CHAPTER 1

# HOW THE BRAIN PROCESSES EMOTIONS

The brain is a highly complex system that regulates every function in the body. It controls learning, emotion regulation, thinking, understanding complex ideas, and initiating movement throughout the body. It sends and receives messages all day, every day to help our bodies function. Its primary job is to keep us alive, and it will do whatever necessary to ensure that happens. Survival is the brain's highest priority, and fear is the emotional signal it sends, letting us know danger is near.

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The brain has always alerted us to danger, but the environment has changed. Back when humans lived in caves, if you heard a sound in the middle of the night and said to yourself, "Ah, it's probably nothing," you would likely be killed by an animal or intruder. Today, you might be able to ignore the noise because you have a security system, a large dog that will let out a scary bark, or a cell phone on which you can quickly dial 9-1-1. From a

rational perspective, you know you are safe, but the brain can't take that chance. To your brain, overlooking fear could mean death, so it sees your luxurious condo as a cave in prehistoric times. Its job is to protect you. The brain perceives danger as, well, danger—no matter what time period you live in.

## THE FEAR RESPONSE

The amygdala is a small, almond-shaped region deep in the base of the brain, and it regulates fear and alerts us to danger. It keeps us safe, aware of our surroundings, and away from potential harm. We need the amygdala to alert us to the sound of screeching tires so we can slam on our brakes and avoid a potential wreck. We need our amygdala to alert us to the bark of a vicious dog so we can avoid getting bitten. The signals the amygdala sends during these times are lifesaving.

However, the amygdala often fires when it doesn't need to, and this can wreak havoc on our daily lives and cause unneeded stress. For example, the amygdala sends fear warnings when we're afraid someone doesn't like us, when we're afraid we've failed a test, or when we're worried about wearing the wrong outfit. It sends signals when we're afraid we won't make a shot in the basketball game, or when we might not get to hang out with friends over the weekend. The amygdala fires when a straight A student fears they will fail a test and when a twelve-year-old is afraid of not getting into college.  For many people (myself included), the

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amygdala sends fear signals on a perfectly sunny day with no potential danger in sight. The constant firing of the amygdala creates emotional exhaustion and anxiety. In fact, the definition of anxiety is an overactive amygdala.

Recently, when I explained to a child how the amygdala works, he asked me if I could take out his amygdala! He was so tired of worrying and wanted to enjoy a stress-free life. I can't blame him. I would sign up for amygdala removal if I had the chance, but he and I would certainly miss it. In our conversation, I explained that the amygdala helps him turn in his homework on time and spend hours studying for a test. It's what helps him pay attention to his teacher and listen to his soccer coach. It's what also helps him be a good friend. The amygdala serves a great purpose. We can't live without it, but we must learn to manage its effects.

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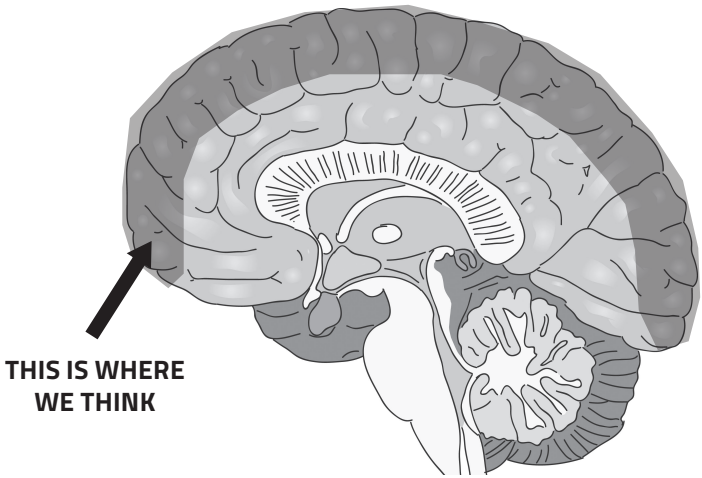


In order for children (or any human) to be able to think clearly, regulate emotions, and make rational decisions, blood must be present at the top of the brain. This is where all rational thinking and emotion regulation occurs. Specifically, the prefrontal cortex is responsible for thinking and decision-making, and the anterior cingulate cortex is responsible for emotion regulation. Most people have heard of the prefrontal cortex, but the anterior cingulate cortex is less talked about because emotion regulation is less talked about. Most people don't think about regulating emotions until they are around someone who can't regulate them, have a child who can't regulate them, or experience consequences themselves for not being able to regulate them.

When the brain senses possible danger, real or imagined, the amygdala is triggered and blood starts to leave the top of the brain (see above image). When that happens, we experience changes in our mind and body. Thoughts become fuzzy. Our palms start to sweat. Our breathing becomes more rapid and our stomachs and heads begin to hurt because our body has entered survival mode. Survival mode can take three forms: **Fight, Flight, or Freeze**. A child who responds with **fight** might become physically or verbally aggressive, create conflicts, or argue and not let something go. A child who responds with **flight** might ask to stay home from school, agree with someone to avert conflict, or avoid uncomfortable situations. A child who responds by **freezing** will lock up, disassociate, and struggle to focus.

## EMOTIONAL RESPONSES TO POTENTIAL DANGER:

| FIGHT | FLIGHT | FREEZE |
|---|---|---|
| Attack | Panic | Shut Down |
| Anger | Fear | Confused |
| Insult | Avoid | Comply |
| Blame | Sabotage | Silence |

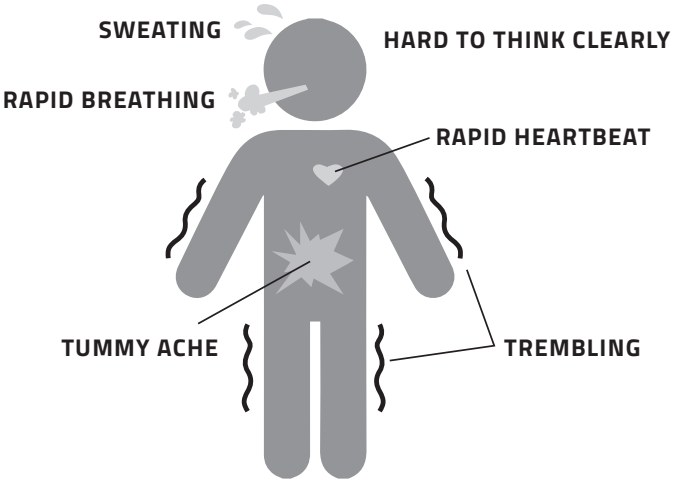
## PHYSICAL RESPONSES TO POTENTIAL DANGER:

**Dilated pupils**: In times of danger, the body heightens its awareness of the immediate surroundings. When pupils become dilated, more light enters the eyes, resulting in better vision.

**Pale or flushed skin**: Blood moves to the muscles, brain, legs, and arms so the body is prepared to run or fight. This shift in blood flow throughout the body causes pale skin.

**Rapid heart rate and breathing**: When breathing and heart rate increase, the body is filled with the energy and oxygen it needs to respond to danger rapidly.

**Trembling**: In survival mode, the muscles tense up and become ready for action, which can cause trembling or shaking.

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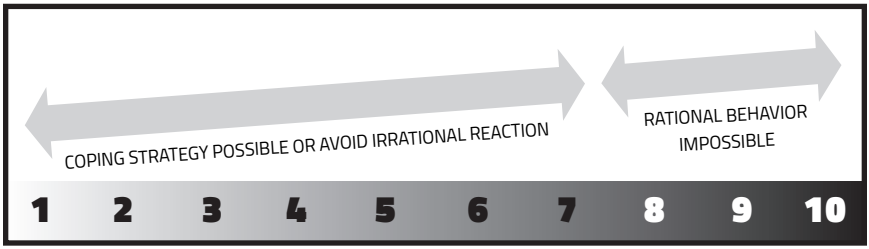
When a child is in survival mode, they enter The Flood Zone. In this state, children are unable to be rational, regulated, and otherwise compliant. In fact, the most motivated child (or adult) with the greatest coping strategies won't be able to manage emotions without blood at the top of the brain.

# THE FLOOD ZONE

The Flood Zone occurs when there is no blood left at the top of the brain. Being "flooded" occurs when you can no longer think rationally, manage emotions, or trust yourself to have healthy conversations with others. On a number line from 1-10 with 10 being the most intense and 1 being the least, The Flood Zone occurs at an 8 or higher. From 1-7, we might be able to utilize a coping strategy or talk ourselves out of an irrational reaction. Once we reach an 8 or above, rational thought and behavior is not possible.




The Flood Zone causes problems for all of us. We will act out in ways we later regret, give unfair consequences to our kids, and say the first thing that pops into our head without thinking about how the other person will perceive it. This occurs in adults whose brains are mature, so kids have an even harder time managing The Flood Zone because their brains are not fully developed. The brain is not fully developed until around 25 years of age,[7] and the area of the brain that connects the left (logical) and right (creative), called the Corpus Callosum, is not fully developed until most kids graduate college.

# FLOODED REACTIONS

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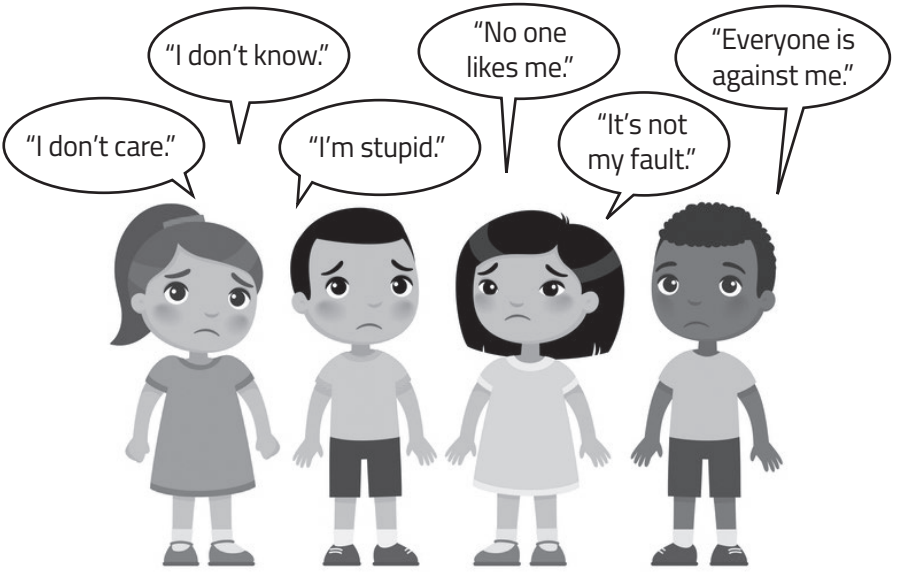
Now that we understand what is happening in the brain, we can expect certain reactions from children in the Flood Zone. We don't necessarily *like* the reactions, but we begin to understand *why* the reactions are happening. Being prepared for these responses will help keep us grounded and able to detach emotionally from what a child is throwing at us. The ability to stand back from a situation and not become triggered ourselves is imperative for us to interactive effectively with children in The Flood Zone.

# WHAT FLOODED CHILDREN SAY

Listed below are typical responses from a flooded child:



When adults hear these reactions from kids, we want to speak truth to convince them otherwise. We might be tempted to say, "I know you care," or "You know we love you," but saying these things only makes the situation worse. Remember, what kids say when flooded isn't rational, so even though what you say is true, you can't rationalize with an irrational person. When you hear these statements (or statements like them), you know a child's brain is flooded and cannot think rationally in that moment, so offering them a counter argument will be unproductive.

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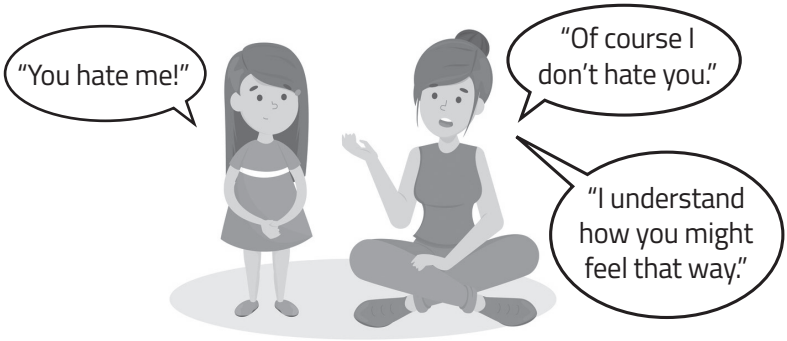


In the above example, the second response from the adult will be the most effective because the adult meets the child where they are. Instead of trying to rationalize with the child or convince them otherwise, the adult acknowledges how the child feels, which is all that matters in that moment.

## WHAT FLOODED CHILDREN DO

Flooded children don't just say irrational things; they do them, too. They can act completely bizarre; their actions make no sense