

The role of genetics in autism spectrum disorder

By ACSH Staff — March 5, 2015



The prevalence of autism spectrum disorders (ASD) seems to have

increased significantly over the last thirty years, resulting in much speculation about the causes of this disorder. Everything from [pollution](#) [1] to [vaccines](#) [2] to [labor induction/augmentation](#) [3] has been blamed, none of which has been supported by scientific research. However, autism has at least some heritable/genetic [component](#) [4] because of the difference in rates between identical and nonidentical twins. A [new study](#) [5] adds more evidence to the relationship between genetic factors and autism.

Researchers from Kings College London led by PhD candidate Beata Tick used data from the Twins Early Development Study which included all twins born in England and Wales from 1994 through 1996. Evaluations were done on 128 twin pairs in which one twin had an autism diagnosis, using several common screening tools. Tools included a population-based measure (the Childhood Autism Spectrum Test), diagnostic measures (the Development and Well-being Assessment, the Autism Diagnostic Observation Schedule, and the Autism Diagnostic Interview-Revised) and a best-estimate diagnosis. Researchers found that correlation on these measures was higher for identical twins compared to non-identical twins, with a heritability estimate of 56 percent to 95 percent.

[According to researcher Dr. Francesca Happe](#) [6], Our findings suggest environmental factors are smaller, which is important because some parents are concerned whether things like high pollution might be causing autism.

Now, many scientists are working to discover the specific genes that may contribute to a diagnosis on the autism spectrum. Dr. Happe says there may be hundreds.

ACSH's Ariel Savransky says, Hopefully this current study will help to debunk some of the misleading information promulgated to the public regarding the causes of autism. Although this study may be just the tip of the iceberg and there is a long way to go before researchers get definitive results regarding specific genes that may contribute to ASD, the fear that autism is

caused by some factor associated with modern lifestyles should be at least partially allayed.

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[1] <http://acsh.org/2014/12/junk-study-harvard-school-public-health-tries-link-pollution-autism-fails-miserably/>

[2] <http://acsh.org/2014/08/virginia-theres-still-vaccine-autism-link/>

[3] <http://acsh.org/2015/02/link-labor-inductionaugmentation-autism/>

[4] <http://www.ncbi.nlm.nih.gov/pubmed/21727249>

[5] <http://archpsyc.jamanetwork.com/article.aspx?articleid=2173394>

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