

4th Grade  
FIRST PLACE

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### The Revolutionary Controlled Motion Glove

If you had the shaking of Parkinson's Disease and were trying to drink hot chocolate, wouldn't you want a way to get the cup safely to your mouth? My grandfather has Parkinson's, so unless he takes special medicine, he can't stop shaking. If he takes medicine, he'll stop shaking, but then he can't use his muscles well, even for things like walking. Eventually, Grandpa's muscles won't be able to function because he won't be able to use them. That's where my Controlled Movement glove comes in. While it's on, the glove's firmness will keep Grandpa's hand from shaking with less medicine, yet allow him to use his hand freely. If that is made possible, then people with tremors like Grandpa will be able to have functioning hands and a better, independent life. It could also help people like surgeons produce better quality work.

What causes the Parkinson's shaking is that a lot of faulty signals are produced by the brain. The glove will have a metal exoskeleton with sensors to pick up signals from the nervous system going to the muscles of the hand, like they do in an artificial limb. The glove will do part of the moving on its own. Its sensors will be adjusted to follow the strongest signal in order to resist the shaking. The glove would be made out of a stretchy yet strong material such as polyester or spandex.

If Grandpa had the Controlled Movement Glove, he would be able to turn on his light, button his shirt in the morning, and eat his breakfast on his own. He could turn on basketball at his own will. He could hold and read a science magazine before he goes to bed. Grandpa could eat in a restaurant for special occasions, and be a part of the world around him instead of a suffering bystander. If the Controlled Motion Glove existed today, people with tremors all over the world could be active in society, creating better lives for themselves and others.