

MOVEMENT AND CUEING STRATEGIES TO THAW FREEZING EVENTS IN PARKINSON'S DISEASE

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Some individuals with Parkinson's disease (PD) experience freezing of gait (FOG), which results in an inability to take a step or getting "stuck" while walking. This can be frustrating because it slows down walking, resulting in inefficiency. It can also lead to imbalance and falls. It is important to know common triggers for FOG as well as strategies to reduce freezes.

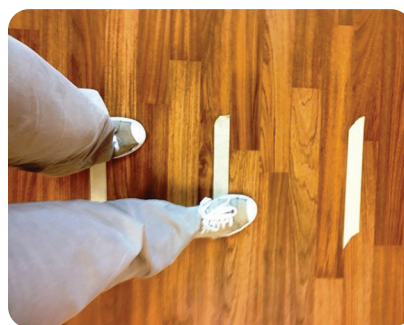
Freezing commonly occurs when a person first stands up and can't initiate the first step (start hesitation). FOG also commonly occurs with turning, walking through doorways, changes in flooring surface, or small spaces (crowds, walk-in closets, etc.). Knowing which "triggers" cause a person to freeze is important because strategies can be used before or during these events. Every person with PD that experiences freezing has different freezing severity and triggers. Additionally, each person

responds distinctly to different movement strategies to reduce FOG. There are general principles that apply to everyone and person-specific movement strategies that will reduce FOG.

Three general principles that apply to everyone with FOG are reducing stress during a freezing event, avoiding quick turning, and reducing triggers as much as possible. Physical and emotional stress commonly increase all symptoms in PD. People often get upset or anxious when experiencing a freeze. It is important to avoid being stressed, getting upset, or trying to "push through" a FOG event. Doing so will often prolong a freeze or cause greater instability. People should try, as best as possible, to relax and avoid stress during a FOG event. Turning quickly will often trigger a freeze and often lead to imbalance or falls. When there is space available, a person should make a slow, wide-arc turn. Use of a "clock strategy" is also helpful for turning. This involves a person pretending to be in the middle of an imaginary clock and stepping to different, invisible points on the clock. For example, to complete a 180° clock-wise turn, a person could step with their left leg to 12:00, then 2:00, then 4:00 and then 6:00. To reduce triggers, try to avoid having clutter in the home that causes a person to walk or turn in a narrow space. When walking through a doorway, look at an object in the distance in the next room, and avoid looking at the doorframe. While these general strategies work well for most people with FOG, there are effective movement or cueing strategies that can also be beneficial. However, the effectiveness of the type of cue used varies from person to person.

Types of cueing strategies include visual, auditory, attentional. Visual cues may involve stepping over someone's foot placed in front of the leg that is frozen or stepping on or over lines on the ground. Lines on the ground can be created by putting tape on the floor as a target in areas where freezing occurs. If freezing occurs in a room with tile or linoleum, the lines in the flooring can be used. Visual targets can also be created by a laser-emitted light that creates a line on the ground. The laser can be part of a cane or walker or a device attached to the shoelaces. Auditory cues use a real or imagined beat or rhythm that a person listens to. The beat can be created by using a metronome, listening to music, singing, or counting. Listening to or imagining a steady beat can help with freezing and also reduce the variability in walking pattern in someone with PD. Finally, attentional cues refer to creating BIG movements or taking BIG steps. Attentional cues involve thinking about taking long steps or strides or lifting knees up high while walking. Cueing can be performed prior to a situation that would likely trigger a freeze with a goal of preventing the FOG event. However, if freezing does still occur, the cues are often effective in shortening the duration of a freeze and, hopefully, reducing the frequency that they occur.

Because people respond very differently to each cueing strategy, people with PD are strongly encouraged to work with a physical therapist who has experience working with people with movement disorders to tailor the appropriate strategy to their needs and de-frost their troublesome freezes.



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