



Family History of Behavioral Disorders

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Behavioral disorders are not regarded as disease; however, they may cause significant functional disabilities. The genetic basis of common behavioral disorders is quite complex and few genetic tests are available at this time. Behavioral disorders are most often inherited in a multifactorial pattern (caused by the interaction of various genetic and environmental factors). There can be considerable overlap between various behavioral disorders. Causes may include a reaction to environmental stresses, genetic factors, biochemical imbalances, or a combination of these. Because genetic factors are involved, when one family member is affected, other close relatives may be at increased risk.

Obsessive-Compulsive disorder (OCD)

This anxiety disorder is characterized by uncontrollable thoughts or rituals. Someone with OCD may have persistent thoughts or the need to engage in specific ceremonies or repetitive behaviors. These activities are referred to as “obsessions” and the rituals are called “compulsions.” Many healthy individuals can relate to some of the symptoms of OCD, such as checking the stove multiple times before leaving the house. A diagnosis is made only when these activities consume an hour or more per day, are extremely distressing or interfere with daily life. OCD affects men and women equally. Approximately 1-3% of individuals will have symptoms of OCD during their lifetime. OCD may be accompanied by depression, attention deficit disorder, eating disorders, or other anxiety disorders. Recent studies have suggested an approximately 8% empiric recurrence risk in close relatives of individuals with OCD. This risk may be higher in families with multiple affected individuals.

Tourette syndrome

This disorder is characterized by various motor and/or vocal tics that begin in childhood. A “tic” is a brief, involuntary movement or sound. Tics that produce movement are called “motor tics” and tics that produce sound are called “vocal tics.” Stress can cause an increase in symptoms. There may also be associated behavioral abnormalities, such as OCD. It is estimated that the risk of Tourette syndrome among relatives of affected individuals is approximately 10-15%, a rate that is significantly higher than the general population rate. Recently, abnormalities of the *SLITRK1* gene have been identified in a limited number of Tourette syndrome individuals. Abnormalities of this gene explain only a very small proportion of Tourette syndrome cases and clinical genetic testing for this gene is not currently available within the United States.

Autism

Autism is a spectrum of disorders causing problems with communication and social interactions. It may involve repetitive behaviors and failure to develop relationships. It typically interferes with social, educational, and occupational function. It is important to evaluate for certain genetic disorders (such as fragile X syndrome and chromosome anomalies) in a child with autism, as the presence of genetic disorders that present with autistic features will greatly impact the recurrence risk estimates within a family. Multiple twin and family studies have shown the familial nature of autism. For families in which there is no identifiable genetic cause for the autism, there is a 5-7% recurrence risk for siblings of an isolated case. The risk is slightly higher for males than for females, and for families with more than one affected individual.

Attention deficit disorder/ Attention deficit hyperactivity disorder

Young people with attention-deficit/hyperactivity disorder may be overactive, unable to pay attention, and impulsive. Children or adolescents with attention-deficit/hyperactivity disorder may not do well in school or even fail, despite normal or above-normal intelligence. Attention-deficit/hyperactivity disorder is sometimes referred to as ADHD. It is estimated that 3-7% of the population is affected with ADHD. While some children outgrow ADHD, approximately one third will continue to have symptoms into adulthood.

First-degree relatives of affected individuals are approximately 5 times more likely to be affected with ADHD than individuals in the general population. The risk for second-degree relatives is approximately 1-2% over the general population risk. Family members of affected individuals are also at an increased risk for personality disorders, substance abuse, depression, anxiety and learning disabilities.

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Addictions

There have been many studies which indicate an increased risk for substance abuse and/or dependence among close relatives of substance abusers. Alcohol, marijuana, cocaine, tranquilizer and sedative use, as well as other drugs, have been studied, and an inherited predisposition for abuse has been demonstrated. For instance, the risk for alcohol dependence in first-degree relatives of individuals with alcoholism is two times the general population risk (28% vs. 14%). There is also an increased risk for relatives of an alcoholic to become dependent upon other substances such as cocaine, marijuana, opiates, sedatives, stimulants, and tobacco. In families with multiple affected family members, the risk for substance addictions/dependence may be even higher.

Resources

Further information regarding these and other forms of mental illness is available through the following organizations.

National Institute of Mental Health
www.nimh.nih.gov
800-421-4211

National Mental Health Association
www.nmha.org
800-969-6642