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**MODULATION IN ATTENTION RELATED EYE VERGENCE IS DISRUPTED IN CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER**

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### **Introduction**

The oculomotor system is closely linked to the neural circuits of attention. Recent evidence shows a novel role for eye vergence in orienting visual attention.

### **Objectives**

Identify patterns of attention disruption through eye vergence.

### **Aim**

We investigated whether modulation in attention related eye vergence is disrupted in ADHD.

### **Methods**

We measured eye vergence in children previously diagnosed with ADHD while performing a cue/no-cue task and compared the results to age-matched controls.

### **Results**

We observed a strong modulation in the angle of vergence in the control group but not in the ADHD group. In addition, in the control group the modulation in eye vergence was different between the cue and no-cue condition. This difference was absent in the ADHD group.

### **Conclusions**

Our study supports the observation of deficient binocular vision in ADHD children. We argue that the observed disruption in eye vergence modulation in ADHD children is proof of a deficient cognitive processing of sensory information. Our work may provide new insights into attention disorders, like ADHD.