

# "Like parent, like child": Attention deficit hyperactivity disorder-like characteristics in parents of ADHD cases

Trejo S, Matute E, de Lourdes Ramírez-Dueñas M, Mendizabal-Ruiz AP, Chamorro Y, Morales JA.

Am J Med Genet B Neuropsychiatr Genet. 2018 Oct 19.

doi: 10.1002/ajmg.b.32676.

## Abstract

The objective of this study was to characterize an attention deficit hyperactivity disorder (ADHD) endophenotype in non-affected parents of adolescents with a history of ADHD, based on the relationship between performance on a sustained attention test (continuous performance task, or CPT) and polymorphisms of the DRD4 gene. In a sample of 25 non-affected parents of adolescents with ADHD history obtained from a longitudinal study of a nonclinical population, and 25 non-affected parents of adolescents with no ADHD history, four groups were evaluated with respect to the presence or absence of the long allele polymorphism of the DRD4 gene (i.e., over seven repeats). Comparisons of CPT performance among the four study groups included the number of commission errors, the number of omission errors, mean reaction time on correct responses (MRT), and reaction time (RT) variability (mean standard deviation of RT in each block [SDRT, as variability], and the sigma and tau components of the ex-Gaussian approach). The group of non-affected parents of adolescents with ADHD history and at least one long allele of the DRD4 gene showed greater RT variability (measured by SDRT), which is best explained by the greater frequency of abnormally slow responses (measured by tau). An association between the presence of the long allele of the DRD4 gene polymorphism and ADHD-like failure in CPT performance was evident in the non-affected parents of adolescents with ADHD in childhood. These findings suggest that certain traits of CPT performance could be considered an ADHD endophenotype.