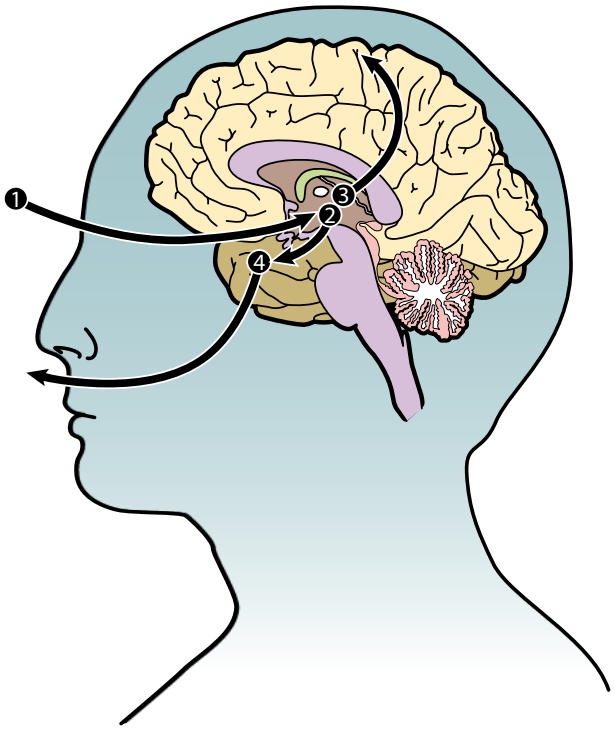
Conflict and Your Brain aka “The Amygdala Hijacking”

As an official you’re going to be involved in potential conflict situations due to the nature of competition and the wide range of people involved. How you handle these situations, and more importantly yourself, can have a major outcome on the length and enjoyment of your officiating career.

So what happens internally when you see or hear something that could potentially get out of hand if not handled in the right way? To start, let’s look at how we receive and process information.



1. The journey begins with sensation received by our eyes, ears, nose, and mouth which are routed to the thalamus.
2. The thalamus acts as "air traffic controller" to keep the signals moving. In a typical situation, the thalamus directs the impulse to the cortex for processing.
3. The cortex "thinks" about the impulse and makes sense. "Aha," it says, "this is …… It means I should ……." That signal is then sent to the amygdala where a flood of peptides and hormones are released to create emotion and action.
4. In what Dan Goleman labeled "The Hijacking of the Amygdala," the thalamus has a different reaction. Like any skilled air traffic controller, the thalamus can quickly react to potential threat. In that case, it bypasses the cortex -- the thinking brain -- and the signal goes straight to the amygdala. The amygdala can only react based on previously stored patterns.

To find out the specific functions of the parts of the brain, see page 3.

Let’s look at an officiating scenario which can happen from time to time.

You’ve just refereed a game which was pretty spiteful and you’re feeling worn out by the end of it. As you’re walking off the field one of the parents approaches you and starts to abuse you for your performance. Their comments are delivered in a nasty tone and they’re being sarcastic about you, and your ability to officiate a game.

What happens?

You feel like your blood pressure has hit the roof and you can’t focus on anything. What the parent has said has pushed your buttons and you immediately reply with abuse of your own which further escalates the situation. Before you know it, you’re both face to face and other parents are practically pulling you both apart.

Afterwards you say to yourself “How did that get out of hand so quickly? What the hell happened?”

What you experienced was an “amygdala hijack.” The amygdala is the “fight or flight” and emotional memory part of the brain. Its job is to protect by comparing incoming data with emotional memories. An amygdala hijack occurs when we respond out of measure with the actual threat because it has

triggered a much more significant emotional threat. For instance, the amygdala will react similarly to the threat of being eaten by a tiger (physical threat) and the threat of an ego attack (emotional threat) by bringing on the fight or flight reaction.

When one experiences an amygdala hijack, the amygdala overtakes the cerebrum (the thinking part of the brain) and there's little or no ability to rely on intelligence or reasoning. The effect is that energy is drawn exclusively into the hijack. The immediate result of a hijack is a decrease in working memory. Adrenaline is released and will be present and effective for 18 minutes, and other hormones are released into the bloodstream that will take 3 - 4 hours to clear.

So what can I do?

Some simple steps to reduce the chance of an amydala hijack occurring are:

Stop. Stop whatever you're doing. Ask yourself what just happened. Replay the comments in your head. This step keeps the neocortex engaged and can prevent the amagdala's takeover.

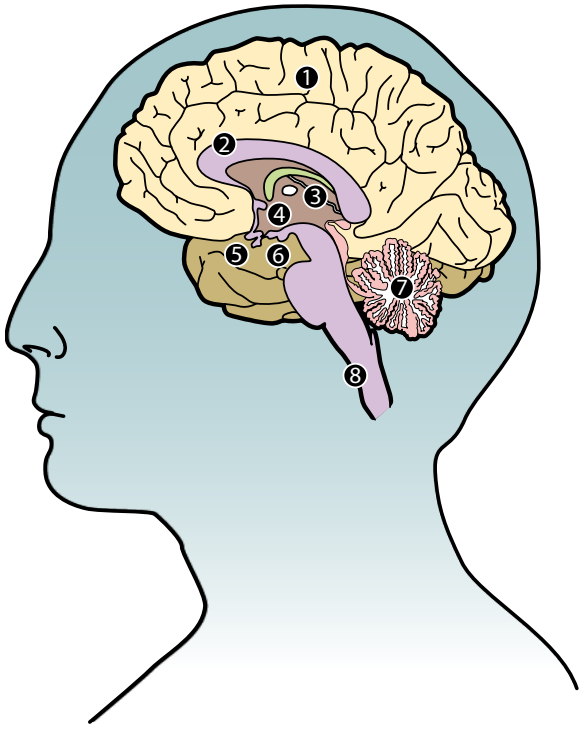
Oxygenate. Breathe deeply, with intention and purpose. This step also keeps the neocortex engaged.

Strengthen appreciation. It's difficult to have two emotional experiences at the same time, and appreciation counters the hijack. While it's especially effective to appreciate the source of the hijack (i.e. appreciating the parent's support of their child by attending the game), any appreciation of anything will be helpful. If you can't appreciate the person who is the source of the conflict, appreciate parts of your own life, such as your family and friends.

Survey the landscape. After the hijack, spend some time exploring what happened and why. Recognising the trigger will allow you to avoid being triggered in the future.

See the self-study scenarios on the SPARC Officials site, under Game Management, for more specific responses to potential conflict scenarios. Contact your NSO with any sport-specific questions you have in regards to the appropriate response.

Parts of the brain and their function



1. Cerebrum
2. Corpus Callosum
3. Thalamus
4. Hypothalamus
5. Amygdala
6. Hippocampus
7. Cerebellum
8. Brain Stem

The Cerebrum

The biggest part of the brain is the cerebrum. The cerebrum makes up 85% of the brain's weight, and it's easy to see why. The cerebrum is the thinking part of the brain and it controls your voluntary muscles — the ones that move when you want them to. So you can't dance or kick a soccer ball without your cerebrum. Some can't dance anyway but that's another story entirely.

When you're thinking hard, you're using your cerebrum. You need it to solve maths problems, figure out a video game, and draw a picture. Your memory lives in the cerebrum — both short-term memory (what you ate for dinner last night) and long-term memory (where you were when the All Blacks lost another key World Cup game). The cerebrum also helps you reason, like when you figure out that you'd better stay late at work tonight so you can leave a little early tomorrow.

The cerebrum has two halves, with one on either side of the head. Some scientists think that the right half helps you think about abstract things like music, colours, and shapes. The left half is said to be more analytical, helping you with maths, logic, and speech. Scientists do know for sure that the right half of the cerebrum controls the left side of your body, and the left half controls the right side.

Corpus Callosum

The corpus callosum is the arched bridge of nervous tissue that connects the two cerebral hemispheres, allowing communication between the right and left sides of the brain.

Thalamus

The thalamus is a large ovoid mass of grey matter situated in the posterior part of the forebrain that relays sensory impulses to the cerebral cortex.

Hypothalamus

The hypothalamus is like your brain's inner thermostat. The hypothalamus knows what temperature your body should be (about 98.6° Fahrenheit or 37° Celsius). If your body is too hot, the hypothalamus tells it to sweat. If you're too cold, the hypothalamus gets you shivering. Both shivering and sweating are attempts to get your body's temperature back where it needs to be.

Amygdala

The amygdala is a bunch of cells on each side of the brain. The word amygdala is Latin for the word almond. That is what the area of cells looks like. This part of the brain is responsible for emotions.

The amygdala is believed to serve as a communications hub between the parts of the brain that process incoming sensory signals and the parts that interpret them. It can signal that a threat is present, and trigger a fear response or anxiety. It appears that emotional memories stored in the central part of the amygdala may play a role in disorders involving very distinct fears, like phobias, while different parts may be involved in other forms of anxiety.

Hippocampus

The hippocampus is a part of the cerebrum, and that’s the area of your brain that deals with memory. There are different kinds of memory, short-term and long-term.

Short-term memory describes information that the brain has recently received. Long-term memory deals with things that have happened in the past.

The Cerebellum

The cerebellum is at the back of the brain, below the cerebrum. It's a lot smaller than the cerebrum at only 1/8 of its size. But it's a very important part of the brain. It controls balance, movement, and coordination (how your muscles work together).

Because of your cerebellum, you can stand upright, keep your balance, and move around. It is also the part of the brain where the high level functions take place and information is integrated.

Brain Stem

Another brain part that's small but mighty is the brain stem. The brain stem sits beneath the cerebrum and in front of the cerebellum. It connects the rest of the brain to the spinal cord, which runs down your neck and back. The brain stem is in charge of all the functions your body needs to stay alive, like breathing air, digesting food, and circulating blood.

Part of the brain stem's job is to control your involuntary muscles — the ones that work automatically, without you even thinking about it. There are involuntary muscles in the heart and stomach, and it's the brain stem that tells your heart to pump more blood when you're biking or your stomach to start digesting your lunch. The brain stem also sorts through the millions of messages that the brain and the rest of the body send back and forth.