

# Video Game Therapy For Cerebral Palsy Research

Jackson Collins and Jaden Buggs

UMB CURE Scholars Program -Eighth Grade Cohort 1, Green Street Academy, Southwest Baltimore Charter, Baltimore, MD  
Marlene and Stewart Greenebaum Comprehensive Cancer Center, University of Maryland, Baltimore,

## Purpose of Study

The purpose of this study is to analyze if video games help people with cerebral palsy improve their motor skills and quality of life.

## Introduction

- Cerebral palsy is a condition that affects your motor skills and coordination.
- It happens because of damage to your brain, most commonly before birth.
- Patients with cerebral palsy might have issues with walking, playing sports or taking care of themselves day to day.
- Symptoms include exaggerated reflexes, floppy or rigid limbs, and involuntary motions.

## Public Perception

- People might think cerebral palsy means that you can't do anything but in reality there is a large range of symptoms.
- Some people might think the idea of using video games as a therapy is unhelpful.

## Discoveries and Innovations

- Video games increase motivation, learning and reward pathways in the brain (this is called "neuroplasticity").
- Movement-based video games can help teach repetitive or new motions.
- Children with cerebral palsy enjoy movement-based video games.
- Video games as a therapy are relatively safe.

## Applications in Medicine

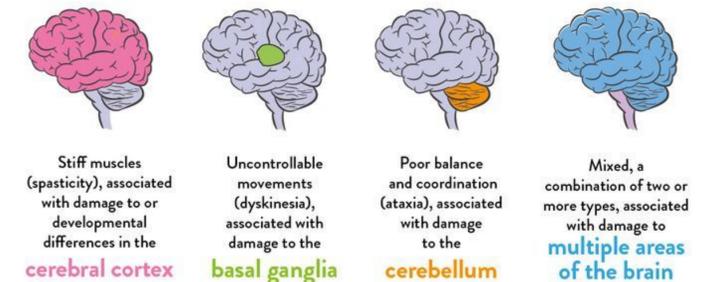
- Physical Exercise: activity for 20 to 30 minutes 5 days a week
- Mental Health- Building Confidence and Self Esteem
- Occupational Therapy
- Physical Therapy



Figure 1. Microsoft Xbox Kinect provides movement therapy for patients.

## What are the Types of Cerebral Palsy?

There are different types of cerebral palsy, depending on what part of the brain is affected.



## Conclusion

- Even though cerebral palsy is rare and there are a variety of symptoms, there are lots of possible treatments.
- More research studies need to be done to know for sure how helpful video game therapy is for people with cerebral palsy.

## References

- <https://g.co/kgs/8NofK1>
- <https://www.stemcellshealthcare.com/some-data-on-cerebral-palsy-and-its-causes.html>
- [www.physio-pedia.com](http://www.physio-pedia.com)