

Participate in Research

Testing a Mixed Reality Video Game for Home-Based Practice of Arm-Hand Skills for Children with Cerebral Palsy - A Pilot Randomized Controlled Trial



We're recruiting
for a new study!

Holland Bloorview
Kids Rehabilitation Hospital

Bloorview
RESEARCH INSTITUTE

CHEO



TO ASK QUESTIONS OR TO SIGN UP,
PLEASE CONTACT:

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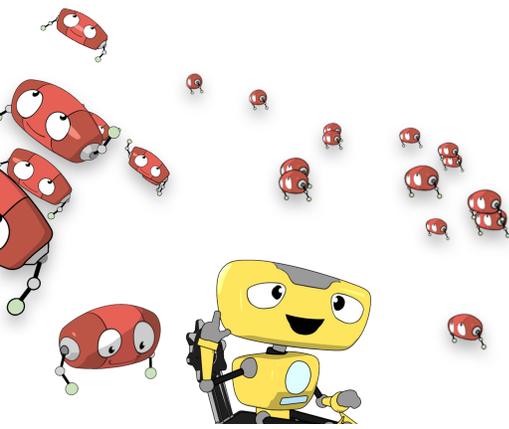
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Do you or your child have Cerebral Palsy? Do you want to play a new mixed reality video game for hand-arm skills training? Participate in our study!

What is this study about?

Bootle Blast is a movement-tracking video game tailored for hand-arm skills training, collaboratively developed by children, game developers, clinicians, and researchers. Using a camera to track movements, the game is adaptable to accommodate various abilities and therapeutic objectives. In this study, we want to find out whether home-based practice with Bootle Blast could potentially improve upper limb function, activity, and participation outcomes in children with Cerebral Palsy.

Who can participate?

We are looking for kids who:

- Have **hemiplegic Cerebral Palsy**
- Have some difficulty handling objects (Levels I to III on the Manual Abilities Classification System)
- Are **between 6 and 17 years** of age with sufficient cognitive capacity and cooperation to play Bootle Blast and complete outcome assessments
- Can answer questions in English about preferences
- Can come to one of the hospital sites (Holland Bloorview, Grandview or CHEO) for a total of 3 in-person study appointments
- Have a large screen (e.g. TV) with an appropriate play space (3m x 3m) in front
- Have at least intermittent access to the internet
- Engage in screen-based activities (e.g., TV, tablet, computer/video games) on a regular basis (e.g., 15-20 minutes/day on ≥ 3 days/week)
- Have time to play Bootle Blast for **15-20 minutes/day, 3-4 days/week** for 12 weeks
- Have not received upper limb surgery or botulin toxin injections in the past 4 months
- Have not had constraint-based movement therapy/casting in the previous 3 months that may be associated with changing abilities
- Are not currently or anticipate receiving active treatments impacting upper limb function during the study period
- Do not have uncontrolled seizures that may be triggered by video game play, defined as any seizure occurring within the past 6 months
- Do not have a medical condition impeding safe participation in physical activity associated with Bootle Blast
- Do not have visual limitations that interfere with Bootle Blast play

What's Involved?

This study is 24 weeks long. For 12 of the 24 weeks, you will be given the Bootle Blast system to play at home. We will ask your child to play for 15 - 20 minutes/day, 3-4 times per week. For the other 12 weeks, you and your child will continue in your usual activities. You will come to the hospital (Holland Bloorview, Grandview, or CHEO) 3 times during this study for research assessments. We will also ask you and your child some questions about Bootle Blast and your experience.

Participants will receive a small token of appreciation for their time.

Travel costs (up to \$50 per visit) are reimbursed.

Potential Benefits?

Your participation will help us understand whether home-based practice with Bootle Blast could potentially improve upper limb function, activity, and participation outcomes in children with Cerebral Palsy.

Potential Risks?

Your muscles may feel sore after playing the games.