



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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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, October 8th – 10:00 am – 1:30 pm

We will be Zooming and 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.



October Program: Dr. Brian Grabert, MD

Topic: Your questions answered by a Parkinson's expert

About the Speaker: Dr. Grabert, a retired neurologist who specialized in Parkinson's disease, is familiar to those who have been in our support group for very long. He has been a widely respected Parkinson's neurologist in our local community for many years. He and his wife, Julianne, ran CSPSG in the 90's when it was called JTPSG and he has continued to speak regularly to our group for over two decades, keeping us updated on the latest Parkinson's information.

The October Potluck - Casseroles!!!

If you would like to sign up to be one of the providers of the main dish, side dish or a dessert for the October meeting, you can contact Bill Hicks at [REDACTED] or potluck@co-parkinson.org, no later than Wednesday, October 5th 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!!!



A nother 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.



The President's Corner

| Jill Reid - Acting President, CPF & CSPSG

Our September meeting featured break-out sessions with caregivers meeting in one room and people with Parkinson's meeting in the main Fellowship Hall. Both groups had lively discussions with many questions asked and, hopefully, answered—which is why we have these sessions on a regular basis. But have you ever left one of those sessions without having the opportunity to ask your question?

Since we have a limited amount of time during these sessions, a lot of your great questions DON'T get asked, much less answered, during the quarterly break-out sessions. To alleviate some of the resulting frustration, we're adopting a really great idea that came out of the caregivers' session (thanks, Linda Koloski!): adding a new column, called Q & A (questions and answers), to our monthly newsletter. You can email your questions about issues you're having with living with Parkinson's to db_mgr@co-parkinson.org, and the question and answer will appear in an upcoming newsletter (ideally, the next newsletter).



Another great suggestion came out of the caregivers' session. A caregiver was extremely concerned that her husband would fall due to his orthostatic hypotension and light-headedness from his carb-levo; to add to the danger, he has other health issues that could lead to serious injury if he falls. Another caregiver had the answer: a PVC walker with a seat. She described it as an adult version of the walkers used by babies who are learning how to walk—the kind that completely surrounds them and has built-in seats. When the babies lose their balance, rather than falling to the ground, they land in the seat! Below are a couple of examples of the adult versions. I googled "PVC walker for adults" on the internet and found these and several more. I didn't check prices, but to me **safety is worth the price, whatever it is!!**



Parkinson's – Living with the Parking Brake On

Tara Sauvain's artwork

In the President's Corner of the July/August newsletter I told you about Tara Sauvain's artwork, "Parkinson's – Living with the Parking Brake On." It goes up for sale during a silent auction on September 24th. I will bid on it on behalf of the Colorado Parkinson Foundation in hopes of winning and donating it to the city to put on display in a city park to spread Parkinson's awareness. See the breathtaking butterfly in the photos below.



Exercises for Trunk Rigidity Seen to Help Patients Safely Make Turns

By Steve Bryson, PhD – Parkinson's News Today, 6/27/22

A four-week, task specific exercise program done at home can improve turning ability and balance. And ease disease severity for people with early- to mid-stage Parkinson's, a small study suggested.

This Parkinson's exercise program focuses explicitly on rotating those parts of the body most involved in turning. It may be a promising alternative rehabilitation program for patients with trunk rigidity that makes turning difficult and risks falls, the researchers said.

The study, "**Benefits of task-specific movement program on en bloc turning in Parkinson's disease: A randomized controlled trial**," was published in the journal *Physiotherapy Research International*.

Trunk rigidity is a common symptom of Parkinson's disease. Instead of turning the body in a top-down approach = with the head moving first, then the shoulders and the hips – patients tend to move all these body parts together, or "en bloc."

Such rigidity in movement can affect turning and balance to increase the risk of falling, the researchers noted. While Parkinson's treatments like levodopa therapy and deep brain stimulation aim to address such difficulties, they best do so when paired with exercise training, the team added.

How task-specific movement exercises might improve "en bloc" turning in Parkinson's, however, has not been reported.

Researchers based at the Mahidol University in Thailand evaluated a month-long and task-specific movement exercise program on turning motion and clinical disease outcomes in a small patient group.

They enrolled 22 early- to mid-stage Parkinson's patients matched by age and disease severity. Half were randomly assigned to an exercise group, the other half continued with routine medication as a control group. Turning movements and clinical outcomes, determined by measures that included the Unified Parkinson's Disease Rating Scale or UPDRS< were

assessed before and after the exercise program.

Task-specific exercises were given in three weekly, physiotherapist-supervised sessions at a clinic for two weeks, then as two supervised and two at-home exercise sessions in the first week, followed by five at-home exercises for the fourth and final week.

The primary exercise program included 45 minutes of rotating, 10 times each, different parts of the body – the head, shoulders, hips, etc. – while in positions like sitting, standing, and lying down. Its goal is to increase the flexibility and mobility of each body part.

Patients then engaged for five minutes in a throwing task to improve balance, and for 10 minute in making turns in each direction while walking to increase their range of body rotation. A 15-minute warm-up and cool-down period of deep breathing and stretching was held before and after the exercises.

To measure turning movements (kinematics) and stepping motion, special sensors were attached to the center of the head, middle chest, and the feet. Participants performed a half-circle turn, and the team recorded the delays, or latencies, in the movement of each body segment as they turned, and their speed and their stepping motions.

According to the analysis, those whose engaged in the exercises had reduced latencies, or faster movement, for all body parts, including the head, chest, leading foot, and trailing foot, compared with the control group. Overall, the mean onset latency significantly decreased – indicating faster onset of move-

ment – in the exercise group only.

While turning the half-circle, the step size, total step, step duration, and turning speed all significantly improved in exercise group patients relative to the control group.

"This result could be explained by the fact that the repetition of the desired movement [180-degree turns] and task-specific training should enhance motor learning by reducing the complexity of motor planning and decreasing the reliance on sensory feedback," the researchers wrote.

UPDRS scores showed that those in the exercise group had significantly lower (improved) UPDRS total, motor, and rigidity scores compared to their pre-program scores, indicating a lessening in Parkinson's severity among these people.

The exercise program also significantly improved balance, as measured by the functional reach test, and eased the fear of falling, assessed with the fall efficacy scale, a self-report questionnaire used to evaluate a fear of falling in an elderly population.

"The main finding of this study was that a [four]-week specific home-based exercise program, which focused on TSM [task-specific movement], could improve en bloc turning and clinical outcomes in people with early-to-mid stage [Parkinson's disease]," the researchers wrote.

One study limitation was that the control group was not provided a similar amount of attention as the exercise group; thus, it "cannot be ruled out as a factor contributing to group differences," they said.

Research Reveals Cause of 'Freezing' Gait In Parkinson's

By Dennis Thompson, Reporter – HealthDay News, U.S. News & World Report, 9/12/22

MONDAY, Sept. 12, 2022 (HealthDay News) -- Researchers think they've figured out why Parkinson's disease causes a person's limbs to become so stiff that at times they

Using a robotic chair equipped with sensors, a research team has linked the activation of leg muscles in Parkinson's patients with a region of the brain called the subthalamic nucleus.

This oval-shaped brain area is involved in movement regulation, and data from the chair show that it controls the start, finish and size of a person's leg movements, according to research published Sept. 7 in *Science Translational Medicine*.

"Our results have helped uncover clear changes in brain activity related to leg movements," said senior researcher Eduardo Martin Moraud, a junior principal investigator at the University of Lausanne in Switzerland.

"We could confirm that the same modulations underlie the encoding of walking states -- for example, changes between standing, walking, turning, avoiding obstacles or stair climbing -- and walking deficits such as freezing of gait," Moraud said.

Parkinson's disease is a degenerative

disorder of the nervous system that primarily affects the body's motor functions.

Parkinson's patients have trouble regulating the size and speed of their movements, according to the Parkinson's Foundation. They struggle to start or stop movements, link different movements to accomplish a task like standing up, or finish one movement before they begin the next.

The subthalamic nucleus is part of the basal ganglia, a network of brain structures known to control several aspects of the body's motor system, said Dr. James Liao, a neurologist with the Cleveland Clinic who reviewed the findings.

"This study is the first to convincingly demonstrate that the basal ganglia control the vigor of leg movements," Liao said. "The significance is that this links dysfunction of the basal ganglia to the shuffling gait deficit of Parkinson's disease."

To research Parkinson's effect on walking, researchers built a robotic chair in which a person could either voluntarily extend their leg from the knee or the chair could do it for them.

Researchers recruited 18 Parkinson's patients with severe motor fluctuations and

problems with their walking gait and their balance. Each patient was implanted with electrodes that could track electrical signals from their subthalamic nucleus and also provide deep brain stimulation to that brain region.

Impulses coming from the subthalamic nucleus were tracked as patients used the chair and later as they stood and walked.

"The fact that all these walking aspects are encoded in that region of the brain makes us believe that it contributes to walking function and dysfunction, thereby making it an interesting region for therapies and/or for predicting problems before they arise," Moraud said. "We could leverage that understanding to design real-time decoding algorithms that can predict those walking aspects in real-time, using brain signals only."

In fact, the researchers did create several computer algorithms that distinguished the brain signals from a regular stride from those that occur in patients with an impaired gait. The team also could identify freezing episodes in patients as they performed short walking tests.

"The authors demonstrated that periods of gait freezing can be predicted from rec-
(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]

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 Kraft at [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 [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].

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.

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 & cleanup at the last meeting!



Kathryn Allie
Ann Brand
Joshua Campbell
Roger Christiansen
Richard Cobey
Charlene Costello
Mike Cunningham

Ruby Doyle
Eddie Edwards
Bobbie Hamilton
Phil Horton
Betsy Hughes
Steve Kozeliski
Linda Krager

Elaine Laue
Rudy Legleiter
Karen McCraley
Katja Pinion
Sean Prescott
Ed Santos
Marda Santos

Linda Marie Shrewsbury
Keith Smith
Jan Suhr
Rick Thomas
Scott Van Pelt
Charles Wells
Helen Zinn

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

Recipe of the Month: Cauliflower "Potato" Salad

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.

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.

Kosher salt
1 large head cauliflower, cut into florets (6-8 C)
1/2 C mayonnaise
2 T yellow mustard
1 T apple cider vinegar
Black pepper

1/3 C chopped dill pickles (or dill relish)
2 T chopped fresh dill
1 T chopped fresh chives
3 + hard boiled eggs, chopped (6 suggested)
2 celery stalks, chopped
1 shallot, diced

Bring a pot of salted water to a boil. Add cauliflower florets to boiling water and cook until tender, 5 to 7 minutes. Drain well and cool to room temperature.

Add mayo, mustard, vinegar, 1/2 t salt and 1/2 t pepper to a large mixing bowl and whisk to combine. Then add the cooled cauliflower, pickles, dill, chives, eggs, celery and shallot. Mix until thoroughly combined. Serve at room temperature or cover and store in the refrigerator until ready to serve.

Help us 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 by calling [REDACTED].

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.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 or 719-640-8478

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

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

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 (719) 683-2960

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 [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
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)

ordered neural activity," Liao said. "Accurate predictions will allow algorithms to be developed to change [deep brain stimulation] patterns in response to periods of gait freezing, shortening or even eliminating freezing episodes completely."

Moraud said these findings could help inform future technologies aimed at improving the mobility of Parkinson's patients.

"There are big hopes that the next generation of deep brain stimulation therapies, which will operate in closed loop -- meaning that they will deliver electrical stimulation in a smart and precise manner, based on feedback of what each patient needs -- may help better alleviate gait and balance deficits," Moraud said.

"However, closed-loop protocols are contingent on signals that can help control the delivery of stimulation in real-time. Our results open such possibilities," he

added.

Dr. Michael Okun, national medical adviser of the Parkinson's Foundation, agreed.

"Understanding the brain networks underpinning walking in Parkinson's disease will be important to the future development of therapeutics," Okun said. "The key question for this research team is whether the information they have gathered is enough to drive a neuroprosthetic system to improve Parkinson's walking ability."

App for Voice 'Games' May Aid At-home Speech Therapy Practice

By Lindsey Shapiro, PhD – Parkinson's News Today, 6/20/22

Researchers have proposed a set of voice exercise games to help speech quality in people with Parkinson's disease, which licensed speech therapist found to be a generally feasible, promising approach.

If adopted in speech therapy routines, the games could motivate patients to practice more often at the home so that their voice better retains volume and clarity, the researchers suggested.

The proposed approach, "[The BioVisualSpeech Serious Game with Voice Exercises for People with Parkinson's Disease with Hypokinetic Dysarthria](#)," was published in *Studies in Health Technology and Informatics*.

Speech changes, including dysarthria or difficulty speaking, are common in Parkinson's, affecting about 89% of those with the condition. Often, patients have hypokinetic dysarthria, characterized by a reduced voice intensity, problems articulating words, a hoarse voice, and monotonous pitch.

While these speech changes can affect a person's social and professional life, only 3% to 4% of those with such alterations take part in speech therapy to improve their ability to communicate, the researchers reported.

Additionally, the success of such therapies requires intensive training and participants' willingness to practice regularly at home, for which the essential motivation can be challenging.

A pair of researchers in Portugal proposed a game-based way of practicing voice exercises for Parkinson's patients with hypokinetic dysarthria, designed to make and keep them motivated.

"Our proposal is to combine therapy, technology, feedback, and fun to motivate patients to practice the voice exercises regularly and at home, and to give them the appropriate feedback that allow them to understand their performance," the researchers wrote.

Accessed as an app on a computer or mobile device and controlled by the user's voice, the game involves three exercises commonly used in speech therapy and selected at the advice of speech therapists. Each has a particular focus on helping a person increase their vocal intensity, or ability to speak more loudly.

With intensity first determined for each participant by a speech therapist, players are asked to sustain a vowel sound at a stable intensity, to sustain the same vowel sound while adding pitch variations, and to practice the use of functional phrases common to daily life routines.

Each game's goal is to get an onscreen character to move in a

straight line toward a box holding a surprise, picking it up once reached.

The character's movement is controlled by the player's voice, and it moves forward only if the voice is within the intensity range – and pitch, when relevant to the exercise – chosen by the therapist. Reaching the box unlocks new game features. Characters stop moving when vocal intensity is inadequate, and a player then has a few seconds to correct their voice before the game ends in failure.

"In this way, the character's movement provides intuitive visual feedback on the player's vocal intensity," the researchers wrote.

Exercises can be adapted to meet an individual's particular needs and abilities, and therapists can alter the game's difficulty as a person improves.

Additional features to help with motivation, the researchers noted, include a push notification reminder if the app has not been opened for more than a day. Points awarded when vocal intensity is maintained within the set range also allow players to accrue coins that can be used to unlock new characters or scenarios.

Researchers asked six speech therapists, with between three and 37 years of experience working with Parkinson's patients, to evaluate the game. Generally, the therapists found it to be a useful tool for keeping patients motivated both during therapy sessions and at the home.

"The game can be a good option for patients to train without the presence of a [speech therapist], every day or consistently, however it has some features that may depend on the [therapist], such as microphone calibration and customization," the researchers wrote. "Thus it would be required that the game is parameterized at a therapy session prior to being used at home."

The six therapists largely thought the game was appropriate for people with Parkinson's and had potential to improve voice quality.

According to the researchers, "the game fulfills its main objectives: (1) it motivates training, (2) it is suitable for home training provided there is an initially in-person session for customization, (3) it gives intuitive visual feedback on the player's voice performance and (4) it has potential to help improve voice performance."

Voice training that can be done at the home also offers an alternative to the face-to-face appointments that can be difficult, the team added.

Machine Learning IDs Approved Meds With Potential for Parkinson's

By Steve Bryson, PhD – Parkinson's News Today, 9/1/22

Screening a large database with machine learning tools helped scientists identify approved medicines for other diseases that reduced the risk of developing Parkinson's, a study reported.

According to researchers, these potential Parkinson's disease therapies "deserve to be confirmed" in larger studies.

"Drug repurposing or repositioning is the application of a known drug to new indications and can lead to shorter and inexpensive drug development cycles with increased probability of success," the team wrote.

Among the medication identified for possible further study were plain sulfonamide diuretics, particularly furosemide, which are used to reduce extra body fluid caused by conditions including heart failure. Exposure to these medications was linked to a reduced Parkinson's risk, the scientists noted.

The machine learning study, "Identifying Protective Drugs for Parkinson's Disease in Health-Care Databases Using Machine Learning," was published in the journal *Movement Disorders*.

AI Platform Shows Potential in Diagnosing Patients at Early Stages

Using machine learning in research

The available treatments for Parkinson's disease to date are only partially effective and fail to markedly delay disease progression. Thus, there is growing interest in repurposing existing medications as an accelerated method of therapeutic development.

Such approved treatments, having already been rigorously tested in clinical trials, generally have established safety profiles.

Studies have suggested that people treated with certain medications, including immunosuppressants or those that widen the airways, called bronchodilators, have a lower risk of developing Parkinson's.

These findings prompted researchers based at the Université Paris-Saclay, in France, to use machine learning tools to automatically screen a large database of marketed therapies to detect those related to a lower risk of Parkinson's.

"This study is part of a research effort aimed at identifying already-developed compounds associated with reduced [Parkinson's disease] risk," the researchers noted.

Data were collected from the French national health data system. A total of 40,760 incident Parkinson's patients were identified based on the details of at least one claim for an anti-Parkinson's medication from 2016 to 2018. A control group of 176,395 individuals of similar age, sex, and area of residence were included as a comparison.

Because data were accessible from 2006 onward, at least a 10-year follow-up was available before a Parkinson's diagnosis. A lag of eight years before the diagnosis date was considered to be due to the long prodromal or pre-diagnostic phase of Parkinson's. Notably, many patients face a delayed diagnosis of Parkinson's because its symptoms are common to other disorders.

Given that, the team assessed therapeutic exposure and related factors during the two years before the lag period (exposure period) to find associations to a reduced risk of developing Parkinson's disease.

The machine learning analysis identified eight potential therapies as part of six subgroups.

Repurposed Therapies, New Compounds to Be Tested to Block Brain Inflammation in Parkinson's

Identifying potential therapies

The strongest signal corresponded to plain sulfonamide diuretics, medications that promote the release of water from the body. Among them, furosemide — used to reduce extra bodily fluid caused by conditions such as heart failure, liver disease, and kidney disease — was most represented. Both frequent and ever exposure — ever exposure is coming into contact with a drug at any point — to furosemide stood out.

A suggestive signal came from frequent exposure to medications related to nicotine dependence. Nicotine is the chemical in tobacco that makes it hard for smokers to quit. This exposure was equally distributed between users of nicotine and varenicline, a therapy to help people stop smoking. Of these two medicines, only regular exposure to varenicline was associated with lower Parkinson's risk.

Insulin aspart, a short-acting, lab-made version of human insulin, was the most represented substance among insulin and related therapies, with only sporadic use as a signal.

Among adrenergic medications, related to adrenaline, frequent exposure to formoterol, a bronchodilator in lung diseases, combined with anti-inflammatory corticosteroid budesonide, generated a signal. That signal corresponded to those ever exposed to the immunosuppressant mycophenolic acid.

Subgroups of soft paraffin and fat products, and direct-acting muscle relaxants also were identified via machine learning, but no signals were detected for specific medicines within these classes.

Following that testing, the team refined the analysis using a more specific definition of Parkinson's. Here, 29,873 Parkinson's patients and 176,395 controls were assessed. Overall, these analyses yielded results consistent with those from the whole group.

All signals identified in the primary analysis also were generated using the refined group, except for insulin and related therapies. The signal for plain sulfonamide diuretics, particularly furosemide, was stronger compared with the primary analysis.

Two signals were regenerated for the two main treatments for nicotine dependence (nicotine and varenicline), alongside any exposure to the bronchodilator tiotropium bromide and direct-acting muscle relaxants.

New signals not found in the primary analysis were identified, including medical moisturizers called emollients used to treat skin conditions, as well as anti-inflammatory medications and non-steroids for topical use. Anticholinergics, or substances that block the action of the nerve cell signaling molecule called acetylcholine, and mucolytics — used to clear mucus from the airways — also generate a signal.

"The search for new [Parkinson's disease] therapies through drug repositioning has gained attention given the current lack of fully satisfactory therapeutic options," the researchers wrote. "We screened ... a large number of drugs and identified plain sulfonamide diuretics as a drug chemical subgroup potentially inversely associated with [Parkinson's disease] risk."

"Our findings result in new hypotheses that deserve replication and could lead to developing new therapeutic or preventive strategies in [Parkinson's disease]," the researchers added.

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PARKINSON'S PERSPECTIVE

OCTOBER 2022

Coming Events

See inside for more information

October 8th - Reg Mtg - 10 am; **Program:** Parkinson's Update, Questions & Answers;
Speaker: Dr. Brian Grabert MD

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.nwfp.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.pdsself.org>; https://www.youtube.com/playlist?list=PLkPlhQnN7cN6dAJZ5K5zQzY84btUTLo_C; pmdalliance.org;