

PARKINSON DISEASE: TREATING SYMPTOMS UNRELATED TO MUSCLE MOVEMENT

This fact sheet may help you understand which therapies help Parkinson disease (PD) symptoms unrelated to muscle movement.

Neurologists from the American Academy of Neurology are doctors who identify and treat diseases of the brain and nervous system. The following evidence-based information* is provided by experts who carefully reviewed all available scientific studies on therapies for treating PD symptoms unrelated to muscle movement.

If you have PD, it is important that you, your doctors, and your caregivers understand PD symptoms other than movement problems. You also should know that more research on these symptoms is needed.

What is PD?

PD is a brain problem that causes shaking (tremors). People with PD have trouble walking and using muscles in a coordinated way. This disease usually sets in after age 50. It is a common nervous system disease in older adults. Younger adults sometimes develop PD. However, it rarely occurs in children. Both men and women can develop PD. It also can run in families.

In PD, certain nerve cells in the brain slowly waste away. These cells make dopamine, a brain chemical that helps control muscle movement. Damage to these cells leads to lower dopamine levels, affecting the nerve cells' ability to function. The cells no longer communicate well to the muscles. For this reason, people with PD slowly lose muscle function. The cause of this cell damage is not yet known.

I know PD causes movement problems. What other PD symptoms are there?

The main symptom of PD is movement problems. However, there are many other symptoms to be aware of. These include sleep, fatigue, and mood disorders. Problems with automatic body processes also are common. Examples are constipation and problems with urination and sexual function. These symptoms can cause pain and discomfort. They also can greatly affect daily routines and quality of life.

I have PD and I have a hard time sleeping. Is this related to my PD? How is this treated?

Sleep problems are common in people with PD. Severe daytime sleepiness is one problem. This also is called excessive daytime somnolence (EDS). EDS can be brought on by the disease process. Other causes are drug use and other sleep disorders. Strong evidence shows modafinil is used to help people *feel* more awake. However, one study showed people taking modafinil had a false sense of alertness. When

tested, their sleepiness had *not* actually improved. These people were not awake enough to do certain tasks well. This may pose a safety risk for activities such as driving.

Other sleep problems affect people with PD. One problem is periodic limb movements of sleep (PLMS). Another is restless legs syndrome (RLS). People with PLMS move their legs or arms during sleep. People with RLS have the urge to move their legs during periods of inactivity, and at night. These limb movements can lead to poor sleep quality. Good evidence shows that levodopa or carbidopa likely help treat PLMS in PD. Other drugs are used to treat RLS and PLMS in the general population. However, there is not enough evidence to show if they relieve these symptoms in PD.

People with PD also can act out vivid dreams during sleep. They also can have insomnia and nighttime waking. There is not enough evidence to show if treatments relieve these symptoms in PD.

I have anxiety. Is this related to my PD? How is this treated?

Anxiety affects many people with PD. There is not enough evidence to show if drugs help treat anxiety in PD. However, anxiety drugs are used widely in the general population. These drugs have some side effects. Examples are falls, thinking problems, and loss of coordination.

What automatic body processes are affected by PD? How are these treated?

PD affects several automatic body processes, such as sexual function. This can stem from problems with movement, mood, or the nervous system. Drugs also can cause sexual problems. These problems include reduced genital sensitivity and lubrication (moistness). Difficulty reaching orgasm can occur. It is common for men with PD to experience

erectile dysfunction (ED), where there is difficulty having or maintaining an erect penis. Weak evidence shows that sildenafil citrate (also known as Viagra®) may improve ED. The US Food and Drug Administration has approved sildenafil citrate to treat ED. If you have ED, talk with your doctor about all possible causes. There are no studies of other sexual problems in PD.

Digestion is another process affected by PD. People with PD often have constipation when the body has difficulty passing solid waste. There is weak evidence that macrogol (also known as polyethylene glycol) may help with constipation. There is not enough evidence to show if botulinum toxin (BoNT) helps with constipation. If you have constipation, talk with your doctor. Drugs that treat other symptoms can cause constipation. Experts say that water and high-fiber foods may help. There are no studies of other digestive problems in PD.

Low blood pressure and urinary incontinence (leakage) also occur in PD. There is not enough evidence to show if treatments are helpful.

There are no studies of other automatic body processes affected by PD. For example, no studies have been done on

urinary urgency, sweating, or drooling. Another AAN guideline found good evidence that BoNT likely helps treat drooling.

I have PD and I have several health problems. How can I know which problems are caused by PD?

PD can cause many symptoms other than movement problems. It is hard to know the cause of these symptoms. Two tests are available to screen for these PD symptoms. One is a questionnaire from the NMS Quest study. The other is the Unified Parkinson's Disease Rating Scale (UPDRS). The UPDRS tests for all PD symptoms, including those unrelated to movement. Experts say these tests may help to identify these problems early. Talk with your doctor about whether these tests may be helpful.

It is important to understand all PD symptoms. However, not much is known about symptoms unrelated to muscle movement. For this reason, more research on these PD symptoms is especially needed. Such research may help you, your doctor, and your caregiver better manage your disease.

This statement is provided as an educational service of the American Academy of Neurology. It is based on an assessment of current scientific and clinical information. It is not intended to include all possible proper methods of care for a particular neurologic problem or all legitimate criteria for choosing to use a specific procedure. Neither is it intended to exclude any reasonable alternative methodologies. The AAN recognizes that specific patient care decisions are the prerogative of the patient and the physician caring for the patient, based on all of the circumstances involved.

*After the experts review all of the published research studies, they describe the strength of the evidence supporting each recommendation:

Strong evidence = more than one high-quality scientific study

Good evidence = at least one high-quality scientific study or two or more studies of a lesser quality

Weak evidence = the studies, while supportive, are weak in design or strength of the findings

Not enough evidence = either different studies have come to conflicting results or there are no studies of reasonable quality

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