

Parkinson's Post

to educate, inspire and empower individuals affected by Parkinson's

Welcome to the Summer 2021 edition of Parkinson's Post!

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The Department of Neurological Sciences at the University of Nebraska Medical Center (UNMC)/Nebraska Medicine is very excited to announce that the Parkinson Disease in 2021: A Conference for Parkinson's Disease Patients, Family, and Care Partners.

The conference will be held Monday, October 18, at Scott Conference Center, 6450 Pine Street, Omaha, Neb. This year, we are offering both an in-person and webinar conference, therefore, if you are unable to attend then event, you still can participate through the webinar. The registrations will all be completed on-line (for both in-person and webinar options). Due to space restrictions, there will be limited number of seats and tables available at conference, so if you plan on attending, please submit your registration as soon as possible.

In-person registration begins on Friday, August 20 starting at 8 a.m. You will utilize the following link: <https://www.eventbrite.com/e/parkinsons-disease-conference-for-patients-their-familiescare-partners-tickets-165014545949>.

Our Movement Disorder Team at UNMC/Nebraska Medicine continues to provide state of the art care for our patients while utilizing a combination of telemedicine and clinic visits. The well-being of our patients, their families and caregivers continues to be one of our highest priorities. We also have continued our Parkinson's Support Group; however, all are now virtual to accommodate our Parkinson's community. We have continued our virtual PD Care Partners Support Group and virtual Women with PD Support Group (refer to Upcoming Events at the end of the newsletter for registration details and date and time changes) which have been very well attended! We are always welcoming new participants to all our support groups and accepting new patient referrals to our Movement Disorder program. Happy summer!



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Time to Change it Up!

Jenna Paseka, MS, RD, LMNT

Nutrition Therapist | Neurological Sciences | Nebraska Medicine

My challenge to you is to try a new recipe this summer! Adding more variety into your diet not only can change meals up, but it can also introduce beneficial nutrients your body needs. Here are two Mediterranean diet recipes that incorporate two summer vegetables: zucchini and bell peppers. These also include other healthy, unique ingredients like millet, chickpeas, tuna, and cannellini beans.

Zucchini is a variety of summer squash that is low in calories and high in fiber. Zucchini has lutein and zeaxanthin which are antioxidants plus a nice source of vitamin C, potassium, and vitamin B6.

Millet with Zucchini and Chickpeas

YIELDS: 8 servings

TIME: 40 minutes

INGREDIENTS:

3 tablespoons extra-virgin olive oil, divided
2 medium zucchini, diced into 1" cubes
Salt Pepper
1 large yellow onion, diced
4 cloves garlic, minced
2 cups millet
3 cups low sodium vegetable broth
3 cups water



1 tsp curry powder
1 (15-ounce) can of chickpeas, no salt added, rinsed and drained
¾ cup golden raisins (optional)

INSTRUCTIONS:

1. In a medium-sized pot, heat one tablespoon olive oil on medium heat. Add zucchini with salt and pepper to taste, stirring occasionally. Sauté for 4 to 5 minutes, or until the vegetable softens but retains slight crispness. Remove zucchini from pot and set aside.
2. In the same pot, heat two tablespoons olive oil on medium heat. Add onions and garlic, and sauté for 4 to 5 minutes, or until onions are softened and translucent.
3. Add the millet to the pot, and toast for 2 to 3 minutes, stirring occasionally.
4. Add the vegetable broth, water, and curry powder. Bring to a boil, then simmer on low, covered, for 15 to 20 minutes, checking occasionally.
5. When the millet is softened, turn off the heat and allow it to sit for 5 minutes. Fluff with fork, before adding zucchini, chickpeas, and raisins (if using). Season to taste with salt and pepper, and return to heat for 1 to 2 minutes to warm if necessary.

NUTRITION PER SERVING:

Calories: 370 Sodium: 320mg Protein: 10g
Fat: 9g Carbohydrates: 63g
Saturated Fat: 1g Fiber: 9g

Bell peppers are sweet whereas other peppers often are spicy. They come in vibrant colors of green, red, yellow, and orange. Bell peppers are also high in fiber and provide a source of vitamin C, vitamin A, potassium, vitamin B6, and beta-carotene.

Tuna with White Beans, Celery and Peppers

YIELDS: 4 servings

TIME: 20 minutes

INGREDIENTS

1 tablespoon extra-virgin olive oil
1 small red onion, sliced
2 stalks celery, sliced
1 red or yellow bell pepper, seeded and sliced



1 (15-ounce) can cannellini beans, drained and rinsed
1 (2-ounce) can white tuna in water, drained
½ cup thinly sliced fresh basil or baby spinach leaves
Salt and pepper to taste

INSTRUCTIONS:

1. Heat the olive oil in a large skillet over medium heat. Add the onion, celery, and pepper and sauté for several minutes.
2. Stir in the beans and cook for 2 minutes longer.
3. Add the tuna and break it up slightly with a spatula. Add the basil and cook just until it wilts. Season with salt and pepper. Serve hot, at room temperature, or cold.

NUTRITION PER SERVING:

Calories: 190 Sodium: 210mg Protein: 16g
Fat: 6g Carbohydrate: 18g
Saturated Fat: 1g Fiber: 5g

Recipes from *Oldways*, A Food and Nutrition Nonprofit Helping People Live Healthier, Happier Lives: www.oldwayspt.org

Dystonia and Parkinson's Disease

Keil Woodward, MD

Movement Disorder Fellow | University of Nebraska Medical Center

What is Dystonia?

Dystonia is a movement disorder in which there are involuntary and repetitive muscle movements that cause a part of the body to twist or assume a particular posture. Various body parts can be affected by dystonia in Parkinson's, including the eyes, neck, trunk, and limbs. Most often, dystonia will start in one area of the body and remain there, but it can sometimes spread to other parts of the body. Examples of dystonia may be tilting or pulling of the head, difficulty opening the eyes, writer's cramp, or toe-curling or inversion of the foot when trying to walk. The abnormal muscle movements tend to worsen when using that part of the body. Some dystonia patients also find that touching or holding the affected body part in a certain way that can relieve the dystonia, which is referred to as a "sensory trick." Dystonia can sometimes be painful and can interfere with a person's desired movement.

Dystonia and Parkinson's Disease

It is important to note that many people with PD do not develop dystonia and conversely, there are numerous causes of dystonia which are unrelated to PD, including genetic disorders, brain lesions, and medication side effects. There are also dystonia syndromes that occur with no clear cause. However, dystonia can be a feature of several neurologic diseases, including PD.

Approximately 30% of people with Parkinson's disease will experience dystonia. Most commonly, dystonia occurs in PD patients sometime after treatment with levodopa or a dopamine agonist has been started. If you experience dystonia and you already take medications for PD, it is important to note when it occurs in relation to when you



take your medication because levodopa can improve dystonia, worsen it, or have no effect. Readers may find it helpful to keep a journal to log when dystonia occurs and when a dose of medication is taken to help determine a relationship between the two. If you can figure out your levodopa-dystonia relationship and inform your neurologist, it will make potential treatment of the dystonia easier.

Dystonia can also sometimes be the first symptom of PD, although this is uncommon and most frequently seen in young-onset genetic PD. In these patients, dystonia can precede the development of Parkinsonism from anywhere between 1 and 25 years, but on an average about 10 years.

Treatment of dystonia

If the dystonia becomes bothersome, either due to pain or interference with daily activities, you can discuss potential treatment options with your neurologist. Options include:

- Adjusting dopaminergic medication

dosing, timing, or formulation

- Adding new medications to treat the dystonia
- Physical and occupational therapy to loosen and strengthen the affected muscles
- Botox injections to help relax the affected muscles
- Deep brain stimulation (DBS) in difficult-to-treat situations

Although dystonia does not affect everyone with PD, it is a commonly experienced symptom and often has relation to the use of levodopa. If you experience dystonia, remember to bring it up with your neurologist because there are treatments available.

References

Albanese A, Bhatia K, Bressman SB, DeLong MR, Fahn S, Fung VSC, et al. Phenomenology and classification of dystonia: a consensus update. *Movement Disorders*. 2013 Jun 15;28(7):863–73.

Shetty AS, Bhatia KP, Lang AE. Dystonia and Parkinson's disease: What is the relationship? *Neurobiology of Disease*. 2019 Dec 1;132:104462.

The Impact of Aerobic Exercise on Mental Function

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College of Allied Health Professions | University of Nebraska Medical Center

Parkinson's disease (PD) has been described as an iceberg. Movement symptoms such as tremors, shuffling gait, rounding of upper back are visible above the water, but you cannot always see the other symptoms such as changes in memory, attention, and planning below the water's surface.

While information communicated in the media typically focuses on the symptoms you can see, many individuals diagnosed with PD are more worried about the symptoms that you cannot see. Because of this concern, scientists have spent decades researching the use of exercise to help navigate the waters around the cognitive decline that is often caused by PD.

"Cognition" is the mental trait that is involved in making decisions, thinking, and functioning. It includes attention, memory, and planning. It allows you to plan out the steps of a task like making a cup of coffee, making choices about what should be done, and helping you solve problems. Cognition is also related to how easily you can start movement, like placing a foot into a car to sit down, and your ability to physically adjust to new environments. In short, cognition is your mental ability, and it is often decreased by PD. This change is often called dementia. It is estimated that up to 80% of those diagnosed with PD will develop some level of dementia related to the disease. However, research has found that cardiovascular exercise can slow down the progression of PD, especially related to cognition.

It has been well researched that cardio exercises (like walking, cycling, or being on the NuStep) can improve the mental abilities of the general population. This is due to several factors, including preparing the brain for new information. In those with PD, it seems that aerobic (cardio) exercise can also be used to slow down the impact of "cognitive decline." This seems to be especially true for selective attention: focusing on one task while

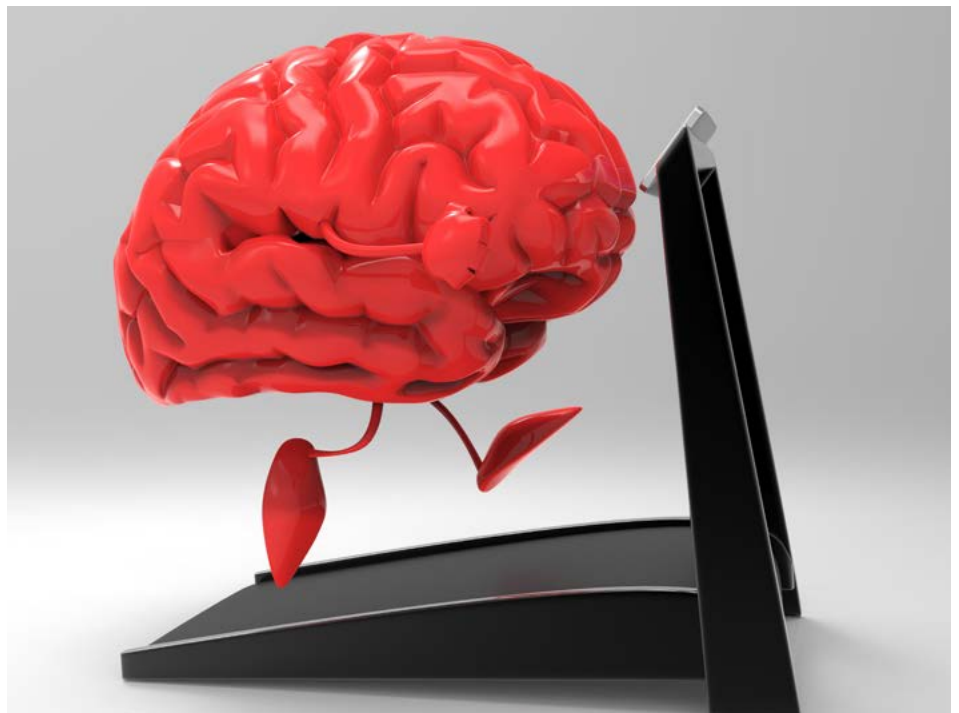
ignoring extra information that tries to get in the way. Mental flexibility can also improve with exercise, meaning that you can think about a problem or situation in a different or unique way.

Of course, cardio training is good for other reasons, too. Aerobic exercises improve fitness and endurance. This could mean a few extra years of staying independent with daily activities as we get older. Cardio activity strengthens the heart, improves blood pressure, and decreases the chance of other conditions like strokes and heart attacks. Weekly exercise has also been found to improve the ability to learn a new movement or skill in those with PD along with improved balance and function. Additionally, a weekly aerobic routine has a significant impact on depression and

anxiety. Through a consistent routine of exercise, people tend to feel more confident in their abilities and feel more in control of their symptoms.

So where should you begin? Talk to your doctor before beginning a new exercise routine. With the wide range of symptoms with Parkinson's disease and the number of medications that are often taken, each person's exercise routine will be different. Depending on your abilities and symptoms, you may want to discuss beginning your aerobic plan with a partner. Having a partner to exercise with is useful for two reasons: you will have someone with you in case you feel unsteady or unsafe, and you will

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have someone to keep you motivated and accountable for weekly exercise. For some individuals, aerobic activity may include walking around the home at an easy, leisurely pace. For others, it may involve walking at a mall or gym, or outside around the neighborhood. It may even involve a recumbent bike, NuStep, or treadmill. Most research has shown that the method of exercise is not as important as simply performing the exercise.

Currently, there has not been an agreement on the best effort level, heart rate, or length of time that someone with PD or parkinsonism should exercise. PD is not a cookie-cutter condition with clear patterns. Some people may be more affected than others. In general, a good starting goal would be the recommendations of the American Heart Association: at least 30 minutes of moderate-intensity cardio activity, five days per week. One way to monitor if you are at “moderate-intensity” is to monitor your breathing. If you feel just a little winded but can still hold a conversation, you are probably at the right intensity. If 30 minutes of exercise five times per week seems like too much, start out with 15 to 20 minutes and work your way up to 30 minutes or more.

If you are interested in starting regular exercise routine but do not feel safe doing so alone, reach out to your doctor and request a script for physical therapy services. If over the age of 64, you are eligible for physical therapy services that would be covered through Medicare for physical therapy appointments. These appointments will focus on getting you moving, challenging your balance in safe-protected ways, and offering support from trained professionals.

Starting a new exercise routine is often the hardest part. Choose an exercise

type (walking outdoors, walking around the house, using a treadmill, using a recumbent bike, etc.) that you are familiar with and enjoy. Once a routine is established, keep it up as-long-as you can. One or two weeks off can really spiral out of hand. Most of the studies have shown that the mental improvements noticed with exercise were seen after three months or more of routine exercise. It is not clear if these changes are kept once the routine is ended. Try to stay active any way you can and remember that even a little bit of an exercise program is better than none.

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- Da Silva, FC, Iop, RD, De Oliveira, LC, et al. (2018). Effects of physical exercise programs on cognitive function in Parkinson's disease patients: A systematic review of randomized controlled trials of the last 10 years. *PLOS ONE*, 13(2). doi:10.1371/journal.pone.0193113
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- Nelson ME, Rejeski WJ, Blair SN, et al. (2007). Physical activity and public health in older adults: recommendation from the American College of Sports Medicine and the American Heart Association. *Circulation*. 116(9):1094-1105
- Silveira, CR, Roy, EA, Intzandt, BN, & Almeida, QJ. (2018). Aerobic exercise is more effective than goal-based exercise for the treatment of cognition in Parkinson's disease. *Brain and Cognition*, 122, 1-8. doi:10.1016/j.bandc.2018.01.002

Upcoming Events

SAVE THE DATE

October 18 | 8 a.m. – 3:30 p.m.

Parkinson's Disease Symposium for Patients and Care Partners Scott Conference Center

Hybrid format including in-person and virtual.

UNMC/Nebraska Medicine PD Care Partner Support Group

New day and time beginning Sept. 1
First Wed. | 1 – 2 p.m.

Please use the following link to register (after you register, you will receive a confirmation email from Sallie Weathers with ZOOM connection information):

<https://unmc.zoom.us/j/96134594876>

UNMC/Nebraska Medicine Women with PD Support Group

New day and time beginning Sept. 8
Second Wed. | 1 – 2 p.m.

Please use the following link to register (after you register, you will receive a confirmation email from Sallie Weathers with ZOOM connection information):

<https://unmc.zoom.us/j/93447704600>

UNMC/Nebraska Medicine PD Support Group

Third Fri. | 10 – 11 a.m. thru 2021, then
third Wed. | 1 – 2 p.m.

Please use the following link to register (after you register, you will receive a confirmation email from Sallie Weathers with ZOOM connection information):

<https://unmc.zoom.us/meeting/register/tJwqcOyorzliG9Tpv20WhasRKCuROI9whTN>

All the ways a Speech-Language Pathologist can help you

Kayla Orndorff, BS, Graduate Student Intern

Speech-Language Pathology | Munroe-Meyer Institute | University of Nebraska Medical Center

One of the surprising things about speech-language pathologists (SLP) is how many ways they can support someone as they walk through a diagnosis of Parkinson's disease. Going to "speech therapy" can involve not only speech, but also cognition and even swallowing.

First things first, speech. Speaking is a complex function, involving many parts of the brain and body. "Speech" can refer to articulation (how clearly you can produce speech sounds, such as consonants). It can also refer to language, which is an intricate network of brain activity that translates ideas into words and sentences. Speech also involves the voice, which relies on both the vocal cords and the respiratory system. Oftentimes, Parkinson's disease can cause issues in any one of these three areas. Did you know that 90% of people who are diagnosed with PD have a speech disorder that affects their ability to be understood (Logemann et al., 1978)? Making sure we are understood is crucial not only in keeping in touch with loved ones but also communicating with health professionals to receive the best possible care.

SLP's are also mind-menders. They have techniques to help you remember things better, improve your attention, and even make you a better learner! SLP's work on maximizing cognitive function through higher-level thinking skills, problem solving, goal-setting and self-monitoring. They can also help you identify and capitalize on strengths through communication partner training,



setting up strategic routines, and breaking down barriers to communication. And if you think (pun intended) that that's all that SLP's can do, think again!

One of the most unexpected things about SLP's is that they are experts in swallowing. This seems unrelated to speech, until you realize that all the same body structures and muscles that control speech also control swallowing. SLP's can do tests that identify when something is "going down the wrong pipe" and give you strategies to prevent it. This is crucial in preventing pneumonia, dehydration, and unintentional weight loss. In some cases, SLP's can also provide exercises that can build up strength in the swallowing muscles to make swallowing easier again. Does a spoonful of sugar really help the medicine go down? Ask a speech pathologist!

So if you ever have a problem getting your point across or getting something down, odds are and SLP can help you!

Reference

Logemann, J.A., Fisher, H.B., Boshes, B., & Blonsky, E.R. (1978). Frequency and cooccurrence of vocal tract dysfunctions in the speech of a large sample of Parkinson patients. *The Journal of Speech and Hearing Disorders*, 43(1), 47-57. <https://doi.org/10.1044/jshd.4301.47>

How Can You Incorporate Fine Motor Tasks into Your Daily Routine?

Michaella Mendick, MOT, OTR/L

Occupational Therapist | PWR Certified Therapist | Nebraska Medicine

Occupational therapy is known for promoting health and well-being by helping people be successful with engaging in activities of daily living (ADLs). Some of the fine motor ADLs that may be negatively impacted by Parkinson's disease (PD) are but not limited to writing, using utensils, zipping, buttoning, typing, emailing, using tools, applying makeup and shaving.

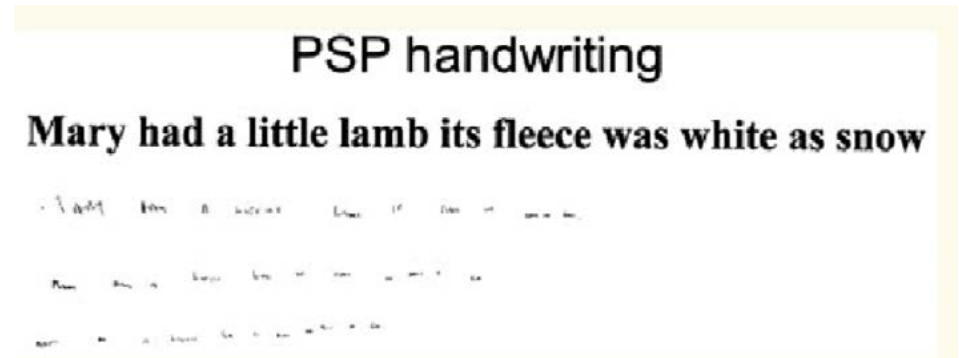
Tremors and/or decreased fine motor control can limit the ability to engage in these everyday activities. Occupational therapy can provide activities to help reduce or compensate for tremors and/or decreased fine motor skills during activities.

An example of how OT can help manage tremors are incorporating weights into fine motor exercises to provide temporary relief and/or lessen the effects of tremors when engaging in these activities.

Adding weights to the upper extremities during these activities can provide proprioceptive input and when used with high velocity movements, tremors tend to decrease. During sessions with an occupational therapist, trials of weights and weighted utensils can be completed to determine if this method would be effective to each individual patient.

A common goal of patients with PD that attend occupational therapy is to be able to engage in writing tasks. People frequently report a change in the ability to sign their name. The change in handwriting that is most common in people who have PD is called micrographia. Micrographia is handwriting that is smaller and often sloping on the page.

An example of micrographia is seen here:



An occupational therapist can guide you with exercises and activities that will challenge fine motor skills. Often this is seen by modifying tasks to promote success. Common modifications for writing can be seen below. Using a weighted pen and/or adding a wide base can ease the task.

In addition to modifications, it is important to continue to engage in tasks to maintain the skillset. Some ways you can engage in writing activities at home that are fun and easy are working on cross word puzzles, playing sudoku or using coloring books. Consciously including writing tasking into your day along with other exercises can decrease micrographia. If you have further questions regarding OT services, please ask for an occupational therapy referral from your provider.





Clinical Neuropsychology

Amelia (Aimi) Nelson, PhD, ABPP

Board Certified in Clinical Neuropsychology | Training Director, Clinical Neuropsychology Residency Program
Assistant Professor & Division Chief Neuropsychology | Department of Neurological Sciences | University of Nebraska Medical Center

Clinical neuropsychology is a specialty within the field of psychology that focuses on the relationship between the brain and behavior.

Neuropsychologists assess how the brain functions by testing cognitive skills (i.e., mental abilities such as memory, attention, thinking speed, language, visual-spatial/perception skills, reasoning, problem-solving, etc.). The examination is interactive, in that the cognitive “paper-and-pencil” tests are administered to the patient by the neuropsychologist or by a technician, although some tests may be computerized. Sometimes, tests and questionnaires that assess mood and functional abilities (e.g., counting change, telling time, etc.) are also given. The neuropsychologist uses the test results to make diagnoses and to plan appropriate treatments. Some neuropsychologists may also provide treatment themselves, such as psychotherapy or cognitive rehabilitation.

Parkinson’s disease (PD) can cause cognitive changes in some individuals, such as slower thinking, forgetfulness,

and word-finding problems. PD can also cause mood changes such as depression, apathy, or anxiety. As such, it is not uncommon for individuals with PD to undergo a neuropsychological evaluation to better understand these issues.

The neuropsychological evaluation involves a clinical interview with the patient and a family member (30 to 60 minutes) and the neuropsychological testing itself (2 to 5 hours). Behind the scenes, the neuropsychologist will review medical records, interpret the test results, and write a report that explains the results and the recommendations. Oftentimes, a feedback session (30 to 60 minutes) is scheduled on a separate day to discuss the findings and treatment options with the patient and family.

For individuals with PD, a neuropsychological evaluation can be

most useful for: 1) assessing whether the cognitive changes are due to “normal aging,” PD, or another cause; 2) determining whether the cognitive changes are severe enough that the individual needs help from family or others with daily activities; 3) providing recommendations on how to treat, compensate for, or cope with any cognitive, mood, or functional changes that have occurred. Each evaluation is tailored for the individual patient to help with his or her care.

Apathy in Parkinson's Disease

Erica Schmidt, PhD, Sarah Szymkowicz, PhD, and Amelia Nelson-Sheese, PhD, ABPP-CN

Apathy is a loss of motivation and interest, as well as a reduced ability to feel and express emotions. Hobbies and social activities may no longer bring enjoyment, and daily routines may seem more effortful. Basic tasks may be difficult to start and complete. This can be perceived as a lack of "get up and go" and can be misinterpreted as laziness, poor initiative, or depression.

Apathy is quite common in Parkinson's disease (PD), affecting about 40% of patients. The individual is not purposefully being lazy or unmotivated. Rather, symptoms of apathy are a consequence of the disease process and are associated with dopaminergic depletion in the brain's motivational circuits.

Apathy can impact anyone at any time in the course of their disease. However, older age, worse disease severity, and cognitive impairment place a person at higher risk of developing apathy. In addition, those who already have depression and/or anxiety are more susceptible to developing apathy.

Oftentimes, people with apathy do not realize there is a problem, so it is important for friends, family, and medical providers to recognize the symptoms of apathy. While apathy is often a feature of depression, it can occur on its own in PD. Some medication treatments for depression may worsen symptoms of apathy, so it is important to differentiate between the two. Apathy is also associated with reduced daily functioning, increased relationship stress, poor treatment compliance, worse illness outcomes, and poorer response to treatment (such as after deep brain stimulation surgery).



Research studies have shown that some medications may be effective in reducing apathy. Other treatment options include behavioral interventions. Activities like dance and music therapy, exercise, cognitive training programs, and behavioral activation have all been shown to improve apathy.

In sum, apathy is often under-recognized or misinterpreted as depression in PD and tends to worsen over the course of the disease. It is important to recognize these symptoms and treat appropriately. If you or a loved one are experiencing apathy, you are encouraged to speak with your Movement Disorder specialists.

Three Best Practices for Improving Apathy	
Behavioral Activation	<ul style="list-style-type: none">• Maintaining engagement in physical, social, and cognitive activities and doing them even when you do not feel like it.<ul style="list-style-type: none">» Ex: Crafts and hobbies, games, projects around the house, going on outings, regular exercise
Setting Goals	<ul style="list-style-type: none">• Set goals that are specific, measurable, realistic, and ones you can do in a timely fashion.
External Cues	<ul style="list-style-type: none">• Write down reminders for activities• Maintain a regular schedule• Use a calendar (either paper or electronic)• Engage a friend or family member to help keep you accountable and stick to your goals.

Exercise is Medicine

Jennifer McKune, PT
Physical Therapist | Nebraska Medicine

Exercise is important for everyone. For an individual with Parkinson's disease, it is vital! Exercise is a key element to maintaining balance, functional mobility, and daily activities.



week can slow decline in quality of life. Exercise improves strength, gait, balance, tremor, flexibility, grip strength, motor coordination, and endurance. It is important to include a combination of aerobic exercise to improve fitness, walking to practice gait, and resistance training to strengthen your muscles. There are many forms of exercise you may find to participate in: biking, running, Tai Chi, Yoga, Pilates, dance, weight training, non-contact boxing, group classes for Parkinson's disease, or physical therapy to learn a focused program specific to your needs. It is beneficial to perform random practice with activities. This may include changing the speed of movement, the direction, or varying the activity. Increase the intensity of your exercise for as long as you can and as often as you can.

Exercise may have a neuroprotective effect, as well as improve neuroplasticity. In the brain, dopamine, which plays a role in starting movement, functions as a neurotransmitter. A neurotransmitter is a chemical released by nerve cells to send signals to other nerve cells. Exercise improves dopamine efficiency by modifying areas of the brain where dopamine signals are received. Exercise protects nerve cells that are at risk for damage, degeneration, or cell death. Another benefit is improvement in neuroplasticity—the brain's ability to discover new nerve cell connections. In other words, exercise helps the body and brain find new ways to move.

Any level of physical activity is beneficial; however, studies show that increasing physical activity to at least 2.5 hours/

Choosing to exercise gives you an active role in the management of your symptoms associated with Parkinson's disease. In addition to the already mentioned benefits, exercise can positively affect mood and self-confidence, bone health, cognitive function, sleep, digestion and constipation, fatigue, rigidity and stiffness, and fine motor skills. The best way to see benefit from exercise is to exercise on a consistent basis. It is important to make exercise part of your regular routine. Sometimes it is helpful to make yourself an "appointment" for exercise. Put it on your calendar and make it something you commit to, just like you would a doctor's appointment. When taking your medications, remember that exercise is medicine!

Research Corner: PD Nutritional Impact Study at UNMC

Danish Bhatti, MD

Assistant Professor | Co-Director Comprehensive Parkinson Disease Clinic
Director, International Neurology Program | Associate Director, Movement Disorders Fellowship program
Department of Neurological Sciences | University of Nebraska Medical Center

‘Parkinson Disease Nutritional Impact Study’ is a large prospective study of nutrition and vitamin deficiencies’ impact on Parkinson’s disease at University of Nebraska Medical Center, Comprehensive Multi-Disciplinary Parkinson’s Disease Clinic.

This stems from a longstanding belief and interest of Prof. John Bertoni MD PhD, my colleague and co-director of the Comprehensive Clinic, in important role of vitamins, eating healthy, exercise and other healthy lifestyles have in providing good care for PD. Recent evidence has started to show that nutrition/vitamins play a large role in the future outcomes such as complications or disability in PD. He has always believed in Ten Commandments of good clinical practices in PD. (see Figure Ten Commandments of PD care by Professor John Bertoni).

When we started our comprehensive multidisciplinary PD Clinic in 2015, one of the key focuses was to provide opportunities for research for all the patients, especially impact of nutrition and vitamin deficiencies in PD. In 2018 we started a large prospective study looking at nutritional intake of patients with PD coming to our comprehensive clinic using a standardized Harvard Food Questionnaire (HFQ), which has been validated internationally and provides a highly detailed analysis of various food components. In addition, we have been measuring vitamin levels on all of our patients, which have been part of our good clinical practice, but is now able to add information to our study as well as various clinical characteristics. This model of research is typically known as practice-based research where do you take the data that you’re collecting as part of routine clinical care but in an organized fashion so that you can analyze it and learn from it.

In the next series of articles, I will try to review various aspects of findings from this large ongoing study that we have been learning things based on our analysis of the data and various publications that we are starting to work on. I will try to summarize it and explain it in as simple terms as possible but will make an effort to try not to lose the essence or the true finding or importance or significance of that information. That will mean that in part, some of these

articles might be a little challenging to follow, but in part there might be some inaccuracies in the information that comes in when you try to simplify the topic. Do not consider these articles as a replacement for the scientific

publications and for true scientific findings. I would encourage you to look at actual abstracts and other publications and we will reference them wherever possible.

10 Commandments

1. Ensure patient understanding by using plain language and clear, customized communications
2. Encourage patients to ask questions
3. Emphasize the importance of patient education/patient learning
4. Give patients information about all of their medications, diagnoses, test results, and plans for follow-up care
5. Improve safety and effectiveness of prescribed medications and review current medications and dosages
6. Foster a safe, patient-centered environment
7. Develop patient-centered educational materials and programs to increase healthcare awareness
8. Help inform the patient to make medical decisions
9. Manage disease and infection risks with good practices
10. Adopt the multi-disciplinary team approach to improve health outcomes and reduce errors





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Neurological Sciences
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Reliable Parkinson Resources

NOTE: This list is not complete, nor is it endorsed by UNMC or Nebraska Medicine

American Parkinson Disease Association

www.apdaparkinson.org

Davis Phinney Foundation for Parkinson's

www.davisphinneyfoundation.org

International Parkinson and Movement Disorders Society (WE MOVE)

www.movementdisorders.org

Michael J. Fox Foundation for Parkinson's Research

www.michaeljfox.org

Movement Disorder Society

www.movementdisorders.org

National Institute of Neurological Disorders and Stroke

www.ninds.nih.gov

Parkinson's Action Network

www.parkinsonaction.org

Parkinson's Foundation

www.parkinson.org

Parkinson's Foundation Heartland Chapter

www.parkinson.org/heartland

Parkinson's Nebraska

www.parkinsonsnebraska.org

Parkinson's Resource Organization

www.parkinsonsresource.org

The Parkinson Alliance

www.parkinsonalliance.org

The Parkinson's Disease Foundation

www.pdf.org

The Parkinson's Resource Organization

www.parkinsonsresource.org

PD Well

www.pdwell.com

To obtain access to our UNMC/Nebraska Medicine Parkinson's Disease Patient, Family and Caregiver Symposium (October 2019) PowerPoint presentations and video playlist on YouTube (scroll to the bottom): unmc.edu/neurologicalsciences/patient-care/programs/movement-disorders

To download a copy of ALL *Parkinson's Post* newsletters, please visit:

unmc.edu/neurologicalsciences/news/parkinsons-post-newsletter

