

# ■ GLOSSARY

**Acetylcholine:** A brain chemical that acts as both a neurotransmitter and a neuromodulator and plays a role in muscle function, attention, arousal, memory and motivation. Acetylcholine is reduced in Parkinson's-related dementia.

**Acetylcholinesterase inhibitors:** Medications that block the breakdown of the neurotransmitter acetylcholine to help treat Parkinson's-related dementia.

**Action tremor:** Type of tremor that gets worse when trying to perform an action, such as picking up a coffee cup or eating with a spoon.

**Activities of daily living (ADLs):** Basic self-care skills, including eating, dressing, grooming, bathing and using the toilet. Occupational therapists often focus on improving ADLs.

**Adaptive equipment:** Devices used to assist with activities of daily living, such as bathing, dressing and using the toilet. Examples include tremor-management eating utensils, non-skid mats, adaptive writing utensils, button hooks, etc.

**Advance healthcare directive:** A legal document in which someone explains the actions that should be taken for their health if they are no longer in a capacity to make their own decisions. In the US, an advance healthcare directive has its own legal status.

**Akinesia:** Lack of movement caused by Parkinson's, such as loss of arm swing, that primarily affects walking or the hands and trunk area. A hallmark motor symptom of Parkinson's.

**Alpha-synuclein:** A protein found in the brain. While the role of alpha-synuclein in a healthy brain is unknown, alpha-synuclein clumps together in the brains of people with Parkinson's to form Lewy bodies, one of the hallmark features of Parkinson's. This has led to ongoing investigation into the role this protein plays in the development of Parkinson's.

**Alternative brain pathways:** Recruiting stronger brain circuits to execute similar functions that enables people to perform and gain strength in a difficult task. For example, people with speech problems may be able to sing or someone who struggles walking may be able to ride a bicycle.

**Amantadine:** A medication originally used to treat the common flu and later found to improve the symptoms of Parkinson's. Amantadine can be used alone or in combination with other Parkinson's medications. It is sometimes added specifically for the treatment of dyskinesia and can also improve freezing of gait. Also has a stimulant effect, which can help with fatigue.

**Amino acid:** The building blocks of protein.

**Anticholinergics:** A type of medication that interferes with the action of the neurotransmitter acetylcholine to try and restore the balance between dopamine and acetylcholine.

**Anxiety:** Excessive feelings of worry, nervousness, apprehension and unease. Can be associated with compulsive behavior or panic attacks.

**Apomorphine:** A dopamine agonist that helps improve motor function by stimulating dopamine receptors. It is a Parkinson's medication used to help with "off" episodes and to treat muscle stiffness, slow movements or movement difficulties associated with Parkinson's.

**Art therapist:** A type of therapist who uses art and creative expression as a healing tool to convey the inner self and emotions, strengthen concentration and executive function and reinforce mind-body connections.

**Aspiration:** When food or fluid enters the lungs.

**Ataxia:** A loss of muscle control or the ability to coordinate one's voluntary movements, such as walking. Ataxia signals the presence of an underlying condition and can affect various movements, leading to challenges with swallowing, speech and eye movement.

**Basal ganglia:** Clusters of neurons located deep in the brain that play an important role in movement. The basal ganglia includes the substantia nigra, and cell death in the substantia nigra contributes to signs of Parkinson's.

**Benzodiazepines:** A category of psychoactive medications used to treat anxiety and insomnia by slowing the central nervous system.

**Biomarker:** An early indicator that a person may have a disease, such as Parkinson's, that can be recognized before symptoms appear. Identifying biomarkers may lead to earlier interventions and treatment. Biomarkers could be a chemical, clinical or physiological change or found via imaging.

**Blood brain barrier:** The membrane separating the blood and the brain; a tight physical barrier that normally keeps immune cells, chemicals and drugs out of the brain.

**Botulinum toxin:** A neurotoxic protein that prevents the release of acetylcholine. Injections may help with dystonia. Commonly referred to as Botox.

**Bradykinesia:** The slowness of movement that can be caused by Parkinson's. One of the hallmark motor symptoms of Parkinson's.

**Bradyphrenia:** Slowed thinking that can be caused by Parkinson's.

**Carbidopa:** A drug given with levodopa. Carbidopa blocks the enzyme dopa decarboxylase, thereby preventing levodopa from being metabolized to dopamine. Since carbidopa does not penetrate the blood brain barrier, it only blocks levodopa metabolism in the peripheral tissues and not in the brain, thereby reducing side effects such as nausea, while increasing the effectiveness of levodopa.

**Care partner:** Anyone who provides help or support to a relative or friend living with Parkinson's.

**Caregiver burnout:** A medical syndrome resulting from untreated caregiver strain that includes feeling overwhelmed, angry, irritable, sleeping poorly, fatigue, worsening medical problems and/or self-medicating.

**Caregiver strain:** A medical syndrome resulting from the burdens and demands of caregiving.

**Chronic:** A condition of long duration. Chronic diseases typically appear gradually and progress slowly over time. The term does not imply anything about the severity of a disease. The opposite of a chronic condition is an acute condition.

**Clinical trials:** Experiments or observations done in clinical research on human participants. Clinical trials are designed to test the safety and efficacy of biomedical or behavioral interventions, including new medications, medical devices and supplements.

**Cognition:** Mental processes including attention, remembering, producing and understanding language, solving problems and making decisions.

**Cognitive behavioral therapy (CBT):** A type of treatment for anxiety and depression addressing behaviors and thought patterns. CBT is time-limited and skills-based, and may be used alone or in combination with medication.

**Complementary therapies:** Non-medical treatments used in addition to conventional medical and surgical treatments, such as physical therapy, occupational therapy, speech and language therapy, music and art therapies, etc.

**Complex carbohydrates:** Long chains of sugar molecules that require more complex digestion and are more slowly absorbed; includes starch and fiber.

**COMT inhibitors:** A type of medication that prevents the COMT enzyme from converting levodopa into a form unable to be used by the brain. When levodopa is taken, a portion of the COMT enzyme converts into a useless compound. COMT inhibitors prevent this, thus making more levodopa available for the brain to use to counteract symptoms of Parkinson's.

**Compulsive behaviors:** The overwhelming and often repetitive drive to act in a certain way to ease an urge or reduce worry or tension. Often, this behavior can be out of character for the person experiencing it and can be a side effect of certain Parkinson's medications.

**Constipation:** Infrequent or hard to pass bowel movements. A common problem for people living with Parkinson's that can be helped by increasing fiber in the diet.

**Continuous subcutaneous infusion of apomorphine (CAI):** An ongoing stream of apomorphine delivered into the bloodstream through a needle into the skin, similar to an insulin pump. This treatment is designed to limit the amount of “off” time experienced. It is currently not available in the US, but is in advanced clinical trials.

**Controlled release drugs:** Special preparations of drugs that release the drug into the body slowly and steadily, rather than all at once. This helps to keep the amount of the drug in the blood stream at a steadier level than the “ordinary” version of the same drug.

**DaTSCAN:** A nuclear medicine scan that measures levels of dopamine nerve cells in the basal ganglia. While this scan cannot determine if someone has Parkinson’s or not, it was approved by the FDA in 2011 to help differentiate Parkinson’s tremor from Familial or Essential Tremor (ET). It is also not able to distinguish Parkinson’s from other forms of parkinsonism, nor is it used to track symptoms or progression.

**Deep Brain Stimulation (DBS):** A surgical procedure involving the implantation of electrodes in specific areas of the brain that produce electrical impulses to help regulate abnormal impulses or affect certain chemicals or cells in the brain. DBS is used to help a variety of neurological conditions, most commonly the motor symptoms of Parkinson’s, including tremor, rigidity, stiffness, slowed movement and walking problems.

**Dementia:** A decline in cognitive function due to damage or disease in the brain beyond what might be expected from normal aging. Areas particularly affected include memory, attention, judgment, language, planning and problem solving.

**Depression:** A mood disorder that causes a persistent feeling of sadness and loss of interest. Depression can affect feelings, behavior and thinking, leading to various physical and emotional problems.

**Designation of healthcare surrogate:** A document naming another person as a representative to make medical decisions on one’s behalf should one be unable to make them oneself. As in a living will, people can include instructions about treatments they do and do not want.

**Dopa decarboxylase inhibitors (DDI):** Parkinson’s medications that block the actions of the enzyme dopa decarboxylase (DDC) to inhibit the metabolism of levodopa to dopamine in the bloodstream, allowing more levodopa to reach the brain and be converted into dopamine there. Includes carbidopa and benserazide.

**Dopamine:** A small chemical molecule that is one of the brain’s neurotransmitters. It is found especially in cells within the substantia nigra and conveys messages in the brain to coordinate muscle movements. The motor symptoms of Parkinson’s appear when 60-80% of the dopamine-producing neurons in the brain are damaged and unable to produce sufficient dopamine.

**Dopamine agonist:** A type of medication that acts like dopamine, but is not actually dopamine. These compounds activate dopamine receptors and can be used in both the early and later stages of Parkinson's. Dopamine agonists can cause side effects such as confusion, sleepiness, sleep attacks, ankle swelling, hallucinations and impulse control problems, like uncontrollable gambling, eating, obsessive behaviors and sexual urges.

**Durable power of attorney:** A document appointing an agent (usually a trusted relative or friend) to carry out specific health, legal and financial responsibilities on behalf of another. There are two types of power of attorney: POA for healthcare and POA for finances. The POA for healthcare gives the appointed agent authority to make healthcare decision on behalf of someone. The POA for finances gives the appointed agent authority to make legal/financial decisions on behalf of someone. At the time the documents for POA are signed, the person establishing a durable power of attorney must be physically and mentally capable of making the decision to seek assistance.

**Dysarthria:** A motor speech disorder characterized by slow or slurred speech. Dysarthria results from impaired movement of the muscles used for speech production, including the tongue, vocal folds, lips and/or diaphragm. The type and severity of dysarthria depends on which area of the nervous system is affected.

**Dyskinesia:** Uncontrollable, jerky and involuntary movements, often the result of levodopa medication wearing off.

**Dysphagia:** Difficulty swallowing.

**Dystonia:** Involuntary tightening or spasms of the muscles, often in the feet or lower legs, caused by a lack of dopamine.

**Electrocardiogram (ECG):** A test that measures the electrical activity of the heartbeat.

**Employee assistance program (EAP):** A voluntary, confidential program that helps employees navigate various life challenges that may affect their health, job performance and personal well-being.

**End-of-dose wearing off:** The phenomenon of medicine's effectiveness wearing "off" before the next dose, causing Parkinson's symptoms to re-appear or get worse before it is time to take the next dose of levodopa.

**Erectile dysfunction (ED):** The inability to achieve a sustained erection throughout intercourse. Can be a symptom of Parkinson's.

**Executive function:** Cognitive processes that allow one to plan, focus attention, remember and multitask.

**Facial masking:** A condition resulting in reduced facial expression that may additionally cause softer, more monotone speech. The technical term for this is “hypomimia” and often this is referred to as “mask-like” or “masked” face.

**Family Medical Leave Act (FMLA):** A federal act in the US entitling employees to an unpaid, extended leave of absence for specified family and medical reasons. It also ensures that employer-provided health insurance continues during leave. There are specific criteria that must be met to qualify for FMLA.

**Festination:** The tendency toward smaller, faster steps that pitch one forward.

**Freezing of gait:** Problems with initiating movements that often result in feeling like one’s feet are glued to the floor. A motor symptom that is more common in later stages of Parkinson’s.

**Functional mobility:** Ability to move around one’s home and environment to perform daily activities, such as getting in and out of bed, bathing, sitting on and getting up from the couch or table, etc. Occupational therapists often focus on improving functional mobility.

**Glutamate:** An amino acid and the main excitatory neurotransmitter in the human brain. Glutamate plays a critical role in the development of the brain and helps with learning and memory. Excess glutamate in the brain is associated with neurological diseases like Parkinson’s, Alzheimer’s, multiple sclerosis (MS) and amyotrophic lateral sclerosis (ALS).

**Glycemic index:** A number measuring a food’s effect on blood glucose after consumption. The GI represents the rise in a blood sugar level two hours after consumption and depends on many factors. GI is useful for understanding how the body breaks down carbohydrates.

**Glycemic load:** A measure related to the glycemic index that multiplies the glycemic index of a food by the carbohydrate content in the actual serving to put the glycemic index into appropriate context. For instance, watermelon has a high glycemic index, but a low glycemic load per the typical quantity consumed.

**Gut microbiome:** The complex community of microorganisms that live in the digestive tracts of humans and other animals.

**Growth factors:** Naturally occurring substances (usually proteins) that help maintain the health of neurons and encourage cell growth, proliferation and differentiation. Some growth factors are being looked at to try to promote the survival of the neural cells that are degenerating in Parkinson’s.

**Hallucinations:** The experience of perceiving something that is not actually there. Hallucinations may be a symptom of Parkinson’s or a side effect of certain Parkinson’s medications.

**Hypertension:** Abnormally high blood pressure.

**Hypersexuality:** A clinical diagnosis describing extremely frequent or suddenly increased sexual urges or activity. Can be a side effect of certain Parkinson's medications.

**Hypokinesia:** Small movements that can come as a result of Parkinson's. One of the hallmark motor symptoms of Parkinson's.

**Hypomimia:** The decrease in facial expressions resulting in a masked-like face that can come as a result of Parkinson's.

**Hypophonia:** Soft speech caused by Parkinson's.

**Idiopathic:** A type of condition arising from an unknown cause. The majority of people living with Parkinson's are considered to have "idiopathic" Parkinson's, meaning there is no clear and definitive genetic or environmental cause for developing the disease.

**Impulsive behaviors:** The inability to resist the temptation to engage in a certain activity. Often, these activities give an immediate sense of pleasure, such as eating, gambling, increase in sexual thoughts or feelings, etc. Can be a side effect of certain Parkinson's medications.

**Impulse control disorder (ICD):** A set of psychiatric disorders characterized by an inability to control one's actions, particularly activities that could bring harm to oneself or others. This can be a side effect of certain Parkinson's medications. People taking dopamine agonists may experience ICDs, including compulsive gambling, eating, shopping and hypersexuality.

**Instrumental activities of daily living (IDLs):** Activities that include caring for others and pets, financial management, driving, one's ability to be active in the community, health and medication management, meal preparation, leisure activities, shopping, safety, etc. Occupational therapists often focus on improving IDLs.

**Insoluble fiber:** A type of fiber found in vegetables, whole grains, raisins and prunes that does not absorb water and passes through the gastrointestinal tract to reduce constipation.

**Interdisciplinary care:** Multiple healthcare professionals collaborating to provide care with a common perspective, often involving joint consultations. Sometimes referred to as "integrative care."

**Leucine rich repeat kinase 2 (LRRK2):** A large and complex gene that influences the production of proteins. Mutations in this gene are the most common cause of Parkinson's in the small percentage (~10%) of people with Parkinson's whose disease is linked to a genetic component. Mutations in the LRRK2 gene that can increase one's risk of developing Parkinson's are much higher in certain ethnic groups, such as Ashkenazi Jews, Basque and North African Berbers.

**Levodopa (L-DOPA):** A chemical that is the precursor to dopamine and one of the oldest and most effective medications for Parkinson's. It can pass through the blood-brain barrier where it is absorbed by dopamine nerve cells and converted to dopamine to replace lost dopamine in the brain.

**Levodopa sparing strategy:** Limiting the use of levodopa in an attempt to minimize wearing "off" problems and dyskinesia as Parkinson's progresses.

**Lewy bodies:** A pathologic hallmark of Parkinson's and dementia with Lewy bodies. Named for Frederic Lewy who first described them, Lewy bodies are seen microscopically as inclusions in neurons in several brain regions, including the substantia nigra.

**Macronutrients:** The three major food categories: carbohydrates, fats and proteins.

**MAO (monoamine oxidase):** A family of enzymes with two subtypes: MAO-A and MAO-B. These catalyze the oxidation of amine molecules, replacing the amine group with an oxygen molecule. MAO-B inhibitors are a type of drugs (such as selegiline, rasagiline) that inhibit the breakdown of dopamine via MAO-B enzyme and do not cause abnormally high blood pressure (hypertension).

**Mediterranean diet:** A type of diet consisting of traditional foods consumed in Mediterranean countries, emphasizing plant-based foods like fruits and vegetables, whole grains, legumes and nuts as well as moderate consumption of poultry and dairy. The diet replaces butter with fats such as olive oil and canola oil and uses herbs and spices instead of salt to flavor food.

**Micrographia:** Small, cramped handwriting that can be a symptom of Parkinson's.

**Micronutrients:** Vitamins and substances found in food that are needed in smaller amounts to promote cell health and catalyze biochemical reactions.

**Mind-body medicine:** An approach to medicine based on the belief that thoughts and emotions can influence physical healing and well-being.

**Modified barium swallow (MBS):** A radiology procedure that can show the passage of food or fluids from the mouth to the stomach.

**Monounsaturated fats:** Type of fat that is liquid at room temperature, but gets cloudy when refrigerated. Examples include olives and olive oil, canola oil, nuts and nut oils and avocado. These oils are a better substitute for saturated fats, and can reduce cholesterol levels and improve insulin activity.

**Motor fluctuations:** A complication of levodopa therapy characterized by periodic reemergence of Parkinson's symptoms that are normally controlled when the medication is working.

**Motor skills:** The degree of coordination provided by the brain's control of the skeletal muscles.

**Motor symptoms:** Symptoms that involve movement, coordination, physical tasks or mobility. These include resting tremor, bradykinesia, rigidity, postural instability, freezing, micrographia, facial masking, unwanted accelerations, stooped posture, dystonia, impaired motor dexterity and coordination, speech problems, difficulty swallowing, muscle cramping and drooling.

**Movement disorder specialist (MDS):** A neurologist with additional training in movement disorders like Parkinson's, essential tremor and ataxia.

**Multidisciplinary care:** Care given by multiple healthcare professionals, each approaching the patient from their professional perspective. This often involves separate, individual consultations.

**Music therapist:** Specialists who use music to help with movement.

**Neurogenic bladder:** Problems with nerve control of the bladder, including urinary frequency and sense of urgency.

**Neurogenic orthostatic hypotension (nOH):** A type of orthostatic hypotension caused by a neurological disorder like Parkinson's or multiple system atrophy (MSA) that triggers a sustained drop in blood pressure upon standing. An estimated 30-50% of people with Parkinson's experience nOH. The prevalence increases with both age and number of years living with Parkinson's. nOH can appear with or without symptoms, and common symptoms include dizziness, lightheadedness, blurry vision and occasional fainting.

**Neurological conditions:** A collection of disorders caused by damage or malfunctioning of the brain or nervous system.

**Neurologist:** A doctor who specializes in the diagnosis, care and treatment of disorders of the brain or nervous system.

**Neuromodulation:** The act of altering nerve activity through delivering a targeted stimulus in the brain, such as electrical stimulation. Neuromodulation devices use electrical signals, pharmaceutical agents or other avenues to stimulate nerves and modulate the abnormal neural pathway behavior caused by a neurological disease. Approaches to neuromodulation range from non-invasive techniques, such as transcranial magnetic stimulation, to implanted devices, such as a deep brain stimulation system for Parkinson's.

**Neuro-ophthalmologist:** A neurologist or ophthalmologist with fellowship training in the field of neuro-ophthalmology. These specialists have a particular appreciation for the intersection of the eyes and the brain, and perform comprehensive testing to determine the cause of visual or eye movement problems.

**Neuroplasticity:** Activity and experiences that cause the development of new nerve connections or the strengthening of old connections, resulting in improved brain function.

**Neuroprotection:** Mechanisms within the nervous system that protect neurons from dying as a result of a degenerative disease like Parkinson's or from other types of injury.

**Neuropsychologist:** A psychologist specializing in understanding the relationship between the physical brain and behavior.

**Neurostimulator:** A device that delivers electrical impulses through tiny wires placed in regions of the brain affected by Parkinson's.

**Neurotransmitter:** A chemical messenger in the nervous system that facilitates communication between two neuronal cells, normally across a synapse. The neurotransmitter is released from the nerve terminals on the axons. Examples of neurotransmitters include dopamine, acetylcholine, adrenaline, noradrenaline, serotonin, glutamate and GABA.

**Non-motor symptoms:** Symptoms of Parkinson's that do not involve movement, coordination, physical tasks or mobility. Common non-motor symptoms include loss of sense of smell, constipation, sleep disorders or disturbances, mood disorders, orthostatic hypotension, bladder problems, sexual problems, excessive saliva, weight loss or gain, vision and dental problems, fatigue, depression, fear and anxiety, skin problems and cognitive issues.

**Occupational therapist:** Specialists concerned with assessing a person's home or work situation to determine ways to make life more manageable. Occupational therapists can also advise on aids and adaptive equipment that may make everyday life easier.

**Omega-3 fats:** A type of fat necessary for brain cell function found in walnuts, flaxseeds, pumpkin seeds, purslane and cold water fish.

**Omega-6 fats:** A type of fat that includes sunflower oil, safflower oil, corn oil, most seeds and oil from grains.

**“On/off” fluctuations:** The clinical states of Parkinson's while being treated with levodopa, which can often fluctuate after a few years of treatment. The “on” state is when levodopa reduces Parkinson's symptoms. The “off” state is when the benefit has been reduced or lost. The most common type of “off” is referred to as “wearing off,” and happens because of levodopa not lasting more than four hours after a dose. Sudden and unpredictable “off” states can also occur, but are less common. “Off” states usually will respond to another dose of levodopa.

**Orthostatic hypotension (OH):** A sustained drop in blood pressure that occurs after standing. OH can happen for a variety of reasons. When OH is caused by a nervous system disorder, like Parkinson's or multiple system atrophy (MSA), it is called neurogenic orthostatic hypotension (nOH). Symptoms can include lightheadedness, dizziness or feeling as though one is about to black out.

**Overactive bladder (OAB):** A sense of urgency and needing to urinate quickly and/or frequently, even if the bladder is not full.

**Palliative care:** An approach to care of chronic illness that is holistic and team-based, shifting the focus from an individual patient to the patient together with their family. Palliative care places a strong emphasis on enhancing quality of life and integrating psychological and spiritual aspects. Hospice is a subset of palliative care, administered in the US in the last six months of life.

**Parkinsonism:** A general term for group of neurological conditions displaying movement changes often seen in Parkinson's disease, such as slowness of movement, rest tremors, muscle stiffness and impaired speech. Not everyone who has parkinsonism has Parkinson's disease.

**Parkinsonian gait:** A slow, short-paced way of walking common in people living with Parkinson's. Often there is a tendency to shuffle and a decreased arm swing.

**Parkinson-plus syndromes:** A group of neurodegenerative diseases displaying the classic motor symptoms of Parkinson's disease (such as slowness of movement, rest tremors and muscle stiffness), but with additional features that distinguish them from typical Parkinson's disease. Parkinson-plus syndromes include multiple system atrophy (MSA), progressive supranuclear palsy (PSP), dementia with Lewy bodies (DLB) and corticobasal degeneration (CBD).

**Partially hydrogenated oils:** Primary source of artificial trans fat in processed foods. In 2013, the US Food and Drug Administration (FDA) made a preliminary determination that partially hydrogenated oils are no longer Generally Recognized as Safe (GRAS) in human food.

**Periodic limb movement disorder (PLMD):** A sleep disorder involving repetitive movements, typically in the legs and feet, that occur about every 20-40 seconds and cluster into episodes lasting anywhere from a few minutes to several hours. These movements can be brief muscle twitches, jerking movements or an upward flexing of the feet. PLMD often occurs in tandem with restless legs syndrome, with nearly three-quarters of people with RLS also experiencing PLMD.

**Peripheral neuropathy:** A condition caused by damage to peripheral nerves. This often results in weakness, numbness and pain, usually in the hands and feet, but can also affect other areas of the body.

**Physical therapist:** Specialists who use physical means such as exercise and manipulation to help prevent or reduce stiffness in joints and restore muscle strength. Physical therapists can also advise on aids and equipment to help with movement problems.

**Placebo:** A simulated or inert form of treatment without known proven benefit on a symptom or a disease. A pill serving as a placebo is often called a “sugar pill.” When placebos provide benefit, this phenomenon is called a “placebo effect.” Placebos are employed in controlled clinical trials along with the active drug being tested. The difference in responses between the two drugs is considered the true effect of the active drug.

**Polyunsaturated fats:** Type of fat that is liquid at both room temperature and when refrigerated. Can be divided into two types: omega-6 fats and omega-3 fats.

**Postural instability:** General balance issues that result from how Parkinson’s delays reflexes related to posture. Although this typically shows up as problems with balance, there can be many different causes for balance challenges in Parkinson’s.

**Prudent diet:** A modification of the Mediterranean diet that is rich in fruits, vegetables, nuts, whole grains, legumes, low-fat dairy products, fish and lean meats. A prudent diet is associated with reduced rates of many major diseases, including cancer, stroke, diabetes, heart attack and high blood pressure.

**Receptor:** A protein structure typically embedded in the cell membrane with which neurotransmitters and drugs interact.

**Recreational therapist:** Specialists who help people stay active in hobbies and play.

**Rapid eye movement sleep behavior disorder (RBD):** A sleep disorder that involves movement and abnormal behavior during the sleep phase with rapid eye movements, the stage of sleep in which dreaming occurs. In normal sleep, muscles are paralyzed during dreaming, except for eye movements. In individuals with RBD, the muscles are not paralyzed, so the dreamer is free to physically act out his or her dreams. RBD is common in people with Parkinson’s and may precede the onset of motor symptoms.

**Restless legs syndrome (RLS):** A neurological disorder characterized by unpleasant sensations in the legs, like the feeling of ants crawling underneath the skin. These sensations usually occur in the late evening and during sleep. Walking around relieves the sensation, hence the term “restless legs.” RLS interferes with sleep and is common in people with Parkinson’s.

**Rest tremor:** A type of tremor that worsens when relaxing or resting.

**Retropulsion:** The tendency to fall backward, caused by postural instability.

**Rigidity:** A special type of muscle stiffness, which is one of the hallmark motor symptoms of Parkinson’s. The muscles tend to pull against each other instead of working smoothly together.

**Saturated fats:** Type of fat that is solid at room temperature and found primarily in red meat, tropical oils (like coconut) and dairy. A diet high in saturated fats can increase cholesterol levels, one's risk of accumulating plaque in the arteries (called "atherosclerosis"), stroke and heart disease.

**Seborrhea:** Flaky, white or yellowish skin forming on oily areas of the scalp, forehead or ear. Can be an early, non-motor symptom of Parkinson's.

**Selective serotonin reuptake inhibitors (SSRIs):** A class of antidepressant medications that increases serotonin levels in the brain and can be used to treat depression and anxiety.

**Serotonin:** A neurotransmitter that contributes to feelings of happiness and well-being.

**Serotonin-norepinephrine reuptake inhibitors (SNRIs):** A class of antidepressant medications that increase the neurotransmitters serotonin and norepinephrine and are used to treat depression and other mood disorders.

**Shuffling gait:** Short, slow steps, with feet close to the ground or dragging along the ground. Often seen in people with advanced Parkinson's disease.

**Simple sugars:** Sugars that are only made up of one or two sugar units and can be used to fuel cells and provide energy to the brain. Simple sugars are absorbed quickly as they require little to no digestion. For instance, table sugar is a simple sugar comprised of the sugar units glucose and fructose.

**Sleep apnea:** A sleep disorder in which one's breathing stops and starts during the night. While sleep apnea is not more prevalent in people living with Parkinson's, it does occur more frequently as adults age.

**Soluble fiber:** A fiber type found in fruits, flaxseeds, oatmeal and psyllium in water that can slow digestion and cause feelings of fullness.

**Speech language pathologist (SLP):** Specialists trained to treat problems associated with speech and swallowing. Speech language pathologists can also advise on communication aids.

**Starch:** A long chain of carbohydrates that is digestible by the body and must be metabolized before absorbed. Starch does not cause glucose to rise as quickly as simple sugars do, resulting in steadier energy.

**Stem cells:** Special cells with the potential to develop into several different cell types in the body. When a stem cell divides, each new cell has the potential to remain either a stem cell or become another, more specialized type of cell, such as a brain cell or red blood cell. Stem cells are currently being researched as a potential disease-modifying treatment for Parkinson's.

**Substantia nigra:** An area located in the midbrain that looks like a dark streak in brain tissue, hence the Latin name meaning “black substance.” The substantia nigra influences movement and coordination, and is additionally thought to also play a role in other functions and behaviors, such as learning, drug addiction and emotions. A large amount of the dopamine cells that die in the brain because of Parkinson’s are located in the substantia nigra.

**Subthalamic nucleus (STN):** A small lens-shaped area of the brain (specifically located in the basal ganglia) involved in movement control. The STN is “overactive” in people living with Parkinson’s and is a common target in deep brain stimulation for Parkinson’s.

**Supine hypotension:** High blood pressure that occurs when lying down. Common in people with neurogenic orthostatic hypotension (nOH).

**Trans fats:** Type of fat found in two forms: naturally occurring in animals (such as meat and milk products) or made artificially by adding hydrogen to liquid vegetable oils. The primary dietary source for trans fats in processed food is partially hydrogenated oils. Trans fats raise LDL cholesterol levels and lower HDL cholesterol levels, increasing one’s risk of developing heart disease, stroke and Type 2 diabetes.

**T.R.A.P.:** Acronym for four primary Parkinson’s motor symptoms: tremor, rigidity, akinesia/bradykinesia and postural instability.

**Tremor:** Involuntary shaking, trembling or quivering movements of the muscles. In Parkinson’s, tremor is usually a resting tremor, which lessens with movement and is aggravated by stress. It can occur in any part of the body, although it often begins in one hand or arm. Although tremor is one of the hallmark motor symptoms of Parkinson’s, not everyone with Parkinson’s will experience tremor.

**Visuoperceptual:** Understanding the location of objects around oneself.

**Xerostomia:** Lack of saliva or dry mouth.

**Young onset Parkinson’s disease (YOPD):** A diagnosis of Parkinson’s under the age of 50.