Chronic Irritability and ADHD
ANY YOUTH DIAGNOSED WITH ADHD struggle with symptoms of irritability, specifically, angry mood and temper outbursts. Irritability is among the most common reasons why children are brought for psychiatric evaluation and care. In community studies, problems with severe irritability occur in two to five percent of children. To address the pressing need to assess and treat youth with the most severe and impairing irritability, the fifth edition of the Diagnostic and Statistical Manual (DSM-5) included a new diagnosis, disruptive mood dysregulation disorder (DMDD). It is essential to understand how DMDD symptoms present in order to determine if youth with ADHD have both ADHD and DMDD.

Approximately forty percent of youth with ADHD have mood instability, most commonly manifesting as irritability (Shaw et al 2014), although these symptoms may not be severe enough for a diagnosis of DMDD. Since DMDD is new, it is unclear how many children with ADHD also have DMDD. Conversely, there are studies suggesting that approximately eighty percent of children who meet criteria for DMDD also have ADHD, although these numbers need to be confirmed in more studies.

Emotion regulation involves the ability to modify one’s emotional state in order to work toward adaptive, goal-oriented behavior. So, in addition to problems regulating activity and attention, many children with ADHD have problems regulating their emotions to achieve their goals, such as completing a task (homework, for example). The emotion regulation deficits in children with ADHD can cause significant impairment. Youth with DMDD have particular problems regulating angry emotions. Children with ADHD who have significant problems with irritability and anger outburst should be assessed for DMDD.

Disruptive mood dysregulation disorder (DMDD) has two core criteria: temper outbursts and a generally irritable mood.

Temper outbursts and general irritability

DMDD has two core criteria: temper outbursts and a generally irritable mood. In youth with DMDD, the temper outbursts occur, on average, at least three times a week. While temper outbursts are common in youth with various psychiatric illnesses, children with DMDD have such outbursts routinely. While the outbursts can have a physical component such as slamming a door, kicking furniture, or destroying property, most outbursts in youth with DMDD are verbal, such as yelling or
Youth with ADHD and significant sadness plus lack of pleasure in things may be suffering from major depressive disorder (MDD) in addition to their ADHD. Youth with ADHD and significant anger and irritability may have ADHD comorbid with DMDD. Interestingly, youth with significant irritability during childhood are at higher risk for developing MDD and anxiety disorders in adulthood.

Available treatments
There are pharmacological and psychological treatment treatments that might be effective for youth with ADHD and DMDD. Data suggest that psychostimulants decrease irritability and anger symptoms in children with ADHD (Fernandez de la Crus et al 2015). Therefore, in an irritable child with ADHD, stimulant treatment may decrease both the child’s symptoms of ADHD and his or her irritability. Since DMDD is a mood disorder, it may also not be surprising that selective serotonin reuptake inhibitors (SSRIs), commonly used in the treatment of both depression and anxiety, may reduce irritability. While research in adults shows that SSRIs decrease the irritability associated with MDD, data from work in children are not as clear. The Emotion Development Branch at NIMH is conducting a randomized controlled trial testing the efficacy of SSRIs plus a stimulant in the treatment of DMDD.

There are two types of psychological treatments for irritability: cognitive behavioral therapies (CBT) and computer-based training. CBT has also been shown to be effective in decreasing anger, aggression, and other behaviors associated with DMDD. CBT teaches children concrete skills on how to regulate their emotions and change their thought patterns. An important component of CBT is parent training, which involves reinforcing prosocial behaviors and using strategies like time-outs and ignoring negative behaviors, such as emotional outbursts (Patterson 1975). There are ongoing studies at NIMH.
combining child-focused CBT and parent training to decrease DMDD symptoms. Researchers at NIMH are now testing whether computer-based training can decrease irritability and anger outbursts in youth with DMDD. Using this computer training, children with DMDD modify their natural tendency to interpret ambiguous facial expressions as angry (Stoddard et al. 2016). This work links research throughout the 1990s on “hostile attribution bias” and aggression in children, as with new computer-based assessment and training methods. “Hostile attribution bias” refers to a tendency to view neutral or ambiguous faces as having a negative or hostile emotion. This NIMH research includes brain imaging, which might help to identify brain circuits involved in irritability and guide the development of this and other new treatments.

In order to determine the most effective treatment for a child with hyperactivity and irritability, a comprehensive diagnostic assessment is essential. Once the diagnosis is clearer, effective treatment can be started. In turn, successful treatment and symptom improvement can then have profound long-term consequences for a child’s development and future.

Melissa A. Brotman, PhD, is a clinical psychologist and staff scientist at the National Institute of Mental Health’s Emotion and Development Branch.

ADDITIONAL READING

For more information from the National Institute of Mental Health, visit:

NIMH main page:

About DMDD (NIMH page all about DMDD):

● Disruptive Mood Dysregulation Disorder (DMDD) NIH Research Study evaluating non-drug interventions to reduce anger, irritability or outbursts in children. Enrolling ages 8 to 17. http://tinyurl.com/z25drco
Email: irritablekids@mail.nih.gov
1-301-496-8381 [TTY: 1-866-411-1010]