Risk genes show up in newborns' brain scans

Brain scans of newborns show the same brain changes that appear in adults with gene variants linked to Alzheimer's, schizophrenia, autism, and other disorders.

"These results suggest that prenatal brain development may be a very important influence on psychiatric risk later in life," says Rebecca C. Knickmeyer, lead author of a study published online by the journal Cerebral Cortex, and assistant professor of psychiatry in the University of North Carolina School of Medicine.

The study included 272 infants who received MRI scans shortly after birth. The DNA of each was tested for 10 common variations in 7 genes that have been linked to brain structure in adults. These genes have also been implicated in conditions such as schizophrenia, bipolar disorder, autism, Alzheimer's disease, anxiety disorders, and depression.

For some polymorphisms—such as a variation in the APOE gene which is associated with Alzheimer's disease—the brain changes in infants looked very similar to brain changes found in adults with the same variants, Knickmeyer says. "This could stimulate an exciting new line of research focused on preventing onset of illness through very early intervention in at-risk individuals."

View the full press release here: Risk genes show up in newborns' brain scans