

THE RELATIONSHIP BETWEEN STRESS, ANXIETY AND PARKINSON'S DISEASE

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Living with Parkinson's **The relationship between stress, anxiety and Parkinson's disease**



PARKINSON'S IS STRESSING ME OUT!

How stress and anxiety are related to Parkinson's and what you can do about it

People with Parkinson's disease (PD) often notice that their symptoms are worse when they are under stress. (The topic of stress and PD has been suggested more than once by our readers. Click [here](#) to suggest an issue you'd like to see covered in this blog.) Stress, or emotional strain due to difficult circumstances, is an inevitable part of life for everyone, and can be caused for example, by tension with family or employers. Stress is therefore a response to an *external* situation.

In addition to life stress, people with PD may experience anxiety as part and parcel of their PD itself, caused by chemical imbalances in the brain. Anxiety is a very common non-motor feature of PD and is often accompanied by depression. Anxiety can also fluctuate throughout the day along with dopamine levels, with anxiety experienced most

acutely during OFF periods. (We have a helpful publication with more information about [anxiety and depression in PD.](#))



Anxiety is fueled by *internal* forces and can persist when all external causes of stress have been resolved. It is often difficult for a person with PD to separate out stress and anxiety – because practically,

they may manifest in indistinguishable ways. Both can cause excessive worry, poor sleep, and inattention, as well as physical symptoms such as rapid heart rate, trouble breathing, sweating and headaches. In a past blog, I explored the perspectives of people with [PD as it relates to their mental health.](#)

PARKINSON'S SYMPTOMS AND STRESS

Although tremor in particular tends to worsen when a person is anxious or under stress, all the symptoms of PD, including slowness, stiffness, and balance problems, can worsen. Symptoms, particularly tremor, can become less responsive to medication. The solution in these situations is not to increase medication but to find ways of reducing stress. Read on for tips on how to do that.

Managing stress and anxiety in PD

Anxiety in PD may need to be treated with medication in order for a person to regain his/her quality of life. The medications used for anxiety are typically the same medications used for depression in PD and these include selective serotonin reuptake inhibitors (SSRIs) such as sertraline and paroxetine and selective serotonin and norepinephrine reuptake inhibitors (SNRIs) such as venlafaxine. Occasionally, a group of medications called

benzodiazepines, (which include diazepam and clonazepam) can be used to treat the anxiety of PD.

Lifestyle modifications

However, not everyone with PD needs medication to control anxiety and this is a decision to be made in conversation with your doctor. There are numerous life-modifications that may help a person with PD manage stress. These could include:

- Planning ahead and giving yourself enough time to accomplish your tasks
- Using music to create a relaxing environment
- Focusing on maintaining your positive attitude and sense of humor
- Socializing with positive people
- Getting involved in worthy causes
- Attending a support group
- Exercise
- Meditation

Exercise

Exercise has been shown to improve many of the non-motor symptoms of PD, including stress and anxiety. Interestingly, a recent article published in the journal *Movement Disorders*, explored the relationship between exercise, stress and PD. The study showed that doing high intensity endurance exercise reduced morning cortisol levels in patients with PD.

Cortisol is the body's main stress hormone and although it is crucial to many of the body's functions, levels that are too high or too sustained can cause health problems including anxiety.

Beyond helping with stress and anxiety, exercise has many other benefits for people with PD. Check out our [Be Active & Beyond](#) exercise booklet and our [Staying Healthy, Keeping Fit](#) webinar for more info. As always, be sure to talk with your doctor before starting any exercise program.



Meditation

Meditation is a group of techniques that allow a person to relax the mind and focus inward. Meditation can be used to relieve stress in all types of situations, and has been used in the context of PD as well.

Mindfulness is a type of meditation in which a person sustains a focused awareness of thoughts, feelings, bodily sensations and the surrounding environment. There have been a few small clinical trials which investigate whether the practice of mindfulness helps the motor and non-motor symptoms of PD. Although results are mixed, there are some suggestions that mindfulness can decrease stress and increase healthy behaviors in a sustained manner.

A [randomized controlled trial](#) of mindfulness yoga (which incorporates mindfulness techniques into yoga) in PD as compared to stretching and resistance training, demonstrated that mindfulness yoga improved anxiety more.

Psychotherapy

Although the above ideas can go a long way to control stress and anxiety, you may need additional help (short of medication) to control anxiety. Psychotherapy can be a very effective treatment for PD-related anxiety. One of the most frequently used psychotherapy techniques for stress and anxiety in PD is cognitive behavioral therapy (CBT).

CBT is a type of psychological treatment which focuses on practically changing a thought process or behavior. It is not concerned about the root cause of a symptom but rather focuses more on the practical here and now.

The basic premise behind CBT is that a person's *subjective reaction* to an experience can determine how much of an impact the experience will have on that person. The same experience can have vastly different impacts on two different people. CBT aims to harness this variability and provides interventions to train the body to react to an experience differently than it normally would.

CBT has been used for a variety of conditions including anxiety disorders (of all types, not just associated with PD) eating disorders and chronic pain, among many others. Interventions used for anxiety could include patient education, self-soothing, deep breathing, progressive muscle relaxation, cognitive restructuring, and graduated exposure to decrease and eliminate avoidance behaviors and promote problem-solving.

There have been numerous studies that have looked at the [effects of CBT for anxiety in PD](#) and these have been nicely summarized in this article.

Here is an example of how CBT might work for someone with PD:

Let's say a person with PD is anxious about going out to a restaurant due to fear that he will spill or embarrass himself.

CBT may use graduated exposure to help him overcome his anxiety, in which the person with PD simulates a restaurant meal with increasingly more anxiety-provoking situations until he is ready for the ultimate exposure of actually going out to dinner at the restaurant. Those exposures will work towards a number of goals.

1. One goal is to change the person's cognitive belief that he will always spill and embarrass himself at a restaurant. Using the exposure, he will see that he is able to be at a restaurant and not spill.
2. The next goal is to change the cognitive belief that if he spills, he will definitely be embarrassed. During the exposure, he will realize that even if he does spill, most likely nobody will notice or care.
3. The final goal is to change the cognitive belief that he must avoid embarrassment at all cost. The exposure will help him to understand that if he does spill and

someone notices and cares, he can use the relaxation techniques that he is taught, to handle the embarrassment and enjoy the evening out regardless.

Other complementary therapies for anxiety in PD

Complementary therapies are a growing group of treatments which may improve the symptoms of PD without medication. I



have written past blogs on two complementary therapy approaches for several symptoms of PD – [art therapy](#) and [music therapy](#).

Various complementary therapy modalities have been developed that may lower stress and anxiety in PD. These include yoga, massage, the Alexander technique, neurofeedback (described below) and others. Some of these therapies have been studied in small trials with data suggesting that they may be helpful for the anxiety of PD. Others have not yet been studied, although anecdotally, people with PD may feel that they are very useful in combatting anxiety. In general, this group of therapies may be effective for the anxiety of PD but needs to be studied more rigorously.

Neurofeedback

Neurofeedback is a type of training in which a person observes his/her brainwaves in real time on a computer screen (usually using electroencephalography or EEG) and learns how to control and change them, in an attempt to self-regulate brain function. This technique has been studied in the treatment of a large variety of disorders including ADHD, addiction, pain and other conditions,

There is a small body of literature on the use of neurofeedback in PD, with the majority of the research investigating if neurofeedback can improve motor symptoms

and balance, and not anxiety. However, neurofeedback training has been studied for generalized anxiety, not specifically in the context of PD.

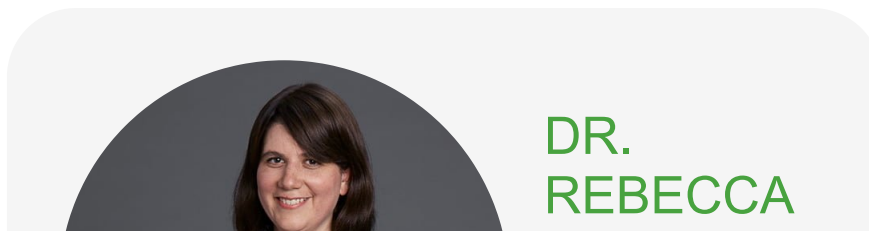
Many of the studies using neurofeedback for anxiety are small and are not rigorously done (for example, many did not compare a group of patients who received the treatment to a group of patients who did not receive the treatment), which makes it difficult to interpret the results. [One randomized controlled study](#) however, showed that treatment with neurofeedback caused an increase in global functioning and a decrease in anxiety symptoms. Although these results are intriguing, more research needs to be done to see if neurofeedback can help with anxiety related to PD.

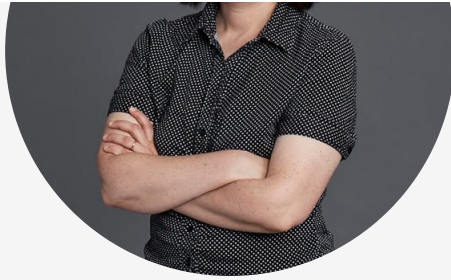
Tips and Takeaways

- Anxiety and stress are two different things, but can often manifest themselves in similar ways, making it challenging to tell the difference.
- Anxiety is a common non-motor symptom of PD, and unfortunately, stress and anxiety can worsen motor symptoms of PD.
- A number of lifestyle modifications, including increasing exercise may be very helpful in combating anxiety
- Cognitive behavioral therapy has been shown to lower anxiety in PD.
- Various other complementary therapies may also successfully lower anxiety in PD, although current research is limited and more needs to be done.
- Be sure to talk to your doctor if you are experiencing stress and/or anxiety. It is important for him/her to understand all of the symptoms you are experiencing in order to best help you improve your quality of life.

Do you have a question or issue that you would like Dr. Gilbert to explore?

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