

# *The Bipolar Child Newsletter*

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*--Demitri and Janice Papolos*

The year is fast drawing to a close and a new century is almost upon us. As the 1990s were declared the decade of the brain, we hope the first few years of the new millennium see increased understanding of and research into early-onset bipolar disorder. As you read this newsletter, our new book, *The Bipolar Child*, should be available at local bookstores or can be ordered at our web site [www.bipolarchild.com](http://www.bipolarchild.com). We hope the book--and its attendant publicity--brings positive attention to the children and their families dealing with this baffling illness. We do want you to know that 20/20 is doing a segment based on early-onset bipolar disorder and has interviewed Demitri and a number of families. It will air either Wednesday night January 19th, or Friday night, January 21st and we will send an email with the confirmed date as soon as we know it.

The Chicago Tribune ran an article on childhood bipolar disorder on December 11th ([http://chicagotribune.com/news/printed\\_edition/article/0.2669,SAV-9912110100,FF.html](http://chicagotribune.com/news/printed_edition/article/0.2669,SAV-9912110100,FF.html)). Our publicist at Broadway Books says that there is tremendous interest among the people of the media. Time magazine plans a story within the next few weeks, an NBC affiliate in Seattle wants to develop a piece around the subject, and Montel Williams has offered to create a show solely about these children and their families. We'll keep you posted, but it is our aim to do everything possible to educate the public about early-onset bipolar disorder and to press for increased research funding.

Things should indeed improve for families dealing with this illness. It will never again be so difficult to access information about childhood-onset bipolar disorder. No longer will parents feel so isolated and defenseless. The newly-formed Child and Adolescent Bipolar Foundation (founded by parents who came together on BPParent.org--Tomie Burke's online support group) has received funding from Dr. Steven Hyman, the director of the National Institute of Mental Health, from private sources, as well as from Janssen Pharmaceuticals and Abbott Laboratories. A large, interactive web site complete with chat rooms and forums will go live early January (<http://www.bpkids.org>). Answers to the many questions parents have about the illness, the medications, and coping strategies, along with cutting-edge scientific information and tremendous support will soon be found there.

On our web site, you will notice a new research section which--with participation from families with children who have bipolar disorder-- will hopefully further help to delineate the clinical, behavioral, and genetic features of the illness. [We urge you all to consider participating in one or all of the studies.](#)

We are grateful for the enthusiastic response so many of you gave us to our first newsletter and we thank you for your suggestions and comments for future issues. Last month, the most frequently raised topic was that of aggressive behaviors and rage attacks--so often seen only by the parents in the arena of the home. Teachers, and even some mental health professionals, find it difficult to square good behavior in school or at an office visit with the reports of terrible aggression described by parents. The outside world seems to think the children can control such behavior. After all it is reasoned, they don't act this way outside the home. Parents and professionals are often stymied and many question whether the child is in fact being manipulative. No one understands what would make a child act in such startling and extremely disturbing ways. Therefore, we would like to devote this newsletter to the subject of rage and aggression so commonly seen in children with bipolar disorder.

### **The Hole in the Wall Gang**

During the year we spent interviewing parents, the phrase: "We are always walking on eggshells" came up over and over again. One mother explained: "Things can be going along quite smoothly and then something would anger him and an attack would start for hours on end. We tried to learn never to let our guard down, but he was often so charming and sweet that we would constantly express surprise when it happened."

One mother was cracked in the elbow with a baseball bat by her seven-year-old during a phone conversation with us. Almost all the parents described holes in their walls resulting from their children's punching the dry wall while in a rage. At least four parents admitted that they had jerry-rigged "quiet rooms" from large closets to prevent their children from hurting themselves, their siblings or pets during one of these "affective storms."

After blaming themselves and taking one parenting course after another, these parents finally asked themselves: "What could possibly be going on inside the brains of these children that could cause this degree of anger or rage?"

Certainly there is something poorly regulated in the central nervous systems of most children with early-onset bipolar disorder. So many of the children have exaggerated stress responses, separation anxiety, sensory integration problems, elation/irritability, depression, and high-- and low-energy states, and poor impulse control, culminating in the tendency for aggressive rages. What biological differences attributable to a genetic predisposition and environmental interactions explain this over-the-top tendency toward aggressive and often destructive behaviors?

The arousal level of the human central nervous system ordinarily moves through various stages during the 24-hour day: transitioning from sleeping to waking states; from drowsy to hyperalert attentiveness, depending on the time of day and the proximity to gratifying (soothing/stimulating) or threatening (fearful/painful) stimuli presented by the social environment. Sleep/wake transitions, switches from rapid-eye movement (REM) to slow wave (NREM) sleep, levels of attentiveness, and physical activity are all governed by biological systems that act synchronously with the light/dark cycle, and that are responsive to incoming sensory signals from the environment.

Some of the highest states of arousal typically occur when a stimulus is perceived to be life-threatening. Such perceptions invariably trigger the primitive fight-or-flight response. This all-important mechanism has served human evolution through the millennia and primes us to fight (oppose/attack) or flee (withdraw/hide) when faced with an emergency situation that may (or is perceived to) pose a threat to our survival. It has been suggested that children suffering from bipolar disorder have poor modulation and/or excessive triggering of this basic human response to threat. In other words, children with bipolar disorder may feel themselves under threat a great deal of the time.

Before we discuss some of the possible underlying biological substrates, it's important to first talk about the clinical symptoms and behaviors that may be associated with a heightened fight-or-flight and stress response.

Many of these children suffer night terrors and fears of abandonment and annihilation. Whereas most children sleep and dream and have a nightmare or bad dream once in a while, many children with bipolar disorder are trapped through the night in hour after hour of night terrors (parents may not even realize it because often the children do not truly wake up but seem in anesthetized states). They dream of horrible mutilation with body parts dismembered and blood surrounding them. As Dr. Charles Popper of Harvard Medical School described it:

Their dreams are more affectively intense than regular nightmares. Dreams of fighting are common. In the fighting dreams of children or adults with mere anxiety, a knife may be pulled out and brought into attack, but the dreamer wakes up just before the knife enters the skin or rips the clothing. For bipolar children, the knife goes in, the blood is seen, and the dream may continue at considerable length and with explicit visualization of gore...Where the 'newsreel' of a dream story normally stops, the "newsreel" of bipolar children keeps going.

It is no wonder that children with this disorder feel so threatened and find it so difficult to settle down and go to sleep at night, or why their drawings may reveal bodily mutilation, or that they often display a fascination

with knives and gore.

### **Sensitivity to Stimuli**

Many parents report that their children are excruciatingly sensitive to stimuli of all sorts. Some are so sensitive that they cannot tolerate pockets on clothing, collars on shirts, or labels sewn into apparel. Both mothers and fathers have told us that they learn to tie their child's shoelaces with just the right degree of tension or risk an explosive reaction.

It's as if the arousal system of the child is set at such a low threshold that any kind of physical sensation that is not "just right" is extremely irritating and threatens a sense of bodily integrity. Not only are these children bothered terribly by sensations, odors, and noises, but they seem to have great difficulty making shifts from one context to another. When the demand to do so is made--and it may only be a request to go up stairs and change his or her clothes----the child may not be able to brook the transition and the change in the state of mood, attention, or motor response, required, and the resultant frustration and irritability may provoke an oppositional response from the child or an extremely angry outburst.

The limbic system (the emotional brain) seems to be involved with the integration of sensory experience and we'll discuss this now.

### **The Limbic System**

Over millions of years of evolution, the human brain has developed from the bottom up, with higher centers developing as elaborations of more primitive parts. Near the center of the brain is the area on which most mood disorder researchers focus--the limbic-diencephalic system. This is composed of the limbic system, the hypothalamus, and the brain stem. In addition to its involvement in emotion, memory, and motivated behavior, the limbic system influences all parts of the body's endocrine system by controlling the release of hypothalamic hormones that regulate behavioral reactions to environmental events, in particular the fight-or-flight response and the stress response.

Within the temporal lobes of the limbic system, and directly connected to the hypothalamus, is a structure known as the amygdala. The amygdala commandeers rational response and leads to the expression of powerful and unmodulated emotion in full-scale rage attacks.

In the brain's architecture, the almond-shaped amygdala is poised like an emotional alarm center and is involved in fear responses. The amygdala receives signals of potential danger well before the higher centers of the thinking brain have time to fully assess the complete nature of the signal. Then the signal is directed to the visual cortex where it is assessed and analyzed more completely for an appropriate response. If this more measured response of the signal confirms a true threat, the fight-or-flight response is triggered in the amygdala and it may be life-saving. A primitive emotion such as rage takes this route to the amygdala, causing a response that is totally raw and unvarnished.

Unfortunately, bipolar children and those with learning and attentional problems have significant problems with the integration of sensory information. Incomplete or confusing stimuli from the sense organs signal the amygdala to scan the environment for danger. Such disturbances may cause children with bipolar disorder to misinterpret a casual touch as a threatening gesture or to overreact to normal social and verbal cues. These children can become hypervigilant and show paranoid tendencies as well as express severe and prolonged defensive reactions. For instance, they can become oppositional and aggressive, or they can withdraw. These overreactions could derive, in part, from the isolated activity of the amygdala, cut off from the modulating influences and accumulated wisdom of the higher cortical centers. Or perhaps some sensory-perceptual disturbance provides a confusing signal to the brain, or both.

When a child feels continually under attack, when their nights are filled with horrifying imagery, when they cannot integrate sensory information, and when they are experiencing rapidly shifting moods (one child described it as if he was always walking on quicksand, the ground was always toppling beneath his feet), the

degree of irritability can become untenable. The child begins to act defensively, aggressively, and most often, a rage develops.

### **Why at Home and Not at School? Why With the Mother?**

A mother recently told us that her school psychologist told her that she--the mother-- must be a major part of the problem because her daughter rages at home and never in school. Therefore, the child was not sick, but there was a problem in the interaction with the parents.

But as we learn more about early-onset bipolar disorder, we see that it is quite typical (at least in the early years) for the child to "keep it together" in the outside world where a rage would humiliate that child, and keep everything under wraps until he or she reaches the safe harbor of the home and the one or two people who will never walk out--the mother and the father (and it is most often the mother).

Mothers describe the child walking in from school, the door shutting, and before they even know what is happening, a rage is exhibited before their eyes. The confluence of extreme irritability the child has managed to suppress all day, the activation in energy levels that seem to occur in the late afternoon, and the highly charged emotional arena of the home almost guarantee some sort of explosion. It is most often triggered by a parental "No" or some sort of limit-setting, but even a request for the child to stop playing Nintendo and come to the dinner table can trigger an incident.

Several of the teenagers and young children we interviewed for the book gave fascinating descriptions of what they feel when a rage develops. One adolescent reported:

It comes out so quickly; faster than a knee-jerk reaction. It's like electricity shoots through me. It's like being struck with lightning. I feel rage and hurt and need to strike back. I would be raging everyday, multiple times a day, verbally abusive, nasty, negative, but very careful not to show it to the outside world.

Another teenager described it this way:

I used to go to my room and punch the walls and I couldn't stop crying. It was like a dream you couldn't recover in the morning: You know something bad and worrisome has been a concern somewhere in your brain, but you just can't remember it.

An eight-year-old boy explained that "when my moods shift, I am never prepared. It feels all tight around me. During a rage, I feel as though the real me is over on the stairway watching myself, but I'm powerless to stop it."

From all of the above, it is obvious that these children have little control over the overwhelming feelings washing over them. Unquestionably, proper medications smooth out the pattern of rapid cycling, inhibit the impulsive rage reactions that seem so out of proportion to their triggers, and can dampen the period of activation that so often occurs in the late afternoon hours. These medications include mood stabilizers such as lithium and the anticonvulsants (Depakote, Tegretol, Topamax, Lamictal, and so on) the major tranquilizers such as Risperdal, Zyprexa, and Seroquel, and the benzodiazepines such as Klonopin and Ativan.

But a two-pronged approach is important. Because rages are so destructive for the child's sense of him-or-herself and the connections among all the members of the family, everything possible should be done to recognize each child's triggers, and to de-escalate a situation before a rage gets set off (if possible). We highly recommend Dr. Ross Greene's book, *The Explosive Child* for ideas about how to create a "user-friendly" home environment for a child with this temperament.

On school days, it may be of great benefit if parents establish a regular routine and rituals that would allow the children to slowly decompress after the long, demanding day. Perhaps any requests to do homework or

chores or the practicing of musical instruments should be postponed until such an adjustment has been made.

Once the child becomes medically stable, there is every reason to believe that reasonableness will come back into the relationship and that the child will gain greater control over him-or-herself.

We'll write again soon, but, in the meantime, we wish you and your children a new year of health and stability.

All best, Janice Papolos and Demitri Papolos, M.D.

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