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# Features of the CT-system in babies at familial risk of autism: a discussion of the design of a longitudinal study

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## Abstract

**Introduction:** It is known that people with ASD do not have full access to the benefits of the CT-system (Cascio, 2008). Avoidance of tactile contact by 9-month-old infants predicts further autistic social impairment (Mammen, 2015). The heritability of ASD is highly probable (Sherlly, 2019), which makes it possible to study the development of the CT-system at an earlier age in babies with older siblings with ASD (especially sisters (Stefan, 2019).

**Sample:** Babies at high familial risk of autism aged 0-3 months (n> 30) and term babies without risk of autism aged 0-3 months (n> 30) considering gender balance.

**Aim of the study:** Study 1. We research EEG and ECG dynamics to identify indicators of possible therapeutic effect in different infants and compare them with psychometric measures.

Study 2. The sample from Study 1 is divided into experimental and control groups by randomization. Participants in the experimental group are exposed to an intervention (tactile contact training program) for 6 months. Study 2 takes place 6 months after Study 1. We compare the characteristics of the response of the CT-system and changes of social-emotional development in both groups.

**Methods:** Scale for early assessment of emotional and social development ADBB (assessment by video recording of 8-min interaction with the baby), dynamics of EEG components during gentle maternal tactile stimulation (also PRE/POST), ECG parameters of mother and infant. Diagnosis takes place at mother's home.

**Keywords:** design EEG study, CT, afferents, gentle touch, autism.

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