

HOW DOES ANGER HAPPEN IN THE BRAIN?

Gerry Vassar

Ever wonder what forces are at work when we become angry? Let's take a look at how anger happens inside of our brain.

The brain's emotional center

The cerebral cortex (cortex) is the thinking part of the brain where logic and judgment happen. It is the outer portion of the brain. Think of the cortex as the strategy center of the brain.

The emotional center of the brain is the limbic system. It is located lower in the brain and is considered to be more primitive than the cortex.

When someone is experiencing and expressing anger, he or she is not using the thinking (cortex) part of the brain, but primarily, the limbic center of the brain.

Have you met your amygdala today?

Within the limbic system is a small structure called the amygdala. It is the area of the brain responsible for our "fight or flight" reactions, our natural survival instincts.

During a distressing event, the amygdala goes into action without much regard for the consequences (since this area of the brain is not involved in judging, thinking, or evaluating). This is sometimes called getting "amygdala hijacked" because the logical part of your brain is no longer in charge.

Get ready for the hormones

In a frightening or upsetting event, a flood of hormones are released that cause physical and emotional alarm. A surge of energy follows, preparing the person for the fight or flight response. The impact of this hormonal flush last for several minutes during which time the person is usually out of control and may say or do things he or she will later regret, when the thinking part of the brain reengages.

Further, an additional longer-lasting hormone is released, and its impact can last for several hours to several days.

Why counting to 10 does not work

Having a long-lasting hormone in the body can explain why someone has an initial, powerful angry reaction, then seems to calm, but later has a huge flair-up that is disproportionate to the situation because of some small incident occurring while the hormone was active in the bloodstream.

On average, it can take 20 minutes for a person who has experienced an angry state of arousal to calm, to move from functioning from the emotional area to the thinking area of the brain.

A lot of stuff to digest

Perhaps we just may need to be aware that a lot goes on in our bodies when we get angry.

What is important to know is:

- anger involves a trigger to the emotions that so easily charges us up that we “lose it, ” and
- it will often take about 20 minutes before we can once again become more logical.

Just knowing that could really help us as we deal with our anger or someone else's. When we know someone is “amygdala hijacked,” then we should give him or her some time (over 20 minutes) before we try to resolve or discuss what happened because it takes about that long for the anger hormones to go back to normal.