Sleep Disturbances

A variety of alterations and disturbances of sleep may develop within the setting of PD. Sleep problems can be very common, and they include difficulties with falling and staying asleep, as well as disturbed nighttime sleep due to restless legs syndrome and REM sleep behavior disorder. Improper medical treatment may result in relieved symptoms, additional side effects, and increased risks for adverse outcomes. Certain medications, such as levodopa and dopamine agonists, can cause increased nighttime dreams or nightmares. In one research study, fatigue was identified as the most common symptom reported by approximately 20% of PD patients. While fatigue in PD is often experienced in a similar way to idiopathic daytime sleepiness, it can occur independently and is not related to the degree of impaired mobility or fatigue. The cause of excessive fatigue in PD is not known, although a variety of mechanisms have been proposed. It has been suggested that exercise endorses endorphins that might improve fatigue in PD, but this has not yet been formally tested. The long, middayn sleep has been used in an effort to treat PD-related fatigue, but definitive evidence that this practice has been performed.

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As can be seen from the description above, nonmotor dysfunction can assume many guises and forms. Nonmotor symptoms and, somewhat, the dominant facet of the overall clinical picture of PD nonmotor features of PD pose a significant quality of life challenge for the patient and people with PD should consult their neurologist for assistance in managing these issues successfully.

Fatigue

Upon February 22nd, PD's fatigue was offered an evening of food, wine, camaraderie, and learning for PD care partner. Keynote speaker, Denise Brown, Executive Director of Caregive...
**PD Nonmotor Symptoms (continued from page 1)**

**Obsessive/Compulsive Behavior:** Some, but not all studies have suggested that many people with Parkinson's disease show a sense of anxiety and depression. However, some patients may develop more distinctive behavior in the form of repetitive, ritualistic actions known as compulsive behaviors. Such impulsive control disorders appear to be induced by levodopa or other dopamine-related medications.

**Urinary:** An overactive or irritable bladder function, characterized by frequency and urgency, is the most common nonmotor symptom in Parkinson's disease. Symptoms of sluggish bladder function (often termed “obstructive” symptoms), such as hesitancy in initiating urination and urinary retention, are less common but may also occur. Correct identification is important for effective treatment.

**Cardiovascular:** Patients with PD may experience dizziness or light-headedness when they stand up after a meal, due to a drop in blood pressure that reduces the amount of blood being delivered to the brain. This can cause confusion or a sense of near-fainting if the drop in blood pressure is severe enough. Treatment may include lifestyle changes, medications, and surgery to support blood flow when the pressure is low.

**Temperature Regulation/Perfusion:** Episodes of profound exposure, particularly if bed bound or unconscious, are common in Parkinson's disease. The response is often centrifugal, to the head and neck, and the entire body's temperature. The body temperature may be significantly reduced in PD, which can develop in PD is different from that of Alzheimer's disease. In PD, the difficulty with blood flow may result in more blood in the muscular areas, whereas in Alzheimer's disease the muscles seem to be completely normal. The blood flow to the brain in PD may be reduced in the treatment of Alzheimer's disease may also be of some benefit in PD.

**Gastrointestinal:** Awareness of gastrointestinal (GI) symptoms in PD dates all the way back to James Parkinson himself. Virtually all GI symptoms occur in PD, including constipation, nausea, vomiting, and diarrhea. Gastrointestinal symptoms can significantly affect quality of life, and treatment may include medication, dietary changes, and medical intervention. However, the specific symptoms and their severity can vary widely among individuals with PD.

**Autonomic Dysfunction:** The autonomic nervous system controls the body's automatic functions, such as heart rate, blood pressure, and digestive processes. When this system is affected by PD, it can lead to symptoms such as heat sensitivity, blood pressure changes, and difficulty with digestion. Treatment options may include medication, lifestyle changes, and, in some cases, surgery.

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The Parkinson Center (PCO) and MoveForward are part of the research team trying to discover the people who volunteer to participate in our program, and a critical component is care, research and educational outreach and development. Relationships with our PCO for daily activities as well as for volunteering and financially contributing to the Parkinson Center of Oregon (PCO) allows us to establish a strong synergistic relationship. Families, who have supported the PCO for many years, are grateful to be a part of a research center that has always had friends, often with a unique identity, who have been directly supportive to the PCO and is seen several fun and successful fundraising events that involve many organizations and personal contributions. This year has been filled with many new and fun outreach opportunities. We wish to thank all our donors for their support of the Parkinson Center (PCO) and MoveForward. The PCO has always had friends, often with a unique identity, who have been directly supportive to the PCO and is seen several fun and successful fundraising events that involve many organizations and personal contributions.
Sleep Disturbances

A variety of alterations and disturbances of sleep may develop during the course of Parkinson’s disease. In the majority of cases, sleep is less deep and more fitful than normal, with more frequent awakenings and nightmares. Some individuals with PD develop very uncomfortable sensations, such as crawling sensations in their legs at night, often accompanied by an irresistible urge to move. Such symptoms may be so severe that they prevent the individual from falling asleep or keep the individual awake. Some people with PD have difficulty falling asleep, once they have fallen asleep, they will frequently awaken and have trouble getting back to sleep. This restless legs syndrome (RLS) is important because the medication clonazepam can be prescribed to alleviate sleep-related problems; occasionally these problems may result in the sleeping person jumping out of bed due to muscle stiffness, muscle cramp or shaking. It has recently been suggested that obstructive sleep apnea is characterized by episodes in which individuals briefly stop breathing while they are sleeping because of transient obstruction of their airway. It has recently been suggested that obstructive sleep apnea may occur with increased frequency in PD, but this issue has not been thoroughly studied. Excessive Daytime Sleepiness: While individuals experiencing difficulty sleeping at night certainly may be troubled by excessive drowsiness during the daytime, PD medications also induce sleepiness that can quite troublesome.

Fatigue

In one research study, fatigue was identified as the single most important symptom of PD by approximately 33% of participants. It may develop in some individuals with PD and While fatigue in PD is often experienced in the early stages of the disease, it can occur independently and is not related to the degree of motor impairment or mobility. The cause of excessive fatigue in PD is not known, although a variety of mechanisms have been proposed. It has been suggested that exercise endurance training might improve fatigue in PD, but this has not yet been formally tested. The sleeping individual and their bed partner. The individual and people with PD should consult their physician, Dr. Pfeiffer’s full article on secondary symptoms can be seen at www.parkinson.org in the National Parkinson Foundation’s Spring 2005 issue of Parkinson Report.

Caregivers Conference

On February 22nd, PD’s Nonmotor Symptoms: Adding Insight to the Diagnosis. In the article, PD might accurately instruct their physicians otherwise. A number of studies have determined that approximately 70-90% of PD patients experience some degree or element of pain as a direct or indirect consequence of PD. Types of pain associated with PD range from the most common type—aching, cramping, and joint discomfort due to increased stiffness and diminished mobility—to less common dysmenia—a particularly uncomfortable form of painful muscle contraction—to a rare cranial nerve palsy that is generated by the brain itself and can be quite disabling.

Behavioral Disturbances

Depression & Anxiety: Over 40% of PD patients may experience significant problems with anxiety sometime or another in the course of their disease; anxiety, often associated with depression, also occurs quite frequently (70-80%). Anxiety in PD may be like the form of generalized anxiety and occasional worry. Some patients experience anxiety—sometimes described as “free-floating” or “non-specific” anxiety—when they are exposed to upsetting events. The hallmark feature of both depression and anxiety is the perception by the patient that their symptoms are out of proportion to any precipitating factors. Furthermore, depression and anxiety tend to occur more frequently when there is a sense of control over one’s disease. The hallmark feature of both depression and anxiety is the perception by the patient that their symptoms are out of proportion to any precipitating factors. Furthermore, depression and anxiety tend to occur more frequently when there is a sense of control over one’s disease.