

## Integrating the Upstairs and Downstairs Brain: For Parents

Making good decisions in high-emotion situations is among the most important skills we can teach our kids . We want them to pause before acting, to consider consequences, to think about the feelings of others, to make ethical and moral judgments. Sometimes they come through with behavior that makes us proud: and sometimes they don't.

Imagine that your brain is a house, with both a downstairs and an upstairs. The downstairs brain includes the brain stem and the limbic region, which are located in the lower parts of the brain, from the top of your neck to about the bridge of your nose. Scientists talk about these lower areas as being more primitive because they are responsible for basic functions (like breathing and blinking), for innate reactions and impulses (like fight, freeze, and flight), and for strong emotions (like anger and fear).

Your upstairs brain is completely different. It's made up of the cerebral cortex and its various parts – particularly the ones directly behind your forehead, including what's called the middle prefrontal cortex. The upstairs brain is more evolved and can give you a fuller perspective on your world. More intricate mental processes take place here, like thinking, imagining, and planning. Because of its sophistication and complexity, it is responsible for producing many of the characteristics we hope to see in our kids: sound decision making and planning, control over emotions and body, self-understanding, empathy, and morality.

When a child's upstairs brain is working well, she can regulate her emotions, consider consequences, think before acting, and consider how others feel, says neuropsychiatrist, Daniel J. Siegel, MD. When the upper and lower parts of the brain are **vertically integrated** the upstairs can monitor the actions of the downstairs and help calm the strong reactions, impulses, and emotions that originate there. We need to consider emotional and physical feelings – which originate downstairs – before using the upstairs to decide on a course of action.

While the downstairs brain is well developed even at birth, the upstairs brain isn't fully mature until a person reaches his mid-twenties. In fact, it's one of the last parts of the brain to develop. The upstairs brain remains under massive construction for the first few years of life, then during the teen years undergoes an extensive remodel that lasts into adulthood. Since the upstairs brain is still under construction, kids are prone to getting "trapped downstairs," without the use of their upstairs brain, which results in them "flipping their lids," making poor decisions, and showing a general lack of empathy and self-understanding.

Our amygdala is shaped like an almond and is part of the limbic area, which resides in the downstairs brain. The amygdala's job is to quickly process and express emotions -- especially anger and fear. This little mass of gray matter is the watchdog of the brain, remaining always alert for times we might be

threatened. When it senses danger, it can completely take over, or hijack, the upstairs brain. That's what allows us to act before we think. But acting or reacting before we think isn't usually so good in normal, everyday situations. When we're not truly in danger, we want to think *before* acting. We want our kids to do the same. The problem, though, is that especially in children the amygdala frequently fires up and blocks the stairway connecting the upstairs and downstairs brain. Massive brain resources, having rushed to the downstairs brain, leave little power to the upstairs brain.

What does this new knowledge about the brain say about tantrums? When you know about the upstairs and downstairs brain, you can also see that there are really two different types of tantrums. An ***upstairs tantrum*** occurs when a child essentially decides to throw a fit. She makes a conscious choice to act out and to push buttons until she gets what she wants. You can see that she knows what she's doing and that she's definitely working from strategy to achieve a desired end. A parent who recognizes an upstairs tantrum is left with one clear response: never negotiate with a terrorist. The upstairs tantrum calls for firm boundaries and a clear discussion about appropriate and inappropriate behavior. Then it's important to follow through with consequences if her inappropriate actions don't stop. By providing this type of firm limit, you're giving your daughter practice at seeing the consequences of her inappropriate actions and at learning to control her impulses. You're teaching her that respectful communication, patience, and delayed gratification pay off – and that contrary behaviors don't.

A ***downstairs tantrum*** is completely different. Here, a child becomes so upset that he's no longer able to use his upstairs brain. He's not even close to being in a state of integration. In fact, the stress hormones flooding his body mean that virtually no part of his higher brain is fully functioning. As a result, he's literally incapable – momentarily, at least – of controlling his body or emotions, and of using all of those higher-order thinking skills, like considering consequences, solving problems, or considering others' feelings. When your child is in a state of dis-integration and a full-blown downstairs tantrum has erupted, a completely different parental response is called for: one that is much more nurturing and comforting. A "connect and redirect" technique allows you to help him calm himself down, often accomplished via loving touch and a soothing tone of voice; perhaps holding him. There is no sense in talking about consequences or appropriate behavior when he simply can't process any of that information. Instead help by soothing him and steering him away from the chaos. Then, later when the upstairs brain reenters the picture, you can begin to respond to the issue using logic and reason. And your child is more likely to internalize the lesson because you're teaching it when his brain is more receptive to learning.