

SPEAK OUT!® *for Parkinson's Disease*

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Did you know that 90% of people with Parkinson's disease are at risk of developing a weak voice which can impact their communication and lead to life-threatening swallowing complications? Did you also know that there is a therapy available that is proven to help patients regain and retain their speech and communication while minimizing swallow issues?

You heard that right – SPEAK OUT!® Therapy is the answer!

SPEAK OUT!® is an effective and research-based medical therapy intervention developed by the Parkinson Voice Project and is one of the primary therapies that has helped thousands of people with Parkinson's disease regain and retain their voices, minimize swallowing problems, and stay connected with their families and friends! The program offers a unique blend of intensive exercises through engaging activities that help those with Parkinson's improve and maintain their skills through the years.

How do you know if you need SPEAK OUT!® Therapy?

Has anyone ever told you that your voice is too quiet, they have a hard time hearing you, or you feel that your voice is not as strong and clear as it used to be? People with Parkinson's disease may or may not immediately notice changes to their voice or speech, but will often be told by others around them. Common characteristics of speech problems in Parkinson's may include reduced loudness, a breathy voice, monotone pitch, vocal tremors, rapid rush of speech, and imprecise production of consonants impacting a person's ability to communicate. Additionally, some notice swallowing challenges separately or in conjunction with speech changes. If this is something you or a loved one is experiencing, SPEAK OUT!® may be exactly what you need.

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How does it work?

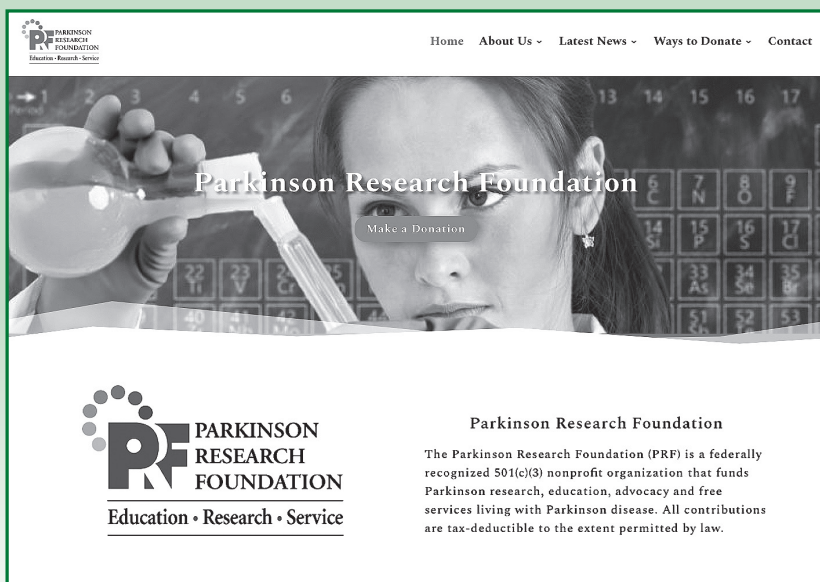
SPEAK OUT!® Therapy is a straightforward and evidence-based therapy that can only be provided by a clinically trained and certified SPEAK OUT!® Speech-Language Pathologist. The program is based on principles of motor learning and teaches patients how to convert their speech from an automatic function to an intentional act. This is done through a combination of education, individual speech therapy sessions, and daily home practice using workbooks, flashcards, and group sessions. The program runs for approximately 4 to 6 weeks, but patients typically reach their SPEAK OUT!® goals in 8 to 12 individual speech therapy sessions with dedicated practice. After graduating from your SPEAK OUT!® Therapy program, every graduate is encouraged to continue their daily practice and enroll in their local Speech and Singing Group to maintain their skills! While Parkinson's disease is a progressive disorder and retaining skills is a challenge, the SPEAK OUT!® program has proven over the years that retaining speech and swallowing IS possible and is with you for the long haul!

How do I start?

Getting started is easy! The first step is to determine if you or your loved one is a candidate for SPEAK OUT!® treatment by completing a Speech Evaluation with a SPEAK OUT!® Provider near you. Parkinson Place Center in Sarasota, Florida has Speech-Language Pathologists right in their building who can help get you started! You can also find local providers by going to <https://parkinsonvoiceproject.org/program/find-a-provider/> and searching for providers near you.

Additional information about SPEAK OUT!® can be found at <https://parkinsonvoiceproject.org/>.

Become a member at Parkinson Place Center for All Movement Disorders at www.ParkinsonPlace.org and join the free SPEAK OUT!® continuance class after you complete the therapy program. We look forward to seeing you soon!



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Nutrition and Parkinson's Disease

Cristina Guerra, COTA/L, OTS

Parkinson's disease is a neurodegenerative disease caused by loss of dopamine in the substantia nigra in the brain. This process of neurodegeneration occurs when nerve cells in the brain, central nervous system (CNS), or peripheral nervous system (PNS) lose function and, eventually, die out (Hollander & Lawler, 2022). Currently, more than 10 million people worldwide are currently diagnosed with Parkinson's and Parkinson's impacts around 1% of the population in the United States. Clinical presentation of Parkinson's disease includes tremors, rigidity, slowed movements, impaired balance, anxiety and depression, impaired cognition, constipation, and difficulty absorbing nutrients (Barati et al., 2022).

Nutrition is often overlooked when it comes to Parkinson's disease; however, it plays an important role in the management of the disease and disease process and should be considered just as much as all other forms of treatment, such as therapy and medications (Breasail et al., 2022). Nutrition is the taking in and use of food and other substances that are essential for growth, health, and good condition. Nutrition can be broken down into three basic parts: 1) Food and/or drink is eaten/drunk; 2) The body breaks down the food and drink into nutrients; 3) Nutrients (substances used by the body for growth, health, and survival) travel to different parts of the body through the bloodstream and are used for energy and other purposes. Both nutrition and diet are essential for achieving and maintaining general health and well-being, and nutrition should be considered when looking at disease management (National Cancer Institute, n.d.).

Parkinson's is well-known to decrease dopamine levels in the brain. It is estimated that in individuals with Parkinson's, at least 80% of dopamine-producing cells are lost within the brain, causing the multitude of motor symptoms that occur with the disease and can also contribute to the kinds of foods that we choose to eat. Dopamine is the "feel good" chemical in our brain that allows us to feel pleasure, motivation, and satisfaction and is released at various times throughout the day, including when we accomplish or do well on/with something and eating foods that are high in fat



and sugar. Dopamine also controls and plays a role in body movements and muscle control, which leads to the many physical and visible signs and symptoms that are observed in those with Parkinson's disease (HealthDirect, 2021).

Many individuals with Parkinson's have been observed, through various studies, to increase their consumption of sweet foods such as cookies, cakes, ice cream, etc. due to the decreased levels of dopamine in the brain. This overconsumption of sweet foods, along with decreased consumption of "healthy" foods, such as fruits, vegetables, and proteins, can lead individuals to become malnourished (Breasail et al., 2022).

Malnourishment occurs when there is an imbalance in the nutrients that our body takes in; we can consume too little good nutrients (i.e., fiber and protein) and too many bad nutrients (i.e., sugar). In various studies conducted, many individuals, more specifically those with Parkinson's, have been found to be malnourished or at risk for being malnourished, regardless of age. Being malnourished can also affect and impact your mood and overall self-feelings. In studies conducted on individuals with Parkinson's and the role nutrition plays in the disease process, it was found that those who were malnourished also experienced greater symptoms and feelings of anxiety and depression compared to those who were not. It is also worth noting that when those individuals

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changed their diets, they reported decreased feelings and symptoms of anxiety and depression overall (Ongun, 2018). Malnourishment can also cause sarcopenia, which is a loss of muscle tissue and occurs naturally throughout the aging process; however, when someone is malnourished, it accelerates the loss (Breasail et al., 2022).

Many studies have been conducted on individuals with Parkinson's disease and their nutritional status to observe and determine if food is linked to the severity of the symptoms. In one study conducted by Ongun (2018), it was found that those with Parkinson's who had a poor diet and poor nutritional status had a decreased overall quality of life. These individuals had higher levels of anxiety and depression compared to those in the study with better nutritional status (Ongun, 2018).

Another study conducted by Breasail et al. (2022) found that those with poorer nutritional status also had increased difficulty with successfully completing bowel movements, but also had a quicker and, at times, more significant cognitive decline and decreased energy levels throughout the day. Difficulty with successful bowel movements, constipation, has also been found to relate to decreased levels of absorption of medications, which can also play a role in the severity of both motor and non-motor symptoms (Breasail et al., 2022).

Breasail et al. (2022) also found that, not only does nutrition play a role on the nonmotor symptoms associated with Parkinson's disease, but on the motor symptoms as well. Nutrition affects the strength of our muscles and endurance, with a poorer diet correlating to decreased muscle strength and endurance (Breasail et al., 2022). This can cause difficulty with things such as standing for longer periods of time and difficulty with grasping and maintaining that grasp on various items (i.e., utensils, toothbrush, remote control, etc.). Poor nutritional status has also been linked to decreased balance, which can increase the risk of falling (Breasail et al., 2022; Ongun, 2018). Nutritional status has also been shown to have an effect on gait and mobility, with those with a poorer nutritional status showing signs of increased impairment of gait and mobility, even after taking medications and

on "good" days (Ongun, 2018). Because tremors and dyskinesia are typically managed with medications, those who choose to eat high-protein meals in the morning impact the body's ability to absorb the medications effectively. It has been shown that eating high-protein meals for breakfast, before or after you take your medications, decreases the amount of medication that your body can effectively absorb and use, thereby decreasing the effectiveness of the medication (Baroni & Zuliani, 2014).

There are certain nutrients that you should be intaking each day. You should be consuming protein, carbs, and fats each day as well as other nutrients such as Vitamins and minerals. Usually, your protein, carbs, and fats come in an obvious form with the foods you eat, for example chicken, rice, and avocado; and the foods you eat have the vitamins and minerals that your body needs in them as well, such as Vitamin B, Vitamin C, and Calcium.

Neuroprotection is the strategies and mechanisms that are used by the brain to protect the central nervous system (CNS) against injury from acute neurodegenerative disorders (i.e., stroke or other trauma) and/or chronic neurodegenerative disorders (i.e., Dementia, Parkinson's disease, epilepsy, etc.) (Rehman et al., 2019). Food is one strategy that can be used for neuroprotection, and those are called "neuroprotective foods". Those foods that are considered to be neuroprotective are anti-inflammatory in nature and contain antioxidants, such as blueberries, nuts and seeds, olive oil, whole grains, and leafy green vegetables (Baroni & Zuliani, 2014). Studies show that short-chain fatty acids have been shown to aid in neuroprotection and improve some motor symptoms (Barati et al., 2022). Short-chain fatty acids include fruits, vegetables, oats, whole grains, beans, peas, and lentils. Vegetarian, plant-based, and Mediterranean diets are considered neuroprotective due to the nature of the foods eaten and being primarily plant-based (Baroni & Zuliani, 2014).

Certain foods can have an effect on the body that could potentially cause an increase in severity of symptoms (Breasail et al., 2022). The foods that we eat can potentially cause decreased muscle strength and endurance, decreased balance and increased fall

risk, impaired gait and mobility, and increased tremors and dyskinesia (Breasail et al., 2022; Ongun, 2018). Long-chain fatty acids have been found to worsen symptoms (Barati et al., 2022). Long-chain fatty acids include avocados, meats, and fish, when consumed in excess (Baroni & Zuliani, 2014). It's important to keep in mind that you do not want to eliminate these foods from your diet all together, as they do provide you with important micronutrients that your body needs, just to be more mindful with how much of these foods you are eating each day.

Research has shown that modifications in diets have been successful with symptom and disease management for individuals with Parkinson's disease and supports these changes being made to aid in symptom management.

Some changes to consider would be consuming low amounts of protein in the morning for breakfast to allow for fuller or more successful absorption of medications. The reason for this is that the same processes are used by the body to break down and absorb both protein and the medications often used for Parkinson's management. So, for example, instead of having eggs and bacon for breakfast, you could consider switching to oatmeal or cottage cheese and fruit. This is a change that allows you to still be full after eating, but also allows the medication to be fully absorbed by the body and work effectively. Not only should we be consuming lower protein foods for breakfast to allow our medication to be its most effective, but we also want to take our medication at least 30 minutes before our first meal so we can get the most benefits from it (Baroni & Zuliani, 2014).

With this shift of consuming low amounts of protein for breakfast, most of the protein that you consume each day (~90%) should be consumed during dinner meals/times. When trialed in a study, this shift showed to be very well tolerated by the patients and has also shown the potential to give "near-normal" daytime motor function (Baroni & Zuliani, 2014).

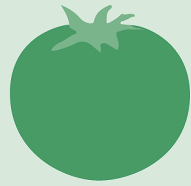
Incorporating more fruits and vegetables into your diet can help with getting in the micronutrients that your body needs and helps with achieving regularity with bowel movements. Fruits and vegetables have a

lot of fiber in them, which is what your body needs and uses to form and complete bowel movements in their entirety. So, incorporating more of these into your diet can help ease some constipation that may be occurring.

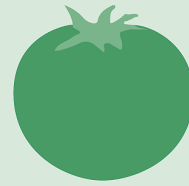
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WHAT'S IN SEASON



NOW?



SUMMER PRODUCE GUIDE

FRUITS

Apples
Apricots
Avocados
Blackberries
Blueberries
Cantaloupe
Cherries
Honeydew Melon
Limes
Mangoes
Nectarines
Peaches
Plums
Raspberries
Strawberries
Tomatillos
Watermelon

VEGGIES

Arugula
Beets
Bell Peppers
Carrots
Celery
Corn
Cucumbers
Eggplant
Garlic
Green Beans
Lima Beans
Mint
Okra
Oregano
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Without ongoing contributions from generous donors like you, the **PARKINSON RESEARCH FOUNDATION** would be unable to fund **EDUCATION, RESEARCH, and FREE SERVICES** for the millions of people living with Parkinson's disease around the world.

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Online: Please visit www.ParkinsonHope.org today and click on the Donate tab.

Stocks, Securities, Mutual Funds and IRAs

Please give serious consideration to the donation of stock and mutual fund shares as this offers numerous opportunities to make a most gracious gift and receive tax advantages.

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Investment Brokerage: Fidelity Investments

Phone: 800-544-6666

DTC #: 0226

Account Name: Parkinson Research Foundation, Inc.

Account #: Z50054607

Wills, Bequests and Planned Gifts

Please give serious consideration to the designation of PRF in your Will, Charitable Trusts, Life Insurance, Appreciated Securities and Real Estate as this offers preplanned giving opportunities that will serve the Parkinson community for years to come. Please call Lynne Henry (941) 893-4389 at the Parkinson Research Foundation, today, for personal assistance in initiating this effort.

The following language has been reviewed and is deemed a legally acceptable form for including such a bequest in a will:

"I give and bequeath to the Parkinson Research Foundation,
5969 Cattleridge Boulevard, Suite 100, Sarasota, FL 34232
for discretionary use in carrying out its aims and purposes,
(the sum of \$_____) OR (a sum equal to _____% of the value of my gross
estate at the time of my death under this will or any codicil hereto)."

The Parkinson Research Foundation Federal ID number is 20-0205035

Memorial and Honor Giving

Honor a family member, friend or special event by donating to PRF. Pay tribute to someone you love whose life has been impacted by Parkinson's disease. In lieu of flowers, please consider designating Parkinson Research Foundation as your charity of choice.

Workplace Giving: Launch a Giving Campaign

Please consider leading a team at work by encouraging your colleagues and staff to join together to help those living with Parkinson disease. Launch a workplace giving campaign today.

Ask about Matching Gifts

Many gracious employers double even triple charitable donations made by individual employees. Some companies will match gifts made by retirees and/or their spouses. Contact your employees for matching gift eligibility as this allows you to maximize your personal donation.