Nine Functions of the Prefrontal Cortex

1. Bodily Regulation

Coordinates the "brakes and accelerator" (autonomic nervous system), including heart rate, respiration and digestion.

2. Attuned communication

Allows our internal state to shift, to come to resonate with the inner world of another. This allows them to "feel felt" by you.

3. Emotional Balance

We feel alive and at ease. We tread the balance between hypo- and hyper-arousal, chaos or rigidity (depression). It's the neurological basis of equanimity, the ability to stay clear and focused in all situations.

4. Response Flexibility

It puts a space between input and output, an important part of emotional and social intelligence. It allows us to weigh options before responding.

5. Fear Modulation

The middle prefrontal cortex has GABA connections to the limbic system, and will inhibit the fear response (amygdala).

6. Empathy

Allows us to map the minds of others and see through their eyes. We can sense others' intentions and what things mean to them.

7. Insight

Permits us to make "me-maps" to perceive our own minds. We're able to connect past, present and future through the nexus of "self" as constructed through the prefrontal cortex.

8. Moral Awareness

Enables us to reflect on and enact behaviors for the social good.

9. Intuition

Gives us access to the "wisdom" of the body. The insula represents how things are going throughout the body, enabling our "heartfelt sense" and "gut feelings." This integrative function illustrates how thinking is not just a cerebral event. We transcend logic alone to encompass wisdom.

Siegel, Daniel, M.D., Mindsight. Bantam Books, New York, 2010