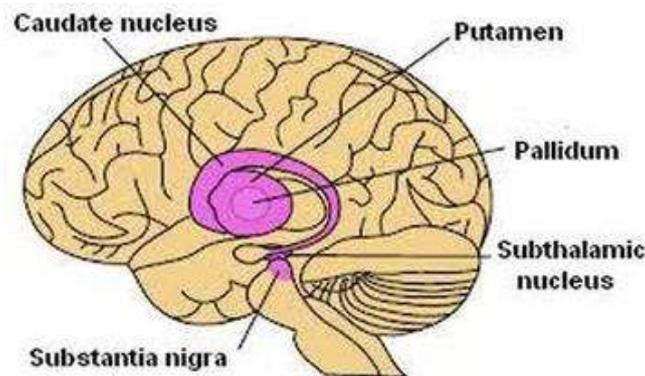


# Perceiving Parkinson's

## Cueing Strategies In Parkinson's (Day 70)

One fascinating fact about Parkinson's is that **certain situations make motor symptoms improve or vanish**. Most neurologists know that a frozen Parkinson's patient, feet glued to the floor like a statue, can suddenly walk if a line is drawn across the floor in front of them. Moreover, there are cases of people with motor symptoms so severe they could not walk without help, yet their symptoms disappeared when they became excited by an external event - there is a case of a man whose motor symptoms were so severe that he was wheelchair-bound, yet when the theater he was in caught on fire he leapt from his chair and ran out of the building!

To understand how **cues** such as a line drawn across the floor or a building catching on fire can improve motor symptoms in Parkinson's, we must learn about the **basal nuclei**, a brain structure that relies on the dopamine produced by the substantia nigra. The function of the basal nuclei is to **unconsciously and automatically perform routine tasks**, such as walking - thus, a person with a **normal** basal nuclei automatically performs routine tasks without needing to "think" about them, whereas a person with an **abnormal** basal nuclei, such as a person with Parkinson's, loses their ability to automatically perform routine tasks. However, a person with Parkinson's can still perform routine tasks if they **train their brain** to use alternate pathways that bypass the abnormal basal nuclei, pathways that require the person to pay attention to the task at hand - that is, to "think" about the tasks.

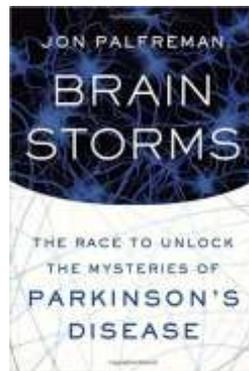


The basal nuclei, abnormal in Parkinson's, consists of the substantia nigra plus other structures.

Cues improve motor symptoms in Parkinson's by **focusing conscious attention to a task**, thus using pathways that **bypass the abnormal basal nuclei**. Cues can be external or internal:

(1) **External cues** are real things in the **environment** that make a person pay conscious attention to a task - they can be **visual** (such as a line drawn across the floor), **auditory** (such as a musical rhythm), or **tactile** (such as vibrations). Many scientific studies show that external cueing strategies improve motor symptoms in Parkinson's.

(2) **Internal cues** are imaginary things in the **mind** that make a person pay conscious attention to a task. The former modern dancer **Pamela Quinn** employs a wide array of internal cueing strategies to improve people with Parkinson's; they can be read about in Jon Palfreman's book, "Brain Storms - The Race To Unlock The Mysteries Of Parkinson's Disease."



Jon Palfreman's book, a great read.

Cueing strategies improve mobility in Parkinson's by **focusing conscious attention to the task of walking**, making it less automatic and more voluntary. To improve your walking, try these strategies:

(1) For **camptocormia** (an abnormally stooped body posture), correct the stoop by imagining a **fashion model** - pull your shoulders back and put your legs forward.

(2) For **reduced or lost arm swing on one side**, wear headphones and **play music** that fits your stride so you can swing your arms to the beat; this will force you to swing both arms evenly. If you don't have headphones, you can also **hum a tune** and match your arm swing to that.

(3) For **small shuffling steps**, there are several strategies. To improve stride length, **step over the lines of the sidewalk** or **follow and copy another person walking** (at a distance, mind you). To improve shuffling, **focus on landing on your heels** - heel, toe, heel, toe!

(4) For **freezing**, break out of it by imagining a **penguin** - begin walking side to side by moving from one foot to the other, then once you get going you can transition to a more normal walk.

(5) For **falls**, please remember this phrase - **always feet first**. People with Parkinson's tend to lead with their torso, so they can trip over their feet and fall; this is prevented by leading with the feet. If you're going forward, feet first. If you're going backward, feet first. If you're going left, left foot first. If you're going right, right leg first. Always feet first!

To wrap up, the motor symptoms of Parkinson's can be improved using **cueing strategies** such as those listed above to focus conscious attention to a task, thus using pathways that bypass the abnormal basal nuclei. Yes, it is possible to "think" your way to improving your motor symptoms, and at the end of the day **you have nothing to lose** by trying - and remember, always feet first!

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**References**

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- (3) Palfreman. 2015. Brain Storms – The Race to Unlock the Mysteries of Parkinson's Disease. Rider, an imprint of Ebury Publishing.
- (4) Ahlskog. 2015. The New Parkinson's Disease Treatment Book. Oxford University Press.