



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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president@co-parkinson.org
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Vice President: Jill Reid
Secretary: Vacant

Treasurer: Julie Pfarrer

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Carole Henrichsen, Steve Locke,
Paul Mackendrick, Dave Moross,
Mary Sauvain, Rich Sauvain

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Educational Outreach: Jill Reid

Membership: Carole Henrichsen

Chaplain: Rusty Merrill

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Vacant

Photographer: Vacant

Lending Locker Coordinator:

Rich Sauvain [redacted]

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Bill Hicks [redacted] or
potluck@co-parkinson.org

Picnic: Carole Henrichsen
and Janet Adams

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Medical Advisor: Curt Freed, MD

New Member Table Chairmen:
Vacant

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[redacted]

T-Shirt Chairman: Vacant

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call [redacted]

The Colorado Springs
Parkinson's Support Group
(part of CPF) meets the second
Saturday of each month at 10AM
(with exceptions to be noted
in this newsletter).

Next Meeting: Saturday, November 12th – 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.

9:30 am – 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.*

9:45 am – Everyone else come in 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.

Topic: Break-out Sessions

Moderators for Parkinsonians: Steve Locke

Moderators 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 November Potluck - Thanksgiving

CPF will be providing the main dish of turkey and gravy for November's lunch.
If you would like to sign up to bring a side dish or dessert for the
November meeting, you can contact Bill Hicks at [redacted] [redacted] or
potluck@co-parkinson.org, no later than Wed. Nov 9th 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!

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 dis-
covered 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.



The President's Corner

| Jill Reid - Acting President, CPF & CSPSG

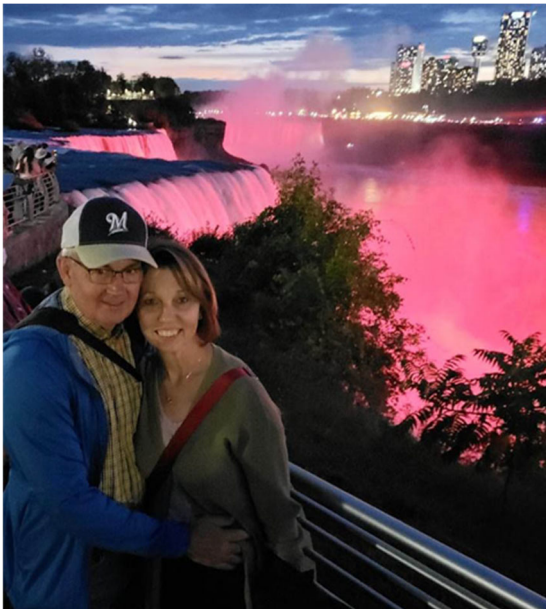


Dr. Brian Grabert's presentation this month was very informative, and many of you contributed by providing great questions for him to research and answer. He's always a crowd pleaser, as evidenced by how many folks came to hear him—77, a record high since the onset of COVID-19! Over the years, he has graciously given his time to us (in fact, he and his wife were running the support group when Julie and I joined in 1995), and he promised to come back next year, even though he retired in March.

That "Question and Answer" session gave us the perfect segue to our plan to add a Q&A column to our monthly newsletter. Dr. Grabert volunteered to answer the questions that you submit for the column. Send your questions to dbmgr@co-parkinson.com, and we'll publish your question and his answer in the next available newsletter.

Speaking of new things that need your participation, the Colorado Springs Parkinson's Support Group Executive Committee has elected to have another on-going fund-raiser to defray our operating costs; this fund-raiser will require very little effort on anyone's part (we used to do annual fund-raisers that took the same 12 people a year of planning to pull off—burned us all out after doing them for nearly 20 years!) For this fund-raiser, we will make arrangements with a different restaurant each month to give us 10% of the profits on meals that you buy there on a designated day. We will provide coupons in the newsletter or at the monthly meeting or both. All you have to do is take the coupon to the restaurant of the month and enjoy a meal or two there on the designated day. The restaurant and the committee will take care of the rest. Janet Adams agree to line up the first restaurant soon. So, buon appetito, bon appetite, buen provecho, good eating, and thanks for your help in keeping this support group running!

Getting to Know You – Randy and Luanne Rogers



Sitting down for a conversation with newcomers **Randy and Luanne Rogers** could lead you down many paths. Name your interest. Would you like to discuss hiking or camping? How about life in the Midwest? Modern Secondary education? Music? Or most importantly – is the "Pack" really back? Who knows where your chat will lead? Regardless; you can be confident that you are in for a very interesting and enriching experience.

Both Luanne and Randy were born in Wisconsin and have lived there their whole lives except when Luanne when to college at Valparaiso, Indiana. They both earned Masters Degrees in Education and chose a career in teaching. Randy taught middle school science and social studies. He retired in 2018. Luanne taught middle school choral/general music; she retired in 2015.

Luanne was a director of a children's choir for 18 years and taught elementary music methods at a local university in Wisconsin for three years after retirement. They have three children who have honored them with ten grandchildren. (Number 11 on the way). One of their daughters, her husband and four children live in Colorado Springs. Another daughter and family still live in Wisconsin. But the Rogers need to use their passports to visit their son and his family living overseas in Jordan.

Luanne and Randy moved to the "Springs" from Platteville, Wisconsin in April 2022. They like to play games, go for walks and have enjoyed camping throughout their years together. Randy was diagnosed with PD in February 2020. In Wisconsin they were both very active in their church; working with both the youth programs and music.

They are proud Green Bay Packer fans and enjoy watching Wisconsin Badger basketball. Phew – no time for "dull" moments for these newcomers. Please **Get to Know Them** in their spare time!

Sleep Problems in Parkinson's May Be Linked to Certain Medications

By Lindsey Shapiro, PhD – Parkinson's News Today, 8/19/22

Dopaminergic medications could promote waking from sleep, researchers say.

Sleep disturbances are common in people with diseases marked by alpha-synuclein buildup, but they are especially problematic among Parkinson's disease patients on dopaminergic medications, a study suggests.

Parkinson's patients tend to have more arousals during sleep and fewer normal sleep cycles than people with isolated rapid eye movement (REM) sleep behavior disorder or dementia with Lewy Bodies (DLB), data show. However, these differences were no longer significant when accounting for the potential influence of medications.

The study, "[Sleep stability in isolated rapid eye movement sleep behavior disorder, Parkinson's disease, and dementia with Lewy bodies](#)," was published in *Acta Neurologica Scandinavica*.

Poor Sleep Seems to Worsen Parkinson's Symptoms

Parkinson's disease and DLB are often considered to lie on the same continuum of disorders marked by toxic buildup of the alpha-synuclein protein in the brain. While they share common symptoms, including movement and cognitive impairments, cognitive problems tend to develop more quickly in DLB.

Both conditions are marked by sleep disruptions, including REM sleep behavior disorder (RBD).

What happens during a typical sleep cycle?

A normal sleep cycle occurs in five stages: wake, three stages of non-REM sleep, and REM sleep. These cycles repeat themselves, becoming progressively shorter through the night.

During the REM phase, the brain is active and dreams are vivid. To

prevent the body from moving too much when a person is dreaming, changes in brain signaling cause muscles to become "paralyzed." However, this doesn't happen in RBD, leading to excessive body movements in response to dreams.

When RBD emerges before evidence of the motor and cognitive symptoms used to diagnose these neurodegenerative diseases, it is called isolated RBD, or iRBD, which has also been associated with early alpha-synuclein buildup.

"Thus, [Parkinson's], DLB, and iRBD could be considered different stages of the same neuropathological process," the researchers wrote, with iRBD representing an early phase of alpha-synuclein accumulation and DLB the most advanced.

While REM sleep has been the focus of much sleep research in these conditions, it is not well-established how other components of sleep might be affected in each of these three disease states.

Therefore, a pair of researchers in Portugal set out to evaluate various components of sleep — measured by polysomnography — between individuals with iRBD, DLB, and Parkinson's who underwent a sleep evaluation at a center in Lisbon, Portugal, between January 2015 and June 2021.

The analysis included 54 individuals with Parkinson's (21 with RBD), 24 with DLB (12 with RBD), and 21 with iRBD. Various facets

of sleep were compared between each of the three groups, but also more broadly between patients who had RBD and those who didn't.

In general, iRBD patients were more frequently male than in the other two groups, and DLB patients were significantly older. Parkinson's patients more often used dopaminergic medications — a common class of treatments for the disease — whereas DLB patients used more acetylcholinesterase inhibitors.

Overall sleep stability and transitions between sleep phases did not differ by disease type.

"This suggests that the three different disorders are equally affected by changes in the flip-flop mechanism involved in maintaining and switching between states of consciousness," the researchers wrote, suggesting that the brain regions involved in sleep stability are affected early in disease, and not added to with disease progression.

Data did show, however, that the number of arousals during non-REM sleep were significantly greater among Parkinson's patients than iRBD patients. That association was lost when accounting for medication use in the statistical analyses.

This finding suggests that the use of dopaminergic medications, which was more prevalent among Parkinson's patients, could promote waking from sleep.

All three groups showed a low number of

sleep cycles through the night compared with the 4–6 typically seen in the general population during an eight-hour sleep period. The mean number of cycles was 2.9 among iRBD patients, 2.25 in DLB, and 1.39 in Parkinson's.

About a quarter of participants (24%) had no sleep cycle, mostly due to a lack of REM sleep entirely in some Parkinson's and DLB patients.

Inflammatory Markers, Sleep Disorder Linked In Parkinson's

The lower number of cycles among Parkinson's patients relative to the other two groups could be associated with medication use. Again, the differences between groups were lost when medications were accounted for in the analyses.

A greater degree of motor dysfunction in Parkinson's patients might also play a role, although this was not measured in the study, the team noted.

No sleep measurements differed significantly when comparisons were made between patients with or without RBD regardless of disease type, "which suggests that disease differences could play a larger role in arousals and sleep cycle duration changes than the presence of RBD," the researchers wrote.

That hypothesis would "merit confirmation from larger sample studies and comparison with a non-neurological control group," the team concluded.

Electroconductive Hydrogels Ease Parkinson's Symptoms in Rat Model

By Lindsey Shapiro, PhD – Parkinson's News Today, 6/3/22

Electroconductive hydrogels prevented the loss of dopamine-producing nerve cells (neurons) and motor function when injected into the brain, a study in a rat model of Parkinson's disease showed.

The gels were also able to promote neuronal growth and prevent inflammation in cell cultures.

"Our work is the first to show the in-built therapeutic effect of an injectable, conductive self-healing hydrogel by the [Parkinson's] animal model," the researchers wrote, adding that these new hydrogels "may serve as a promising vehicle without additional cells or drugs for the treatment of [Parkinson's]."

The study, "An anti-inflammatory electroconductive hydrogel with self-healing property for the treatment of Parkinson's disease," was published in the *Chemical Engineering Journal*.

Hydrogels are three-dimensional networks made of water and peptides that are tightly linked together. Formed naturally or synthetically, they resemble the flexibility of human tissue, and are thus of great interest for biomedical applications. The gels are often leveraged as carriers of therapeutic molecules into the body.

The composition of the hydrogels influences their properties and biological effects. Electroconductive hydrogels contain molecules that conduct electricity, and are thought to have potential regenerative properties in tissues that are electrically active, such as the brain. Such hydrogels may be therapeutic on their own, even when not carrying other therapeutic substances.

A research team in China developed a new type of injectable electroconductive hydrogel. They found the gels had several promising properties, including an ability to self-heal, conduct electricity, and degrade naturally.

The team then evaluated whether their new and improved hydrogels

might show therapeutic promise in Parkinson's compared with control hydrogels, without needing to be loaded with additional therapeutic cargo.

Other hydrogel types have shown an ability to promote the growth of neural stem cells – nerve cell precursors – and stimulate their transition, or differentiation, towards mature nerve cells.

The researchers found that when neural stem cells derived from mice were encapsulated in the new hydrogel (call CDAH2), they grew by 650% over two weeks in cell cultures – significantly more than the 511% seen with the control hydrogels.

CDAH2 hydrogels were also more able to direct neural stem cell differentiation towards nerve cells, as reflected by increased gene activity associated with nerve cell maturation.

Evidence also suggested that CDAH2 gels were anti-inflammatory. Treatment with interferon-gamma, a pro-inflammatory molecule, led neural stem cells to show signs of inflammation and cell death. After encapsulating the cells with the nanoparticles for 12 hours, the ratio of unhealthy or dead cells declined significantly. Specifically, about 80% of unhealthy and inflamed cells transformed back to a healthy status in the presence of the hydrogel.

When mouse macrophages – a type of immune cell – were encapsulated in CDAH2 in cell cultures, inflammatory molecule levels were significantly lower and anti-inflammatory molecules significantly higher than in cells encapsulated in a control hydrogel.

The researchers injected either CDAH2, a control hydrogel, or saline directly into the brains of a rat model of Parkinson's. Similar to the effects observed in cell cultures, macrophages in the rats' brains showed an anti-inflammatory shift two week after CDAH2

(continued on page 6...)

Other Local Support Groups:

Due to Coronavirus concerns, check ahead to see if canceled

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 [redacted] or [redacted] to let her know you are coming.

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 [redacted] or

Syble Krafft at [redacted].

Other Opportunities:

Due to Coronavirus concerns, check ahead to see if canceled

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, an evidenced based voice treatment program designed for Parkinson's patients

Swallowing
- Neuromuscular Electrical Stimulation Therapy
- Respiratory Muscle Strength Training
Aphasia following stroke
Cognitive-Linguistic Deficits

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

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 [redacted].

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 or [redacted].

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 or call/text 719-345-2887.

Thank You!

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

November Executive Committee Meetings

November 15th at 11:00 a.m. | Location: Place to be determined (you will be notified by email)

Contact Jill at 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.

December/January Newsletter

Input Deadline: Nov 16th
Call or e-mail Julie at: [redacted]
db_mgr@co-parkinson.org



Steven Boswell
Ron Brown
Fred Carrico
Susan Coddington
Janet Corns
Sheila Davis
Joseph Facer

Dorothy Filippi
Dick Geist
Doug Gibb
Richard (John) Hero
Brenda Hicks
Harry (Bill) Killa
Joan Lydon

Donna MacDonald
Carolyn Mangold
Pat Murphy
Jerry Nelson
Neal Purdy
John Reid
Jack Risley

John Rogers
Joanne Snelling
Diane Winkler
Marilyn Wisler

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

Recipe of the Month: Bacon-Wrapped Keto Meatloaf

Our low carb/good fat ketogenic study that was completed this past year 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 the caregivers who chose to change their diet along with their Parkinsonians). 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 at our potlucks.



- 2 Tbl olive oil
- 3 stalks celery, finely chopped
- 2 tsp onion powder
- 2 tsp Italian herbs, dried
- 2 tsp dry mustard
- 3 Tbl tomato paste
- 1 1/2 lbs ground Beef
- 1/3 C fine almond flour
- 1/3 C grated Parmesan cheese
- 2 large eggs, lightly beaten
- 2 Tbl soy sauce (wheat-free)
- sea salt & black pepper
- 6 strips of bacon
- 2 Tbl keto brown sugar (Swerve)

Preheat oven to 400 degrees. Line baking sheet with foil.
In skillet over medium heat, heat oil. Add celery & cook, stirring for 4 minutes. Stir in onion powder, herbs & 1 1/2 tsp mustard & cook 1 minute. Stir in 1 Tbl of tomato paste and cook for 1 minute more. Set aside.
In a large bowl, combine beef, flour cheese, eggs, 1 Tbl of soy sauce & celery mixture. Season with 1 1/2 tsp salt (or less) & 1/4 tsp pepper.
Transfer beef mixture to baking sheet & shape into loaf 5" wide, 8" long & 2" tall. Arrange bacon slices in 1 layer on top, widthwise, tucking the ends underneath the loaf.
In a small bowl, whisk together the remaining 1/2 tsp mustard, the remaining 2 Tbl tomato paste & the remaining soy sauce. Add the brown sugar & 2 Tbl of water. Combine. Brush or drizzle over loaf.
Bake on lower rack until bacon is crispy, 45 to 50 minutes. Internal temperature should be 160 degrees when done. Let rest for 10 minutes. If bacon is burning, cover loosely with foil.

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.

PD Exercise Classes: Check ahead to see if canceled

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.ormaadance.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 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

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

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

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

One-on-One Physical Therapy for people with Parkinson's Disease and all movement disorders

Provided by Danielle (Spivey) Mulligan, PT, MSPT who is a Physical Therapist, Certified Vestibular Therapist, LSVT and PWR for Parkinson's
Location: 5818 N. Nevada Avenue, Suite 325
Phone Number: 719-365-6871

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

Falcon Exercise Group

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

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 for info

LENDING LOCKER INVENTORY

If you would like to borrow any of the equipment listed here, please contact: Rich Sauvain at 719-337-7911.

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
Back brace	1
Bed cane	3
Bed pan	1
Bed rails	1
Bed risers	1 set
Bedside toilets	6
Canes	7
Crutches	2 sets
Double exercise pedals	1
Exercise bike	1
Lift chairs	2
Lift-ware tremor compensating utensils	1 set
Pick-up assist	6
Shower benches	10
Sock helper	2
Stair chair rail system	1
Swivel seat	1
Toilet arm assist	1
Toilet seats	3
Transport chairs	3
Tub rail	2
U-step	3
Walkers with wheels & seat	12
Wheelchairs	6

A CPF Charitable Giving Opportunity!

Another reminder about an easy and painless way for you to help CPF. An ongoing charitable giving opportunity each time you order merchandise from Amazon. It's called **Amazon Smile**. Colorado Parkinson Foundation (which includes CSPSG and all its other support groups) is listed with Amazon Smile as a charity that you can generate donations for. Rather than starting your Amazon shopping by pulling up **Amazon.com**, type in **SMILE.AMAZON.COM** instead.

The first time you do that you will have to designate Colorado Parkinson Foundation, Inc. as the recipient of charitable donations based on your purchases. From then on 0.5% of the eligible purchase prices you place through Amazon Smile will automatically generate donations from Amazon to CPF – at no cost to you!

Coronavirus and Parkinson's Disease

For information on coronavirus and Parkinson's Disease go to: www.parkinson.org/CoronaVirus.

(...continued from page 3)

treatment, one that was significantly greater than that observed in rats receiving the control gel.

The cellular findings also translated into functional improvements in the rats, CDAH2-treated rats showed significant recovery of motor function after treatment, whereas those given the control gel did not improve.

Examining the rats' brains showed that the electroconductive CDAH2 gel injection led to increased density of dopamine-producing nerve

cells in the brain. These are the cells that are predominately lost in Parkinson's. Sign of neuroinflammation also diminished.

The findings suggest the new electroconductive hydrogels have therapeutic properties that may be beneficial in Parkinson's, the researchers said, noting that their hydrogels differ from previously reported ones because they are inherently therapeutic.

"These findings support conductive CDAH hydrogels as promising biomaterials for neuroprotection and [Parkinson's] treatment," the researchers concluded.

Turning Words Into Actions May Improve Memory

By Margarida Maia, PhD – Parkinson's News Today, 9/21/22

Acting out a word or phrase may help people keep memory of it — a phenomenon called the enactment effect — and this also may hold true for those with poor motor control due to Parkinson's disease, according to a review study.

"Our meta-analysis found that even Parkinson's disease patients who struggle to execute actions can have their memory improved by enactment, possibly because their planning abilities remain intact," Brady Roberts, said in a press release. Roberts is the study's first author and a PhD candidate in cognitive neuroscience at the University of Waterloo, in Canada.

The review study, "[The enactment effect: A systematic review and meta-analysis of behavioral, neuroimaging, and patient studies](#)," was published in the *Psychological Bulletin*.

Parkinson's is a neurodegenerative disease that occurs when there is a loss of nerve cells in the *substantia nigra*, a region of the brain that helps control body movements.

Exercise Eases Motor Symptoms in Parkinson's Early-to-mid Stages

This causes a range of motor symptoms, from resting tremor to muscle rigidity and slowness of movement. But there also are non-motor symptoms, such as mood changes and cognitive deficits, which can include memory problems.

"When you stop and think about it, memory permeates throughout most other cognitive functions," said Roberts. "I've seen the real need for memory research in my own grandmother who is starting to demonstrate

memory deterioration that comes with aging."

"The enactment effect is the phenomenon that physically performing an action represented by a word or phrase (e.g., clap your hands) results in better memory than does simply reading it," the researchers wrote.

To get a general view of how the enactment effect works, Roberts systematically reviewed studies on the phenomenon that were published in the past 60 years. Roberts worked with his supervisors Myra Fernandes, PhD, and Colin MacLeod, PhD, both professors in the psychology department at the University of Waterloo.

"Our objective was to contextualize the enactment effect as a powerful memory strategy, and we found it can benefit people across a range of demographics and cognitive abilities," Roberts said.

A total of 183 studies were included in the meta-analysis. Most (145 studies, 79.3%) were behavioral studies, seven (3.8%) were neuroimaging studies, and 31 (16.9%) were studies of people with neurological conditions.

The team analyzed how different strategies — physical actions, reading words or phrases, watching another person perform actions, and imagining performing actions — change how much information can be stored and retained.

Pooled data from the behavioral studies showed that enactment had a large effect on memory performance. However, its effect

varied depending on the design of the study and the strategy used for comparison.

Neuroimaging studies indicated that enactment mainly turns on two regions of the brain: the motor cortex, which regulates body movements, and the inferior parietal lobule, which helps people imagine objects, pay attention, and work their language.

Alzheimer's, too

Pooled results from studies on neurologic disease patients showed that even those with poor motor control due to Parkinson's, or patients with memory problems due to Alzheimer's, another neurodegenerative disease, benefited from the enactment effect.

"Enactment was found to be a reliable and effective mnemonic tool for both neurotypical [neurologically typical] and patient populations," the team wrote.

The findings also highlighted "two components accounting for the memory benefit from enactment: a primary mental contribution relating to planning the action and a secondary physical contribution of the action itself," they added.

"Enactment is a great example of rich multisensory encoding," Roberts said.

The findings establish a foundation for designing strategies to improve memory for all.

"Given the potency and ease-of-use of enactment in real-world settings, including improving memory in patients with Alzheimer's disease, it's an important area of research worthy of further exploration," Roberts said.

Way of Producing Adult Nerve Cells Aid Memory, Ease Anxiety in Mice

By Parkinson's News Today

A group of cells in the hypothalamus, a specific brain region, are responsible for stimulating the production of adult-born nerve cells, or neurons, in another region called the hippocampus. Activating these new nerve cells leads to better memory performance in mice, a study reported.

These findings suggest that stimulating the production of new neurons — a

process called neurogenesis — may be a promising way to help treat disorders like Parkinson's disease, characterized by cognitive problems.

"Targeting the hypothalamic neurons to enhance adult hippocampal neurogenesis will not only benefit brain functions, but also holds the potential to treat cognitive and affective deficits associated with various brain disorders" Juan

Song, PhD, an associate professor of pharmacology at the University of North Carolina and the study's senior author, said in a press release.

The study, "Hypothalamic modulation of adult hippocampal neurogenesis in mice confers activity-dependent regulation of memory and anxiety-like behavior," was published in *Nature Neuroscience*.

Could climbing help people with Parkinson's disease reach new heights?

By Scarlett Sherriff – Parkinson's Life, 10/6/22
Researchers in Vienna, Austria, have found that sport climbing may help people with Parkinson's to "significantly" improve their posture

Ever thought of climbing for fun? According to experts, the benefits of the sport can be wide-ranging – with the potential to improve cardiorespiratory fitness, strength, balance and flexibility. Now, a new study has suggested that climbing may also offer “significant” positive effects on posture in people with mild to moderate Parkinson's.

Because the condition affects control of automatic activities – such as reminders sent from the brain to stand up straight – people with Parkinson's may have stooped posture. To find out whether climbing could help tackle this symptom, researchers in Vienna, Austria, conducted a 12-week study involving 46 people with the condition.

Among these participants, one group took part in sport climbing while a control group carried out a different, unsupervised exercise of their choice. Throughout the study period, members of the climbing group – who had no prior experience with the sport – conducted 90 minutes of supervised rope climbing per week.

After three months, all participants were measured in terms of forward flexion (bending) of the spine.

“There's no burden you can't conquer”

The results, which were presented at this year's International Congress of Parkinson's Disease and Movement Disorders in Madrid, Spain, revealed that those who practiced climbing throughout the study period saw improvements in their back posture.

Based on the findings, the study authors concluded that sport climbing “significantly improves posture in mild to moderate Parkinson's disease”.

Speaking to medical news provider ‘Medscape,’ Dr Heidemarie Zach – associate professor of neurology at the Medical University of Vienna, Austria, and an author on the study – said: “As long as you can walk independently and walk up a stair, you can go climbing. There's no hurdle too high over which you can't climb or burden you can't conquer.”

Are Scientists homing in on a cure for Parkinson's Disease?

By Dr. Richard Meade – University of Bath – Medical Press, Dec 9, 2021

A molecule that shows promise in preventing Parkinson's disease has been refined by scientists at the University of Bath in the UK, and has the potential to be developed into a drug to treat the deadly neurodegenerative disease.

Professor Jody Mason, who led the research from the Department of Biology and Biochemistry at Bath, said: “A lot of work still need to happen, but this molecule has the potential to be a precursor to a drug. Today there are only medicines to treat the symptoms of Parkinson's – we hope to develop a drug that can return people to good health even before symptoms develop.”

Parkinson's Disease is characterized by a specific protein in human cells ‘misfolding’, where it becomes aggregated and malfunctions. The protein – alpha-synuclein (aS) – is abundant in all human brains. After misfolding, it accumulates in large masses, known as Lewy bodies. These masses consist of aS aggregates that are toxic to dopamine-producing brain cells, causing them to die. It is this drop in dopamine signaling that triggers the symptoms of Parkinson's Disease, as the signals transmitting from the brain to the body become noisy, leading to the distinctive tremors seen in sufferers.

Previous efforts to target and ‘detoxify’ aS-induced neurodegeneration have seen scientists analyze a vast library of peptides (short chains of amino acids – the building blocks of proteins) to find the best candidate for preventing aS misfolding. Of the 209,952 peptides screened in earlier work by scientists at Bath, peptide 4554W showed the most promise, inhibiting aS from aggregating into toxic disease forms in lab experiments in solutions and on live cells.

In their latest work, this same group of scientists tweaked peptide 4554W to optimize its function. The new version of the molecule – 4654W(N5A) – contains two modifications to the parental amino-acid sequence and has proven to be significantly more effective at reducing aS misfolding, aggregation and toxicity. However, even if the modified molecule continues to prove successful in lab experiments, a cure for the disease is still many years away.

Dr. Richard Meade, the study lead author, says that “previous attempts to inhibit alpha synuclein aggregation with

small molecule drugs has been unfruitful as they are too small to inhibit such large protein interactions. This is why peptides are a good option – because they big enough to prevent the protein from aggregating but small enough to be used as a drug. The effectiveness of the 4654W(N6A) peptide on alpha synuclein aggregation and cell survival in cultures is very exciting, as it highlights that we now know where to target on the alpha synuclein protein to suppress its toxicity. Not only will this research lead to the development of new treatments to prevent the disease, but it is also uncovering fundamental mechanisms of the disease itself. Furthering our understanding of why the protein misfolds in the first place.”

Professor Mason added that “next, we'll be working on how we can take this peptide to clinic. We need to find ways to modify it further so it's more drug-like and can cross biological membranes and get into the cells of the brain. This may mean moving away from naturally occurring amino acids towards molecules that are made in the lab.”

This research also has implications for Alzheimer's disease, Type 2 diabetes and other serious human diseases where symptoms are triggered by protein misfolding.

Dr. Rosa Sancho, head of research at Alzheimer's Research UK, said that “finding ways to stop alpha synuclein from becoming toxic and damaging brain cells could highlight a new pathway for future drugs to stop devastating diseases like Parkinson's and dementia with Lewy bodies.”

“We're pleased to have supported this important work to develop a molecule that can stop alpha synuclein from misfolding. The molecule has been tested in cells in the laboratory and will need further development and testing before it can be made into a treatment. This process will take a number of years, but it is a promising discovery that could pave the way for a new drug in future.”

“Currently there are no disease-modifying treatments available for Parkinson's disease or dementia with Lewy bodies, which is why continued investment in research is so important for all those living with these diseases.”

The research was published in *Journal of Molecular Biology*.

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PARKINSON'S PERSPECTIVE

NOVEMBER 2022

Coming Events

See inside for more information

November 12th - Reg Mtg - 10 am; **Program:** Breakout Sessions
Moderators: Steve Locke – Parkinsonians; Jill Reid & Julie Pfarrer – Caregivers

December 10th - Reg Mtg - 10 am; **Program:** Christmas Party!!!!

January 14th - Reg Mtg - 10 am; **Program:** Deep Brain Stimulation;
Speaker: Dr. Amit Ayer MD - Neurosurgeon

February 11th - Reg Mtg - 10 am; **Program:** Breakout Sessions
Moderators: Steve Locke – Parkinsonians; Jill Reid & Julie Pfarrer – Caregivers

March 11th - Reg Mtg - 10 am; **Program:** Parkinson's 101;
Speaker: Jill Reid, Educational Outreach

More useful websites:

<https://parkinsonsnewstoday.com>; www.parkinsonrockies.org; www.parkinson.org; www.nwpcf.org; 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; www.parkinsonheartland.org;
<https://www.pdself.org>; https://www.youtube.com/playlist?list=PLkPIhQnN7cN6dAJZ5K5zQzY84btUTLo_C; pmdalliance.org;