



# Assessment of Visual Processing Abilities Associated with Brain Based and Ocular Visual Impairment

*The Laboratory for Visual Neuroplasticity  
Massachusetts Eye and Ear  
Harvard Medical School*



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## Research Project Description

We are interested in investigating how individuals born with either an ocular or brain based visual impairment perceive the world around them. To study this, we have designed new approaches to assess functional vision abilities using novel visual tasks.

We have developed a series of visual tasks using desktop virtual reality (VR). These video environments are designed to investigate how children, adolescents, and adults are able to locate objects in a complex visual scene. Visual search abilities will be measured using eye tracking.



*Participant viewing a virtual reality scene designed to simulate a school hallway (left) and a toy box (right). Visual search abilities are measured using eye tracking.*

This study will help us better understand how individuals with visual impairment see and interact with the world around them and provide further characterization of visual perceptual abilities beyond standard clinical testing. Results are shared with participants and families.

## General Eligibility Criteria:

- Aged 7 or older and having a diagnosis of early onset visual impairment associated with:

1. Cerebral/cortical visual impairment (CVI)

OR

2. Ocular disease or injury

- Visual acuity sufficient to perform tasks (generally 20/60 Snellen equivalent or better).

### Other Eligible participants:

- Diagnosis of attention-deficit/ hyperactivity disorder (ADHD) with (or corrected) normal visual acuity and no history of visual impairment.

### Participation includes:

- Approximately 2 hours

- Compensation for participation, parking, and travel expenses reimbursement provided

For more information, please contact:

**Claire Manley** (Study Coordinator)  
(617) 573-3794 or  
[cemanley@meei.harvard.edu](mailto:cemanley@meei.harvard.edu)

**Lotfi Merabet** (Principal Investigator)  
(617) 573-4130 or  
[lotfi\\_merabet@meei.harvard.edu](mailto:lotfi_merabet@meei.harvard.edu)