
keep their drivers in the current lane and slow down to avoid hitting the car ahead. People with Parkin-  
son's tend to drift out of their lane without even realizing it and rush up on the car in front of them.

**The President's Corner** *(continued from cover)*

| Jill Reid - Acting President, CPF & CSPSG

Both are dangerous situations that are prevented by cars equipped with lane assist. They also help maintain independence for both the person with Parkinson's and his family caregiver! Surprisingly, cars in all price ranges come equipped with this life-saving feature, so you don't have to break the bank to acquire one.

2) Voice recognition software is particularly helpful for the person with Parkinson's who still has a strong, clear voice but who has tremors in his hands, making it difficult, if not impossible, to use a computer keyboard. The software enables the user to type an email and send it or create a document and save it without touching the keyboard.

3) Smart phones with motion compensation enable people who tremor to take clear photos again. The cost of these phones is a small price to pay for the resulting gratification and uplift in morale!

4) Theracycle forced exercise machine. Per the July 2009 Cleveland Clinic study entitled, "Forced, Not Voluntary, Exercise Improves Motor-

Function in Parkinson's Disease Patients," this tool eases the daily struggle with movement in people with Parkinson's. You sit, and it does all the work for you!

5) Lastly, tremor-compensating eating utensils enable people with tremors to keep food on the eating utensil without dumping back on the plate or worse. The single tool comes with interchangeable spoon and fork heads. Again, the cost is relatively small when compared to the embarrassment and frustration that occur when food goes flying across the room!

This month's comedy recommendation is *How to Steal a Million*, starring Audrey Hepburn and Peter O'Toole. This is one of my all-time favorite movies, a delightful, clean comedy full of great one-liners with romance, to boot! You'll never guess who wrote the musical score!

**IMPORTANT INFORMATION ON GETTING HELP AFTER A FALL!!!!**

DID YOU KNOW THAT IF YOUR LOVED ONE HAS A FALL AND YOU ARE UNABLE TO GET HIM OR HER UP, YOU CAN MAKE A NON-EMERGENCY CALL TO THE COLORADO SPRINGS FIRE DEPARTMENT'S "LIFT ASSIST" AT 719-444-7000 TO GET HELP - TWO FIREFIGHTERS WILL COME, MINUS SIRENS AND LIGHTS.

**A HELPFUL RECIPE TO ALLEVIATE CONSTIPATION!**

MIX TOGETHER 1 CUP OF APPLESAUCE, 1 CUP OF PRUNE JUICE AND 1 CUP OF FIBER SUCH AS BRAN AND DRINK 1/2 CUP WARM AT BEDTIME.

**THERACYCLE FOR SALE**

IN THE PRESIDENT'S CORNER THIS MONTH (#4), THE PRESIDENT MENTIONED THAT THERACYCLES ARE FORCED EXERCISE MACHINES THAT EASE THE STRUGGLE WITH MOVEMENT IN PEOPLE WITH PARKINSON'S. THE LEADER OF THE TRI-LAKES PARKINSON'S SUPPORT GROUP HAS ONE FOR SALE. THE PRICE OF A NEW THERACYCLE IS \$5,100 BUT BARRY IS ASKING \$2,550 AND HE WILL DELIVER IT TO YOUR HOUSE. IF YOU ARE INTERESTED, CONTACT HIM AT (719) 351-9485.

*Thank You!*

Thanks to ALL who brought food and to those that helped set up & cleanup at the last meeting!

**May Executive Committee Meeting**

May 16th at 11:00 a.m. at a place to be determined  
*(you will be notified by email)*

Contact Jill at [president@co-parkinson.org](mailto:president@co-parkinson.org) if you haven't been to an Executive Meeting so we will know that you're coming. Leave your email address so Jill can contact you if anything changes.

**June Newsletter Input Deadline: May 17th**

Call or e-mail Julie at:

[db\\_mgr@co-parkinson.org](mailto:db_mgr@co-parkinson.org)



Janet Adams  
Owen Briggs  
Pat Bush  
Sue Coen  
Anita Damon  
John Fly

Joan Foutz  
Carol Gugat  
Becky Helmsing  
Ross Huddleson  
Judy Ireland  
Don Jaeger

Donald Joiner  
Donna Malmgren  
Richard Marold  
Phil McDonald  
Carol Morris  
Jaros Murphy

Lu Ann Nickelson  
Caitlin O'Reilly  
Eileen O'Reilly  
Katrina Rochon  
Randy Rogers  
Meredith Sage

Sonya Shannon  
Beverly Wells  
Hope Winkler

Your birthday isn't listed? Fill out the membership form and check BD listed "YES".

**Recipe of the Month: Smoked Salmon Deviled Eggs**

Our low carb/good fat ketogenic study that was completed in 2021 showed incredible results. Not only was there remarkable improvement in the symptoms of Parkinson's but also with overall health in general (including the health of caregivers who chose to change their diet along with their Parkinsonian). Since it seems clear that everyone's health would improve exponentially if we all changed our diet to eat this way and since we have potlucks, we thought we would feature an easy low carb/good fat recipe or two in the newsletter each month to promote healthy eating.



*Ingredients*

- 8 extra large eggs
- 1/2 C sour cream
- 2 oz cream cheese, room temperature
- 2 Tbl mayonnaise
- 1 Tbl lemon juice
- 2 Tbl minced chives
- 4 oz smoked salmon, minced
- 1 tsp (or less) kosher salt
- 1/2 tsp pepper
- 2 oz salmon roe (optional)

1. Hard boil the eggs & cool. Peel eggs & slice in half lengthwise. Remove yolks & place in bowl of electric mixer fitted with paddle.
2. Add sour cream, cream cheese, mayo, lemon juice, chives, salmon, salt & pepper. Beat on medium speed until fluffy.
3. With small spoon, fill egg whites with yolk mixture.
4. Cover loosely with plastic wrap & refrigerate for 30 minutes for flavors to blend.
5. Garnish with salmon roe & chopped chives. Sprinkle with salt & pepper and serve.

**If you have a favorite low carb/good fat recipe you'd like to share, please send it to Julie at: [db\\_mgr@co-parkinson.org](mailto:db_mgr@co-parkinson.org).**

**Potluck Favorites: Shakin' & Bakin' Cookbook!**

Another reminder about a new CSPSG endeavor to add new recipes to the original cookbook the support group created years ago. Sherry Whitaker has volunteered to lead this effort to add your favorite recipes – old or new family recipes, newly discovered favorite recipes, etc.

We only want recipes that you have actually tried and liked – not ones that you think should be good but haven't tried or tasted. They don't have to be gluten-free or Keto. We will, however, indicate which ones fit those categories. We will also add a conversion table that will tell you how to convert ordinary recipes into gluten-free or Keto recipes if you would like to know how to do that.

*All favorite recipes are welcome - Send them to Sherry at [project@co-parkinson.org](mailto:project@co-parkinson.org).*



## Ask the Doctor!

Dr. Brian Grabert, MD, a Parkinson's Specialist



Dr. Grabert has generously agreed to answer your questions pertaining to Parkinson's Disease each month in our new newsletter column called "Ask the Doctor!"

If you have questions you'd like to submit to Dr. Grabert, send them to our newsletter coordinator, Julie, at [db\\_mgr@co-parkinson.org](mailto:db_mgr@co-parkinson.org).

**Question:** What could be the cause of sudden hallucinations or the acceleration of Parkinson's symptoms and what should be done to resolve those issues?

*(There are two questions here)*

**Answer: #1.**

Sudden Hallucinations in Parkinson's Disease [PD] in someone on a stable regimen of medications is most often due to an infection. An addition of a new PD medication or an increase in the dose of current Parkinson's medication could also be responsible as well. Hallucinations [which are usually, but not always, visual hallucinations] are more common in advanced PD and especially with any cognitive deficits. Hallucinations in PD usually start intermittently, not daily and progress to be daily and persistent. They usually start as non-threatening but may eventually become frightening/threatening and disabling. PD Medication adjustments and even elimination of PD medications may be helpful in decreasing or eliminating the Hallucinations. If medical treatment is needed for hallucinations it should be remembered that Pimavanserin [Brand name: Nuplazid] is the only FDA approved medication to treat hallucinations in PD. I would consider "sudden hallucinations" as just one of the types of "acceleration of Parkinson's symptoms."

**Answer: #2.**

What could cause Acceleration of Parkinson's Symptoms? Rapid worsening or Exacerbations of Parkinson's symptoms is present in up to 25% of patients in a study 11 years ago that followed 120 individuals with PD. [For those who want to read more, this article is open access by searching Clinical Characteristics of Exacerbations in Parkinson Disease by Karen S. Zheng, et al in Neurologist 2012, Volume 18, p. 120-124]. In this study and in my experience over 80% of these exacerbations were reversible. Again infection was the most common reason for rapid worsening of symptoms. Other causes were Medication changes or medication errors, poor adherence to medication dosing, addition of a non-Parkinson's medication, post-operative decline and other more rare causes. The take home message is to explore all possibilities as the acceleration is usually reversible. Idiopathic Parkinson's Disease is a slowly progressive disease, so rapid "acceleration" should have an explanation.



## Sad News

Janet Nielson, a long-time member of the support group, passed away on September 6th, at age 82. She was born in Washington D.C., and grew up in Silver Spring, Maryland. Janet married Wendell Laurance B. Nielson and they had three children, Elizabeth Brigham, Daniel Edward, and Kathryn Gene. They moved to Colorado Springs in 1969 where Larry worked for UNIVAC/Sperry Rand corporation and Janet worked for District 11. After Larry died, she moved to Florida for a while and then returned to the springs in 1999. She had a love for gardening and interior design. Janet is survived by her three children, and nine grandchildren.

## Aggression Aimed at Caregivers in Parkinson's Linked to Patients' Grief

By Patricia Inacio, PhD – Parkinson's News Today, 2/9/23

Aggression aimed at caregivers in Parkinson's disease and related disorders is associated with patients' grief in coping with disease progression and related losses, a new study suggests.

Fluctuations in cognition also play a role, researchers say.

But these behavioral disturbances have serious consequences for caregivers, according to investigators, who suggest that neurologists and movement specialists consider screening for aggression by incorporating the caregivers' perspectives. That will contribute to working with caregivers on strategies to cope with aggressive behavior by patients — "prioritizing caregiver education and well-being," the researchers wrote.

"This is an issue that we think is very much underrecognized," Zachary Macchi, MD, who led the study, said in a press release, adding that "this is a factor likely driving caregiver burden for some people."

"I'm hoping to create more awareness toward it ... among clinicians who work directly with people living with Parkinson's disease," said Macchi, an assistant professor of neurology at the University of Colorado School of Medicine.

**SURVEY SHOWS TOLL OF 'OFF TIMES' ON PATIENTS, CAREGIVERS INVESTIGATING AGGRESSIVE BEHAVIORS AMONG PATIENTS**

Titled "**Aggression towards caregivers in Parkinson's disease and related disorders: A mixed methods study**," the study was published in the journal *Movement Disorders*.

Aggression in advanced stages of Parkinson's disease and related disorders is common and relates to symptoms burden, according to researchers.

This includes verbal abuse, physical harm, or sexual advances. While previous studies have looked into behavioral disturbances and their impact on caregivers, the caregivers' perceptions of being the target of aggressive behaviors were not considered.

Now, a team of U.S. researchers identified factors associated with aggressive behavior in Parkinson's disease and other disorders. The study mixed quantitative

data, obtained from a recent clinical trial, with a qualitative component of caregivers' perceptions, based on interviews.

The initial clinical trial enrolled 592 participants — dyads or related pairs of 296 patients and 296 caregivers — who were recruited from outpatient neurology care in California, Colorado, and Wyoming. The researchers collected the quantitative data every three months for 12 months, between March 2017 and December 2020.

At the beginning of the study, half of the patients (50.3%) had dementia, and two-thirds had idiopathic Parkinson's (66.6%). Idiopathic means the disease is of unknown origin. The average disease duration was nine years, with an average duration of caregiving of five years.

The majority of the caregivers were women (76.6%) who were highly educated — 50% had a college education. More than three-quarters (76.9%) were married to the patient and an even greater number (82.4%) lived in the same house.

Some type of aggression was reported by 22.3% of caregivers. This included physical aggression, experienced by 17.6%, and sexual aggressions, reported by 8.8%.

*This is an issue that we think is very much underrecognized*

At the study's start (baseline), patients' aggressive behaviors were correlated with lower annual income, longer disease duration, worse severity of motor symptoms, and reduced functional status. Grief and poorer quality of life also was associated with aggression.

A higher resistance to care correlated with physical aggression alone or with either type of aggression combined. Meanwhile, a higher severity of motor symptoms was associated with physical aggression alone.

An increase in aggressive behaviors also was associated with overall symptom burden, including motor and non-motor symptoms. Among the non-motor symptoms were nausea, depression, anxiety, confusion, and hallucinations.

*(Continued on page 6...)*



### Other Local Support Groups:

#### Parkinson's Caregivers Support Group

All family caregivers of persons with Parkinson's are invited to come and participate in our discussion meetings.

We meet the 3rd Thursday of each month from 10:00 to 12:00 at 6310 Gemstone Way, Colo Spgs, 80918.

Contact Brenda Hicks at [bbhicks54@gmail.com](mailto:bbhicks54@gmail.com) or [REDACTED] to let her know you are coming.

#### Ladies w/ Parkinson's Support Group

If you are a fun-idea person, please consider volunteering to lead this valuable group.

If you're interested please notify Julie Pfarrer at [db\\_mgr@co-parkinson.org](mailto:db_mgr@co-parkinson.org) or [REDACTED].

#### Essential Tremor Support Group

Meeting Location:  
ENT Conference Room  
Pikes Peak Library District,  
Colorado Springs Library 21c,  
1175 Chapel Hills Drive.

For meeting dates/times or for questions, contact Jim Sanchez at [jimdjs22@gmail.com](mailto:jimdjs22@gmail.com) or 719-660-7275.

#### Tri-Lakes Parkinson's Support Group

Meets the 3rd Saturday of every month at 10 am at the Monument Community Presbyterian Church, 238 3rd Street, Monument. For more information contact Barry Hanenburg at [bhanenbu@hotmail.com](mailto:bhanenbu@hotmail.com) or Syble Krafft at 719-488-2669.

### Other Opportunities:

#### Adult Speech Therapy at Home

Outpatient speech therapy services conducted in the comfort of the patient's home. Personalized speech therapy for restoration of function due to illness or injury. Treating:

*Parkinson's: Voice & Swallowing*

- SPEAK OUT!

- LSVT

*Cognitive-Linguistic Deficits*

*Aphasia following stroke*

*Swallowing*

- Neuromuscular Electrical

Stimulation Therapy

- Respiratory Muscle Strength

Training

For more information, contact Jana Hothan, MA, CCC-SLP at [slp@janahothan.com](mailto:slp@janahothan.com) or by phone at (719) 338-8165.

#### Parkinson's Sing-a-Long Group

No music experience necessary! Join board certified music therapist, Heather Johnson, every Monday at 1 pm as we participate in group singing focused on improving breath control, strengthening of the throat muscles, and improving voice control, volume, and quality! Parkinson's Sing-a-Long is held at Square Music Co, located at 2332 Vickers Drive in Colorado Springs. An online participation option is available as well. Square Music Co also offers individual music therapy to work towards motor movement goals along with the voice qualities listed above. For more information or to sign up, please email [heather@squaremusic.co](mailto:heather@squaremusic.co) or call/text 719-345-2887.

### PD Exercise Classes:

#### Dance for Parkinson's

Moving with joy, creativity, and community to support people living with Parkinson's.

All are welcome and care partners are encouraged to move with us! Classes meet in person every Friday at 11:00 am at Ormao Dance Company, 10 S. Spruce Street \$5/class. Free for care partners.

You can also join us for this class online. Visit our website [www.ormaodance.org](http://www.ormaodance.org) and click on "Dance for Parkinson's" under the "Outreach" tab to get the Zoom link.

Questions: Contact Laura at [laura.hymers@gmail.com](mailto:laura.hymers@gmail.com) or 719-640-8478

#### PWR!Moves Class

Skyline Wellness & Aquatics Center has partnered with the YMCA to help the PWR! Moves class be more available to everyone.

We are reaching out to help individuals who may be located on the south side of town and need a closer location to their home.

LOCATION: 2365 Patriot Heights (located within Brookdale Skyline, near Bear Creek Dog Park)

Our classes are held every Tuesday and Thursday from 12:30-1:30 pm.

If you have any questions, please contact the Fitness Coordinator Karisa Dreyer at (719) 867-4658

#### PWP: Parkinson's With Poles

Come join Emily Moncheski and Eileen O'Reilly for a great exercise workout at Monument Valley Park.

Every Friday, 9 am at the north parking entrance of Fontanero and Culebra streets. Poles are provided. Everyone is welcome!

#### Max Capacity NeuroFitness

PWR Boot Camp classes, donation based Power Punch Boxing, pole walking classes and individual PD specific fitness training. LOCATION: 525 E Fountain Blvd. Suite 150. Park on the S. Royer side of the building.

Boxing: T/Th – 4:00 to 5:00pm and Sat – 9:00am to 10:00am

PWR Boot Camp: M/W – 3:30pm to 4:30pm

Boxing is free of charge, Boot Camp packages available! Contact Emily Moncheski at (719) 213-3996 or email [emily@maxcapacitypt.com](mailto:emily@maxcapacitypt.com) for info

#### UCCS Center for Active Living at the Lane Center

Power Moves group exercise and Balance & Agility classes. For more information call (719) 255-8004 or email [CAL@uccs.edu](mailto:CAL@uccs.edu)

#### YMCA PD Exercise Classes

We utilize exercise as medicine to increase quality of life so that you can get better and stay better.

Tri-Lakes YMCA: PWR!Moves Tuesday & Thursday, 1:30-2:30 PM

Briargate YMCA: PWR!Moves Monday, Wednesday & Friday, 1:30-2:30 PM

For more information contact Jamie Clayton at [jclayton@ppymca.org](mailto:jclayton@ppymca.org)

#### NIA Class

Moving to Heal – the art of feeling better; slower movements with joy and purpose. NIA works with balance, breath, cognitive mind/ body function, mobility and stability. You can go at your own pace. Stop if you want, sit down and dance while sitting in a chair for a while. All while dancing to music from all genres; Jane, the instructor, often asks what we need that day and works her routine around what can help. She has done a wonderful job making the routines fit our Parkinson's needs.

WHEN: Every Friday at 10:30  
LOCATION: 525 E Fountain Blvd.  
MACS–corner of Fountain & Royer  
Cost: \$10.00 a class

#### Colorado Springs Rocksteady Boxing

"Let's kick some PD BUTT!!!"

Tuesday, Wednesday and Thursday 10 am – 11:15 am & 11:45 am – 1:00 pm  
Location: Otis Park, 731 Iowa Avenue  
For more information, contact Bill O'Donnell at 719-243-9422

#### Falcon Exercise Group

Mon and Fri – 11:00 – 12:00 noon, Grace Community Church. For more information contact Catherine Reed at [REDACTED]



Help spread some sunshine to our members!

If you know of a Parkinsonian or PD caregiver that is having a tough time (illness, surgery) or one of our members has passed away, please let our Sunshine Chairman, Sharon Carlson know.

Sharon can be reached at [REDACTED].

## Best Use of TMS Seen in Stimulating Two Brain Areas at High Frequency

By Lindsey Shapiro, PhD – Parkinson's News Today, 1/30/2023

### TRANSCRANIAL MAGNETIC STIMULATION COULD HELP TO EASE PATIENTS' MOTOR SYMPTOMS

High-frequency stimulation of both the brain's primary motor cortex (M1) and its dorsolateral prefrontal cortex (DLPFC) — two regions with altered activity in Parkinson's disease — may be the optimal use of transcranial magnetic stimulation (TMS) in easing Parkinson's motor symptoms, a meta-analysis study reported.

In analyzing data from several published studies in patients, the researchers found that TMS was generally linked to a lessening of motor symptoms. The most significant gains, moreover, were seen by targeting these two brain regions with high stimulation frequencies.

"With the advancement of neuromodulation techniques, the individualized and precise TMS regulation on [Parkinson's] patients is essential to improving the therapeutic effect," the scientists wrote.

### TMS USES MAGNETIC COILS PLACED ON THE SKULL TO STIMULATE NERVE CELL ACTIVITY

The study, "**Comparative efficacy of transcranial magnetic stimulation on different targets in Parkinson's disease: A Bayesian network meta-analysis**," was published in *Frontiers in Aging Neuroscience*.

TMS is a non-invasive neuromodulation technique aimed at stimulating and "re-setting" certain brain regions. Magnetic coils placed on the skull are used to generate a magnetic field that stimulates nerve cells' electrical activity in the area.

Used to treat depression, TMS has gained ground as a Parkinson's therapy, with various studies showing that the approach can ease motor symptoms like bradykinesia (slow movement) and rigidity marking the neurodegenerative disease.

Various Parkinson's studies have evaluated low and high frequencies of stimulation and targeted several brain regions. But a protocol for TMS

that produces the maximum benefits in Parkinson's remains unclear.

To help identify such an optimal TMS approach for Parkinson's, a team of researchers in China systematically reviewed published studies up to December 2021 reporting the results of clinical trials into TMS' use.

A total of 36 studies — involving 1,222 Parkinson's patients — were included in their meta-analysis.

The trials evaluated a range of different TMS protocols, varying in the number, type, and side (unilateral and bilateral) of stimulated brain regions, as well as in the frequency of stimulation. Outcomes for each study were compared against a sham procedure or conventional disease treatment.

Unilateral stimulation involves only one side of the brain, while bilateral stimulation targets both sides.

Motor function benefits were evaluated through changes in scores using the Movement Disorder Society – Unified Parkinson's Disease Rating Scale (MDS-UPDRS) Part 3, whose higher scores indicate worse motor symptoms.

TMS was significantly superior to a sham procedure at easing motor symptoms overall, the analysis found. In particular, protocols that used a high-frequency stimulation had a stronger effect than those that used a low frequency, and bilateral stimulation was generally better than unilateral.

### ANALYSIS FAVORS STIMULATING 2 SPECIFIC BRAIN AREAS AT HIGH FREQUENCY

Ultimately, "high-frequency TMS targeting bilateral M1, bilateral DLPFC, and both M1 and DLPFC could significantly [ease] motor symptoms of PD [Parkinson's disease] patients," the researchers wrote.

The primary motor cortex and dorsolateral prefrontal cortex are brain regions showing activity changes in the brains of Parkinson's patients. M1 is the main

brain region involved in coordinating voluntary movement, while the DLPFC coordinates higher level cognitive processing and communicates with M1.

Notably, both brain regions can influence the release of dopamine, a major signaling molecule, in a brain area called the striatum. A loss of dopamine in the striatum is a hallmark of Parkinson's disease.

The most significant improvements in motor function were observed when high-frequency stimulation was administered to both M1 and DLPFC — leading to a mean 7.6-point drop in MDS-UPDRS Part 3 scores compared with a sham procedure.

Overall, this TMS approach was estimated to have a 90.7% chance of being more effective than the other approaches.

"There are several possible explanations for why M1+DLPFC showed a better performance," the researchers wrote, noting that reasons include greater striatal dopamine release and a re-set of the communication networks known to drive Parkinson's symptoms.

Low frequency stimulations and targeting other brain regions did not associate with significant motor improvements. The lowest performing approach involved low-frequency stimulation of both the brain's premotor cortex and M1.

"This research proposes the optimal TMS frequency and targets for motor symptoms of PD patients," the study noted.

Among the study's limitations were a lack of certain clinical information, including medication use, and patients' age or disease stage, that could influence the results. The analysis also did not assess changes in non-motor symptoms and TMS' long-term effects.

As such, "large-scale and multi-center clinical trials are still irreplaceable in the future to demonstrate the relationship between different parameters and clinical outcomes," the team concluded. ■

## Mindfulness Meditation May Lessen Depression

By Patricia Inacio, PhD – Parkinson's News Today, 2/9/23

### THE MEDITATIVE PRACTICE ALSO BOLSTERS EMOTIONAL STABILITY, STUDY FINDS

Mindfulness meditation — a mental training of being focused on the present moment without interpretation or judgment — was better than physical exercise at lessening depression symptoms and maintaining emotional stability in people with mild-to-moderate Parkinson's disease.

That's according to data from a small clinical trial conducted in Hong Kong that also showed both practices resulted in an immediate, positive effect on cognitive function.

Overall, "mindfulness meditation appeared to be a feasible strategy for managing depressive symptoms and maintaining emotional stability, with comparable benefits in cognitive performance, among patients with mild-to-moderate PD [Parkinson's disease]," the researchers wrote.

The study, "**A randomized clinical trial of mindfulness meditation versus exercise in Parkinson's disease during social unrest**," was published in the journal *npj parkinson's disease*.

### COMMUNITY EXERCISE MAY HELP TO EASE PARKINSON'S MOTOR SYMPTOMS

Parkinson's disease is known for its hallmark motor symptoms, such as tremors and slow movement. However, patients often experience non-motor symptoms like depression, emotional instability, sleeping problems, fatigue, and cognitive decline.

Besides pharmacological approaches, "non-pharmacological, lifestyle approaches including physical activity, stress management, and social support are recommended by clinical guidelines to provide additional symptomatic relief in the illness trajectory," the researchers wrote.

Evidence suggests that physical activities, such as yoga, can lessen both motor and non-motor symptoms. However, the impact of mindfulness meditation in Parkinson's patients remains largely unclear.

Now, a team of researchers in Hong Kong conducted a clinical trial (HKUCTR-2681) from August 2019 to February 2020 to assess the potential of mindfulness meditation to lessen anxiety and depression in people with

mild-to-moderate Parkinson's compared with stretching and resistance training exercise (SRTE).

### STUDY DESIGN

In total, 68 patients (mean age 64.5 years, 57.4% women) were assigned randomly to undergo either the mindfulness program (33 patients) or the SRTE program (35 patients) for eight weeks.

The mindfulness meditation training program consisted of a 1.5-hour session per week, and 20 minutes of home-based practice, twice a week. The weekly session included: body scan, guided meditation with focus on the breath, guided meditation focusing one's awareness to bodily sensations and non-judgmental awareness, and practicing awareness during daily life activities by using the breath as an anchor for the attention.

The SRTE program involved 90-minute weekly sessions of full-body physical exercise, in addition to 20 minutes of home-based practice, twice a week. The exercise protocol included warm-up, stretching, resistance training exercises with moderate intensity,

and cool-down exercises.

At the trial's start, most patients (60.3%) had moderate Parkinson's. Also, 21 patients (30.9%) presented clinically significant anxiety symptoms and 20 (23.5%) had significant depression symptoms, as assessed with the Hospital Anxiety and Depression Scale.

Two patients in the mindfulness group did not attend any sessions, while those in the SRTE group attended at least two sessions. Most patients in both groups attended at least six sessions: 72.8% in the mindfulness group and 88.6% in the SRTE group.

### MIXED RESULTS

Results showed that depressive symptoms were lessened significantly immediately after the mindfulness program, while they remained stable in the SRTE group. This meant that mindfulness meditation was associated with a significant reduction in depression, when compared with SRTE. This reduction reached marginal clinical significance.

However, no significant differences  
(Continued on page 7...)

## Parkinson's Motor, Bowel Functions Improve With Electroacupuncture

By Lindsey Shapiro, PhD – Parkinson's News Today, 1/18/2023

### PATIENTS IN TRIAL USING EA SAW RELIEF FROM CONSTIPATION SYMPTOMS

A 12-week electroacupuncture (EA) regimen in Parkinson's disease patients along with standard medications was well tolerated and led to improved motor function and some relief from constipation, a recent study showed.

Patients also reported gains in quality of life compared with those only receiving standard of care medications.

"Our study suggested that compared with conventional treatment, electroacupuncture significantly enhances motor function and bowel movements in patients with PD [Parkinson's disease]," the researchers wrote. The team noted, however, that the specific benefits of EA in Parkinson's patients warrants further investigation.

The study, "[Electroacupuncture for motor dysfunction and constipation in patients with Parkinson's disease: a randomised controlled multi-centre trial](#)," was published in *eClinicalMedicine*.

Parkinson's disease is associated with a range of motor and non-motor symptoms that can have a profound impact on a person's quality of life.

While levodopa is the main treatment for motor symptoms, its effectiveness is lost over time even as associated side effects tend to increase. It has limited effects on non-motor symptoms.

Constipation is common with Parkinson's patients and difficult to treat. It can also disrupt the absorption of levodopa.

Some patients turn to complementary or alternative treatments to address these challenges. Acupuncture, which involves inserting very small needles through the skin at strategic points on the body, is a common alternative for Parkinson's patients.

EA is "a modern extension of acupuncture," according to the researchers. It involves stimulating the acupuncture needles with a low electrical current in order to augment its benefits.

### ACUPUNCTURE AS ADD-ON THERAPY MAY FURTHER EASE DISEASE SYMPTOMS

#### TESTING EA THERAPY ON MOTOR, CONSTIPATION SYMPTOMS

To better establish EA's potential advantages, researchers in China conducted a randomized, controlled clinical trial at four hospitals from September 2018 to September 2019 that compared EA therapy combined with usual Parkinson's pharmacological treatment on motor and constipation symptoms.

A total of 166 adult Parkinson's patients, ages 40-80, were enrolled and randomly assigned to the EA group or to the usual care group (conventional pharmacological treatment only, a control group). The prevalence of constipation was 36.1% in the EA group and 34.9% in the control group.

All received standard Parkinson's and constipation medications, if needed, and those in the EA group received 30-minute EA sessions three times a week for 12 weeks — 36 sessions total.

The study's main goal was to assess changes in disease severity, as assessed by the total score on the Unified Parkinson's Disease Rating Scale (UPDRS), over 12 weeks. A reduction in UPDRS scores reflects reduced disease severity.

Patients in the EA group had significantly more meaningful UPDRS score reductions than the control group after 12 weeks, meeting its main goal. Specifically, EA group members had a 5.3-point drop, while the control group had a 3.9-point increase.

These differences were observed as early as four and eight weeks, and were maintained into weeks 16 and 24. Results were similar with motor and activities of daily living sub-scales of the UPDRS.

While the performance in the 20-meter walk test, a measure of motor function, was similar between the two groups after 12 weeks, EA participants saw significantly greater motor improvements by weeks 16 and 24, with a greater decrease in the time to complete the test than the control group.

Constipation also improved with EA from weeks four to 24, with patients in that group having significantly more spontaneous bowel movements a week than the control group. The EA group's patients also had greater reductions in measures of constipation severity and improvements in constipation-associated quality of life after 12 weeks.

Likewise, significantly greater improvements in overall health-related quality of life were observed in the EA group compared with the control group, as assessed by the 39-item Parkinson's disease questionnaire.

The most common EA-associated side effects were skin discoloration and small pools of clotted blood under the skin (hematoma) at the needle site, abdominal pain, and dizziness, none of which were serious. No patients withdrew from the study due to side effects.

Taken together, "the findings of our study suggested that compared with conventional pharmacological treatment, conventional pharmacological treatment combined with electroacupuncture significantly enhances motor function and increased bowel movements in patients with PD," the researchers said, calling electroacupuncture a "safe and effective treatment for PD."

They emphasized that the long-term effects of the program aren't known even though their findings largely support EA for Parkinson's symptoms.

"In clinical practice, we usually use continuous acupuncture for efficacy consolidation, and providing a longer course of treatment may improve long-term efficacy," the researchers wrote. "Still, this hypothesis needs to be tested by further clinical studies." ■

### (Aggression Aimed at Caregivers in Parkinson's Linked to Patients' Grief continued from page 3)

Paranoia was related to sexual aggression alone.

When considering caregiver variables, greater baseline aggression correlated with depression, the overall burden for the caregiver, and the patient's quality of life as perceived by the caregiver.

### FORMER PARKINSON'S CAREGIVERS COULD HELP THOSE NOW IN THAT ROLE ASSESSING THE IMPACT ON CAREGIVERS

Following the collection of quantitative data, semi-structured interviews were conducted over 4 months, with 14 of the caregivers who reported aggression. These participants were predominantly spouses (nine caregivers) and shared a residence with the patients (12 caregivers).

"We did interviews with these caregivers, letting them share their experiences, and we were able to begin to understand the triggers, or what we call predecessors to aggression," Macchi said. He noted these predecessors were "the things that were leading up to aggression, as well as the behaviors themselves."

In the interviews, five themes were identified that exemplified aggressive behaviors and their effect on caregivers. These included:

- behaviors ranging from verbal abuse to threats of physical aggression.
- caregivers' beliefs that aggression was the result of patients' difficulties in coping with disease progression and the loss of abilities.
- a belief that aggressive behaviors worsen caregiver stress and mental health, and negatively impact the patient-caregiver relationship.
- caregivers' feelings that they were ill-prepared to cope with aggressive behaviors.

According to the researchers, several points converged between the identified themes and correlated variables. Grief is a contributor to aggression, mainly related to the patient's frustration with functional decline, the team concluded.

"Our study is the first to show a relationship between patients' grief and behavioral disturbances in [Parkinson's disease and related disorders]," the researchers wrote.

Grief counseling, they suggested, "is one possible strategy for preemptively mitigating interpersonal issues contributing to escalating behavioral disturbances."

Also, cognitive fluctuations, associated with episodic confusion, were shown to contribute to aggression, independently of dementia or global cognitive impairment. According to the researchers, "education of caregivers and medications for cognition ... or mood disturbances ... may help."

Aggression toward caregivers contributes to the overall burden for carers, with a negative impact on their physical and mental health, the study found.

During routine care, screening for aggressive behaviors allows patients and caregivers to access resources to "facilitate early intervention, provide guidance and education to families or loved ones" or "mobilization of protective services when caregivers' safety is threatened," the researchers concluded.

"The next step would be to build what we call a psychoeducation intervention, where we work with caregivers on identifying these behaviors, and then identifying triggers — or potential precursors to these behaviors, and then understanding the consequences of them," Macchi said.

"We want to give caregiver the tools and skillset to be able to manage those, and to foster an ongoing relationship between the caregiver and the clinician," he said. ■

## Symptom-Responding Deep Brain Stimulation System in Development

By Steve Bryson, PhD – Parkinson's News Today, 3/23/23

RESEARCHERS ARE USING NEUROMORPHIC COMPUTING TO IMPROVE ON OPEN-LOOP DBS DEVICES

Researchers at Michigan Technological University are developing a "smart" deep brain stimulation (DBS) system to treat Parkinson's disease that's automatically activated only when needed, making it more effective and energy-efficient.

The researchers are using neuromorphic computing — an approach inspired by the structure and function of the human brain — to improve on current open-loop DBS devices that generate constant stimulation, which can lead to unwanted side effects.

The new closed-loop system has the potential to adjust stimulation signals according to the severity of a patient's symptoms. This could mean increased effectiveness and fewer side effects, along with less energy consumption, meaning fewer surgeries to replace batteries.

"Exploiting neuromorphic computing to improve deep brain stimulation for Parkinson's disease is very innovative," Chunxiu (Traci) Yu, PhD, the project's co-lead and an assistant professor of biomedical engineering at Michigan Technological University, said in a university news release. "To our knowledge, this is the first effort in the field."

DBS is an alternative to Parkinson's medications after they lose effectiveness over time. Small wires are surgically implanted in specific areas of the brain to stimulate them with electrical impulses and reduce motor symptoms such as tremors, muscle stiffness, and slowed movements.

The wires are connected to a battery-powered pulse generator surgically inserted in the chest or abdomen. Once implanted, stimulation settings can be adjusted according to the patient's needs.

However, "most current DBS systems are open-loop," Yu said, meaning signals are

sent constantly regardless of the presence and/or severity of symptoms "because the real-time symptoms are unknown to the device."

Besides the potential side effects caused by continuous stimulation, being "on 24 hours a day, 365 days a year" makes them "high in energy consumption," Yu said. This means surgeries are needed every two to five years to replace the device's batteries.

Yu and colleague Hongyu An, PhD, a Michigan Tech assistant professor of electrical and computer engineering, are applying neuromorphic computing in an effort to improve DBS.

"Referred to as brain-inspired computing or neuroscience-powered artificial intelligence, neuromorphic computing emulates a nervous system using microchips and algorithms," Yu said. "It is also highly energy-efficient."

Together, Yu, An, and their teams are developing a closed-loop DBS system "that can intelligently adjust stimulus signals according to patient symptoms."

"Using a closed-loop system allows us to optimize the energy efficiency of DBS devices," Yu said, adding "the patient's brain signals are used to generate a treatment signal — a stimulation — as needed, in real time."

At the heart of the closed-loop DBS are spiking neural networks (SNNs), a type of artificial neural network that, much like natural neural networks, transmit information only once a spike threshold has been reached.

"The communication signals within SNNs are represented with small spike electrical pulses in volts," An said, adding, because SNNs incorporate the concept of time, like intervals between spikes, "SNN systems have much higher energy efficiency compared to other artificial neural networks."

The new system detects beta oscillations, the type of brain waves generated by brain regions that control body move-

ments. By measuring brain activity there, it can evaluate motor symptoms' severity.

"We use the beta oscillatory activity as a biomarker because it can be detected much faster than other means, such as tremor signals," An said. "If the neural activity detected is unusually strong, it indicates the Parkinson's disease symptoms are more severe."

The teams have been using Loihi, Intel's neuromorphic chip, which "outperform other computational platforms in terms of energy efficiency by 109 times," An said.

Another innovative feature of the new closed-loop DBS system is the replacement of SNN's traditional electronic memory for a memristor. Besides remembering the amount of charge that flowed through it, letting it store information like a memory chip, memristors can control the flow of electrical current, like a resistor.

Unlike standard resistors though, "the resistance of a memristor can be changed into multiple or even thousands of different resistances," An said. "This feature significantly increases the amount of information that can be stored by individual memristors."

According to data presented last year at the 23rd International Symposium on Quality Electronic Design, the teams' simulations using SNNs and memristors reduced the size of chips by 67.3% and generated 41.9% faster signal transmission while using 11.7% less energy.

"This result is highly promising," An said.

The next goal is to design their own memristor neuromorphic chip customized to the closed-loop DBS.

"Our research on these new, innovative computational paradigms — along with the design of emergent AI chips — will open a new door to greater and faster development of smart medical devices for brain rehabilitation," An said. "Even wearable medical devices are now well within the realm of possibility." ■

### (Mindfulness Meditation May Lessen Depression continued from page 5)

were seen between both groups at three months after the intervention.

Also, no significant differences in anxiety were seen within groups or between groups at any time point.

The mindfulness meditation program also was associated with significant improvements in overall mindfulness and overall cognitive performance immediately after the program, and in non-judging aspect of mindfulness at three months after the program.

The SRTE group showed a significant reduction in motor symptoms, as assessed with the Movement Disorder Society's Unified Parkinson's Disease Rating Scale-Part 3, immediately after completing the program. Also, delayed recall and overall cognitive function were improved significantly.

However, a significant worsening in non-

reacting aspect of mindfulness — which allow experiences to come and go without reacting in an effort to change them — was observed at three months after the intervention.

Overall, compared with patients in the SRTE group, those undergoing the mindfulness program showed a slight improvement in quality of life immediately after the intervention, and significant improvements in the non-reacting aspect of mindfulness at the final evaluation.

Adverse events were reported in one patient in each group: temporary back pain in the mindfulness group and temporary mild knee pain during and after squatting exercises in the SRTE group.

### INFLAMMATORY GUT BACTERIA, GENES MAY BE PARKINSON'S BIOMARKERS

All participants were satisfied with the study. More than half of patients in the

mindfulness group (67.7%) and SRTE group (51.6%) reported less constipation and improvements in their sleep, which were not objectively quantified in the study.

"These findings suggest that mindfulness meditation might be a promising complementary lifestyle practice for cultivating non-reactivity and managing depressive mood among patients with PD, which exerts similar benefits on cognition as compared to conventional physical exercise," the researchers wrote.

"The observed improvements were confirmative because interventions and assessments were conducted during the strikes of social unrest and/or the COVID-19 pandemic," they added.

"Further investigation is warranted to establish the mechanistic effect and compliance of various forms of mindfulness practices," the team concluded. ■

### LENDING LOCKER INVENTORY

If you would like to borrow any of the equipment listed here, please contact: Rich Sauvain at [REDACTED].

**Note:** A stair chair lift system has been donated to us. It's a seat on a rail that takes you up and down a staircase. This one is for a 14 step or less straight staircase with no turns.

|  |       |
|--|-------|
| 3-wheeled walker                       | 1     |
| Air mattress                           | 1     |
| Back brace                             | 1     |
| Bed cane                               | 4     |
| Bed pan                                | 1     |
| Bed rails                              | 1     |
| Bed risers (set)                       | 1     |
| Bedside toilets                        | 6     |
| Canes                                  | 7     |
| Crutches (set)                         | 2     |
| Double floor exercise pedals           | 1     |
| Exercise bike                          | 1     |
| Hospital bed                           | 1     |
| Lazercue for freezing help             | 1     |
| Lift chairs                            | 3     |
| Lift-ware tremor compensating utensils | 1 set |
| Pick-up assist                         | 6     |
| Shower benches                         | 9     |
| Sock helper                            | 2     |
| Stair chair rail system                | 1     |
| Standup Walker                         | 1     |
| Swivel seat                            | 1     |
| Toilet arm assist                      | 1     |
| Toilet seats                           | 3     |
| Transfer pole                          | 2     |
| Transport chairs                       | 4     |
| Tub rail                               | 2     |
| U-step                                 | 3     |
| Walkers with wheels & seat             | 13    |
| Wheelchairs                            | 6     |

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**PARKINSON'S PERSPECTIVE**

**MAY 2023**

# Coming Events

See inside for more information

**May 13<sup>th</sup> - Reg Mtg** at 10 am; **Program:** Breakout Sessions

Moderators: Parkinsonians - Steve Locke and for the caregivers - Jill Reid & Julie Pfarrer

**June 3<sup>rd</sup> - Reg Mtg** at 10 am; **Program:** New study on the effects of good dietary oils on health and the Parkinson's; **Speaker:** Dr. Melanie Tidman, DHSc, M.A., OTR/L, MHP

**July 1<sup>st</sup> - Reg Mtg** at 10 am; **Program:** Scam Prevention

**Speaker:** Officer Scott Mathis, Colorado Springs Police Department

**August 5<sup>th</sup> - at 11 am; Program:** Picnic at John Venezia Park!!!!!!

**September 2<sup>nd</sup> - Reg Mtg** at 10 am; **Program:** Breakout Sessions

**October 7<sup>th</sup> - Reg Mtg** at 10 am; **Program:** TBD

**More useful websites:**

<https://parkinsonsnewstoday.com>; [www.parkinsonrockies.org](http://www.parkinsonrockies.org); [www.parkinson.org](http://www.parkinson.org); [www.nwpcf.org](http://www.nwpcf.org); [michaeljfoxfoundation.org](http://michaeljfoxfoundation.org);  
<http://caremap.parkinson.org>; <https://www.brainhq.com/world-class-science/published-research/active-study>;  
[www.davisphinneyfoundation.org/living-pd/webinar/videos/cognitive-nonmotor-symptoms-parkinsons](http://www.davisphinneyfoundation.org/living-pd/webinar/videos/cognitive-nonmotor-symptoms-parkinsons); [www.parkinsonheartland.org](http://www.parkinsonheartland.org);  
<https://www.pdself.org>; [https://www.youtube.com/playlist?list=PLkPIhQnN7cN6dAJZ5K5zQzY84btUTLo\\_C](https://www.youtube.com/playlist?list=PLkPIhQnN7cN6dAJZ5K5zQzY84btUTLo_C); [pmdalliance.org](http://pmdalliance.org);