

## **The 411 on Parkinson's**

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Receiving a diagnosis of Parkinson's disease (PD) can be devastating for families. Even more devastating is not understanding the disease, how to live with it, how it can be treated, or anything else about this debilitating disease. Families can be desperate for information on PD and what to expect in the coming weeks, months, and years.

PD is a movement disorder affecting more than one million people in the United States. According to Science News, more than 50,000 people are diagnosed with PD each year. There is no cure, yet there is treatment available and options vary greatly depending on how soon the diagnosis made.

### **Causes of Parkinson's:**

In order to understand what the disease is, it is helpful to understand what causes the disease. There is some evidence to suggest that the disease has a genetic component, although not all individuals who have the disease also have a family member with the disease. Environment also plays a role, although scientists have not determined to what extent environment interacts with genetics to cause (or not cause) Parkinson's.

Some environmental theories include exposure to pesticides or some other environmental toxin. One interesting piece of research sponsored by the Parkinson's Foundation suggests that there are several factors along the environmental track that may contribute to PD. These factors include "rural living, well water, and herbicide use and exposure to pesticides."

In order for Parkinson's to develop, a part of the brain, the substantia nigra, begins to malfunction and eventually dies. This part of the brain is responsible for producing dopamine, a neurotransmitter that acts as a message relay for coordinated movement in the body. As the substantia nigra dies, dopamine production diminishes greatly, causing further and further disruption to the movement centers within the brain. Finally, the person is unable to voluntarily control movement of the body.

### **Symptoms of Parkinson's:**

Before going to the physician for answers, many people start experiencing symptoms of PD that cause some concerns. These usually start in individuals older than 60 years of age, although people who are much younger have been diagnosed with PD. For example, Michael J. Fox is one of the most famous individuals with PD with news of his diagnosis announced in 1998. Up until his diagnosis at age 30 (in 1991, although his diagnosis was not made public for seven years), the disease was relatively unknown and received little funding or research directed toward its symptoms, diagnosis, causes, and treatment options.

### **Some of the symptoms that you can expect include:**

- Bradykinesia – slow walking or other movement related activities (walking, standing, or sitting down). Bradykinesia can also be seen in stiff facial muscles, often resulting in a "mask-like" appearance where facial expressions seldom change.
- Trembling in the hands, fingers, forearms, feet, mouth, or chin
- Rigid or stiff muscles, including muscles that suddenly freeze for no reason
- Muscle pain, usually accompanied by the rigid or stiff muscles
- Unsteady gait and balance.

Parkinson's is usually characterized by a shuffling walk. The person usually looks down at the ground, not swinging their arms, keeping their shoulders drooped. The person can lean unnaturally forward or backward as they move. Some people have trouble starting to walk and often find their stride frozen as

they try to move.

While the movement issues are paramount in helping physicians start the diagnosis process, there could be smaller (although no less significant), secondary symptoms that accompany the disease. A person may or may not exhibit these symptoms, and the disease varies widely from person to person depending on a variety of factors.

**Secondary symptoms include:**

- Difficulty swallowing or chewing
- Small, cramped handwriting
- Constipation or loss of control of bowels and/or bladder movement
- Depression, fear, and/or anxiety
- Decreased cognitive functioning, including slower processing of information and thinking abilities
- Fatigue and muscle pain
- Dry skin on the face and scalp
- Changes in speech, including talking in a low, soft voice
- Sleep disturbances
- Dementia

**Making the Diagnosis:**

While there is no definitive diagnosis for PD, doctors often run a battery of tests in order to rule out other causes of the patient's problem. In other words, PD is a diagnosis of exclusion, with physicians making the final determination of PD after other avenues have been exhausted.

Some of the tests you might expect are blood tests, urine tests, CT and MRI scans, as well as neurological tests. A thorough neurological exam is needed in order to rule out other areas that could be causing the patient's problems.

**Seeking out Treatment Options:**

Depending on how soon the disease is diagnosed, your physician may have several options. Since there is no cure, treatment is provided in order to manage symptoms. Doctors will often prescribe a medication to help replace the dopamine that the disease attacks, although this is not the only method of treatment you should consider.

Patients can help themselves at home through consistently exercising affected muscles, keeping them as flexible as possible. As the disease progresses, the exercise methods may change in order to provide a new level of comfort for the patient. In addition, there are diet considerations that can help; for some people, losing weight will help ease muscle pain and symptoms.

There are also surgical options for a limited set of patients who need more aggressive treatment. Your physician can discuss these options with you and determine if your case is a candidate for this type of treatment.

Recent studies have revealed that supplements, such as vitamin E and others like it, have no real role in treating PD. Families who may have once been instructed to try supplements in order to strengthen someone's overall health, muscle tone, and other areas are finding that these assumptions have not borne scientific fruit. In other words, save your money when it comes to supplements. There are other more effective treatment methods available to you and your loved ones.

Research concerning treatment and possible cures is ongoing. More patients are needed for clinical trials in order to develop additional lines of research and decide whether or not existing theories need more

study. The Parkinson's community has been under-represented in clinical trials, resulting in less advances in treatment options and causality of the disease. To find out more about clinical trials, visit [www.pdtrials.org](http://www.pdtrials.org).

### **Living with Parkinson's:**

It is possible to lead a fulfilling life despite PD. The disease may change the way a patient views their activity level, yet it is possible through treatment to continue many of the same hobbies and even work on career choices. Your family's doctor is the best place to start when asking questions about the level of activity that you can expect with each stage of the disease. Exercise, for example, is one area that should be discussed clearly with your physician. Finding out the areas where you may need more assistance is critical so you can plan and be prepared for them.

In addition, caregivers need to be prepared with questions for physicians to find out some of the aspects of the disease that can affect them. Traveling with someone who has PD can be challenging, for example, but that doesn't mean that you need to shelve ideas of the family's vacation. Making minor modifications may be all that is necessary. Including a physical therapist in the planning process may also be extremely beneficial since there are mobility concerns that need to be addressed as well.

Families need to be aware of the latest research, treatment options, and additional symptoms that could be experienced as the disease progresses. The disease may advance slowly, especially if caught early and treatment begins quickly; however, it may take its toll on someone quicker if he or she is in poor health and chooses not to take steps toward living a healthier lifestyle. Parkinson's may not be curable, but it is manageable with help from a good family support system, solid medical advice, and advance planning.