



Community Twin Study *news*

EXPLORING THE GENETIC AND ENVIRONMENTAL FACTORS
THAT SHAPE OUR EXPERIENCE

Conduct Disorder (CD) and Major Depressive Disorder (MDD) tend to occur together in individuals with these diagnoses. Researchers using data from this project recently set out to find out why.

Blues Clues: Genes, Conduct Disorder and Depression

It's no secret that adolescence can be a difficult time. Most teenagers go through bouts of depression and periods of rebellion. However, for some teens these behaviors and feelings can turn into long term problems with the potential for serious consequences.

Conduct Disorder (CD) and Major Depressive Disorder (MDD) can sometimes develop when these problems get more severe. Someone diagnosed with CD might be very aggressive, damage property, or harm other people for no reason. Someone with MDD might be very withdrawn, sad and irritable for a long period of time. Often, an individual who has one of these disorders will then develop the other. A prior study reported

that 36% of depressed adolescents also risked a CD diagnosis by age 19.

In the current study, researchers looked at the circumstances that caused some teenagers to develop MDD and CD, while others did not. They examined three influences: genetics, shared environment, and nonshared environment. Genetics is the combination of genes in DNA that make up an individual; shared environment is the environment that family members have in common, such as home life; non-shared environment is the environment that family members experience separately, such as school or friends.

Data analysis showed a large amount of overlap in genetic influences on



MDD and CD. The same genes may be responsible for the symptoms of these two very different disorders. Nonshared environment was also important. Influences outside the home played a role in determining whether or not an individual developed CD and MDD.

Finding these common links between CD and MDD is an important first step. With this information, researchers can begin looking for specific genes and specific nonshared experiences that might influence these disorders.

Subbarao, A., Rhee, S.H., Young, S.E., Ehringer, M.A., Corley, R.P. (2007, in press). Common genetic and environmental influences on major depressive disorder and conduct disorder. [Journal of Abnormal Psychiatry](#).



Questionnaires Now Online

We are now offering many of our questionnaires, consent forms and payment vouchers online for your convenience. Depending on the study, a researcher will contact you with the web address for the consent form specific to that study. Once you have filled out the consent form, you will be sent a 'token number', which is a unique and confidential number. This token number can then be used to fill out the questionnaire. If you would prefer to complete anything in paper form, please let us know, and we will send you the appropriate forms. Also, it is very helpful to us to have your current email address! If you have changed email addresses, or are unsure if we have your address, please contact us via the information on the back.



Future Directions for the CTS

Over the past 10 years we have learned about the genetics of intelligence, emotion, and social interaction. Now, recent funding is providing some new research opportunities.

The Community Twin Study (CTS) began in 1997. During that time we have interviewed over 2,380 individuals and used the data we have collected to explore many aspects of human behavior. Because of the outstanding participation rate in the CTS, and the quality of your data, there are two new research projects currently in development.

The first project is an online questionnaire about sleep. The purpose of the survey is to learn more about individual differences in sleep problems, including genetic and environmental influences and risk factors.

This questionnaire will take about 30-45 minutes and we will also provide you with some feedback about your sleeping habits (for example if you are a morning or evening person). We will contact you soon to explain the details of your participation.

The second project is a grant proposal that has not yet been funded. This will be a telephone interview paired with an online questionnaire. These questions will be very similar to the ones you answered in the past, covering such topics as relationships, emotions, behaviors and substance use.

We are interested in learning how behaviors change over time. By conducting a similar interview at multiple time periods, we can compare the interviews and look at the genetic and environmental factors that contribute to changes as well as to stability.

We will keep you updated on this proposal and contact you as we learn more. As always, you will be compensated for your time for both of these important research projects.

Several research divisions at the University of Colorado are involved with the Longitudinal Twin Study. These include the Institute for Behavioral Genetics, the Department of Molecular, Cellular and Developmental Biology, and the Division of Substance Dependence at the University of Colorado Health Sciences Center. Each department plays a unique and important role in the collection, analysis, and security of the data.

If you have any questions or comments about your participation, or about the general nature of our work, please call or email us at the addresses to the right. Also, you can visit our website at ibgwww.colorado.edu/lts for more in-depth information or to request a copy of any of our publications. **Thank you again** for your contribution to our understanding of genetics and behavior.

BY THE NUMBERS
Stats from the project



This year the oldest twins turn 28 and the youngest turn 17. At 10 years and counting, the CTS is one of the longer running twin studies in the United States.

This year we conducted interviews with over 435 twins and their siblings.

Between 2006 and the summer of 2007 more than 25 papers were submitted using data from this project. To request a copy of a paper, please go to ibgwww.colorado.edu/cadd

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Division of Substance Dependence