

Brief Report: Preliminary Evidence of the N170 as a Biomarker of Response to Treatment in Autism Spectrum Disorder

Link: <https://pubmed.ncbi.nlm.nih.gov/34267691/>

Individuals with Autism Spectrum Disorder (ASD) often experience difficulties with social communication, such as identifying and understanding faces. Currently, most autism research relies on descriptions provided by clinicians, parents, or caregivers. While important, such observer ratings may be subjective and miss important or unobservable information, such as neural activity. Previous research has shown that brain activity in response to pictures of human faces is less pronounced and slower in people with ASD compared to the general population. In this study, we wanted to explore whether and how Pivotal Response Treatment (PRT), a commonly used behavioral intervention for autism, would change brain activity in response to faces in children with ASD. To do this, we measured brain waves using a tool called electroencephalography (EEG) before and after PRT. We found that brain activity in response to viewing faces changed and became faster for children who had completed 16 weeks of PRT, while it did not change for children who did not receive the intervention. Understanding how brain activity relates to behavioral treatments in autism may help inform the development of more objective markers to assess the effectiveness of autism treatment programs.