



## Nervous System - Parkinson's Disease

### Fight the Resistance

Parkinson's is a chronic, slow-progressing disease that is the most common neurological movement disease in older adults involving abnormal movements. The disease is caused by a lack of neurotransmitter dopamine production and sensitivity amongst receptors in the brain. Lack of dopamine activity contributes to uncoordinated muscle movements throughout the body (1). Symptoms of Parkinson's include pronounced tremors, muscle rigidity and slowness of movement, in which standing, walking and balance are impaired. Other common symptoms include falls, drooling and difficulty swallowing. Psychological symptoms can include depression, anxiety, social withdrawal, sleep disturbances, and emotional irritability (1). Through this simulation, you will experience one of the major physical symptoms of Parkinson's disease, muscle rigidity. It will help you will gain a deeper understanding of the physical and emotional strain that this disease can have on those diagnosed, ultimately improving understand and evoking a greater sense of empathy.

### Materials

- Resistance band, rope, or a piece of elastic fabric (a scarf)
- A volunteer assistant to tug on your arm (a family member, friend, housemate)
- A writing utensil (a pen, pencil, or marker)
- Something to write on (paper, whiteboard)

### Procedure

1. Complete the precursor simulations if you have not already done so.
2. Start by placing all items on a table before you.
3. Ask your volunteer assistant to wrap the resistance band around your writing arm. If you do not have a volunteer, tie the band to a chair behind you to simulate similar resistance.
4. Instruct the volunteer to pull slightly and unexpectedly to simulate rigidity of movement.
5. Attempt to write the grocery list below while the volunteer is pulling your arm with the resistance band.

Milk  
Bananas  
Chocolate chips  
Broccoli  
Pasta  
Chicken

### Reflection Questions

1. How did you feel trying to write out the grocery list while your arm was moving uncontrollably?
2. Reflect on the frustration you felt during this simulation. How do you think an older adult feels when experiencing compromised mobility every day?
3. How can you support someone who lives with Parkinson's disease?