

# ARVO: Genetic link ID'd for strabismus and schizophrenia

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(HealthDay)—There is a genetic link for strabismus and schizophrenia, with almost half of the genes dysregulated in strabismic medial rectus muscle identified as biomarkers for schizophrenia, according to a study presented at the annual meeting of the Association for Research in Vision and Ophthalmology, held from May 3 to 7 in Denver.

Austin J. Christensen, from the University of Nevada School of Medicine in Reno, and colleagues examined the correlation between schizophrenia and strabismus. The authors compared samples of strabismic lateral and medial rectus muscle, obtained during corrective surgeries, and normal samples from deceased organ donors. From paired comparisons (four per condition), they examined consistent differences of two-fold or more on targeted or customized [polymerase chain reaction](#) arrays. Gene expression was assessed in 84 [genes](#) of interest based on known risk factors for schizophrenia.

The researchers found that 22 of the 381 genes encoding signaling molecules were dysregulated in strabismic medial rectus muscle versus normal rectus muscle. Ten of these genes were biomarkers for schizophrenia. Overall, 22.6 percent of the schizophrenia-related genes were differentially expressed in the medial rectus muscle, including cytokines, growth factors and their receptors, and downstream signaling pathways.

"Our data establish a molecular link between exotropia and [schizophrenia](#)," the authors write. "This suggests that a combination of defects in signaling molecules is relevant in the pathogenesis of both diseases."

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