## Researching mood, behavior, and brain mechanisms associated with irritability in children.













Children pass through many phases of development as they grow up. It can be hard to know if a child is going through normal development or showing signs of something more serious. Occasional outbursts are a normal outcome of being tired, uncomfortable, or frustrated. In some children it can be chronic and explosive.

Children who enroll in our studies have irritability that significantly impacts their functioning at home, in school and with other children.

Why study irritability? During the 1990s, there was a significant increase in the number of children being diagnosed with bipolar disorder. After years of studies, NIMH researchers concluded that, although children with severe irritability were being diagnosed with bipolar disorder, severe irritability and bipolar disorder are not the same. However, irritability, like bipolar disorder, can be very impairing for children, and little is known about what causes it or how to treat it. Therefore, today, NIMH clinicians continue to investigate severe irritability and the related diagnosis of Disruptive Mood Dysregulation Disorder (DMDD).

## Learning about brain mechanisms underlying irritability and seeking better treatments for it.















Ellen Leibenluft, M.D., is the Chief of the Section on Bipolar Spectrum Disorders in the Emotion and Development Branch. She leads a research team that includes physicians, scientists and clinicians (psychologists, nurses and social workers) who have expertise in mental health. The team is investigating the brain mechanisms underlying severe mood disorders in children and using that knowledge to develop new treatments.

Kenneth E. Towbin, M.D. is Chief of Clinical Child and Adolescent Psychiatry in the Emotion and Development Branch. His research interest is in emotional dysregulation in children and adolescents.

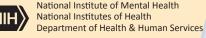
Melissa A. Brotman, Ph.D. is a Clinical Psychologist and Staff Scientist with extensive research and clinical training in cognitive behavioral therapy. Using neuroscience to understand brain function and develop novel interventions, her current studies focus on computer-based training and cognitive behavioral therapy for irritability in youth.

301-496-8381

TTY: 1-866-411-1010

Email: Irritablekids@mail.nih.gov





www.nimh.nih.gov/JoinAStudy

The National Institutes of Health (NIH) is the nation's medical research agency located in Bethesda, Maryland just north of Washington, DC. The National Institute of Mental Health (NIMH) supports scientists who specialize in the brain and behavior of those with mental illness.

## Irritable Child?

Disruptive Mood Dysregulation Disorder

Ages 8 to 17













NIH Research Studies for Children & Adolescents

Research Studies

Does your child have symptoms like these...?



















irritability

extreme frustration

temper tantrums

anger



within 50 miles of Washington, DC.













## Observational Study

- 1-day outpatient evaluation
- Study describes moods and behaviors
- Diagnostic assessments, questionnaires, memory and thinking tasks, computer tasks, and brain imaging
- Optional: Repeat visits for testing and brain imaging over time, up to age 25.

[Protocol No: 02-M-0021]

## ■ Medication Research Study

- Inpatient, with possibility of outpatient or day participation, 12 to 15 weeks
- Discontinuation of current medications
- · Research medications are: methylphenidate plus citalogram, or methylphenidate plus placebo
- Schooling is provided during inpatient care

[Protocol: 09-M-0034]

# Enrolling those living

## ■ Non-Drug Interventions

## ◆ Cognitive Behavioral Therapy (CBT)

- 12 to 16 sessions
- Child remains on current medications
- Evaluate techniques and strategies to manage and modify irritability and disruptive behavior

[Protocol: 15-M-0182]

#### Interpretation Bias Training (IBT)

- 18 days of initial training
- Child remains on current medications
- Child receives active training or placebo session
- Additional training:
  - O 8-weeks (active training or placebo),
  - and 3-weeks (active training)

[Protocol: 15-M-0182]

## Join A Study



#### 1. Call NIMH

- 2. Learn Study Details
- 3. Ask About Eligibility
- 4. Consent to Participation

#### 301-496-8381

TTY: 1-866-411-1010

Email: Irritablekids@mail.nih.gov www.nimh.nih.gov/JoinAStudy

## To participate in a study your child must be...

- Ages 8 to 17, and able to perform procedures that include computer tasks, testing, and brain imaging
- In treatment with a physician
- Medically healthy, and not currently hospitalized, psychotic, or suicidal
- Willing to consent to participate









## Study participants can help us better understand the mind.

## What is a Clinical Research Study?

A clinical research study is often called a clinical trial or a protocol. Both are scientific studies conducted in a clinic or hospital setting with patients as research participants. Children must meet the studies eligibility requirements, and child and parents must consent to participate in a study.

#### Can my child remain on medication?

In studies that do not use research medications. children stay on their current medications. In the medication research study, children are tapered off their current medications, and then new medications are introduced.

#### What does it cost to participate?

There is no cost to enroll in a study. Travel and lodging expenses are paid and arranged by NIMH. Children and parents are compensated for participation.

#### Where are the studies conducted?

The studies are conducted in Bethesda. Maryland at the NIH Clinical Center (the largest clinical research hospital in the world) with an outpatient day-clinic and inpatient beds.