The first spark of anger activates the amygdala before you're even aware of it.

Now the amygdala is ready to turn on the stress response system in your brain and body. Scientists named this stress response system the “HPA axis” because it consists of the Hypothalamus, the Pituitary gland, and the Adrenal glands. In this system, a chain reaction of hormones prepares your body to respond to stressors like anger.

Here is how it works:

1. The amygdala signals the hypothalamus.
2. The hypothalamus signals the pituitary gland by discharging CRH (corticotropin-releasing hormone).
3. CRH stimulates the pituitary gland to produce ACTH.
The adrenal glands secrete stress hormones like cortisol, adrenaline, and noradrenaline.

The pituitary gland signals the adrenal glands by releasing ACTH (adrenocorticotropic hormone).

The adrenal glands secrete stress hormones like cortisol, adrenaline, and noradrenaline.

When these hormones are produced, they quickly impact your neurons and cells. This is important because that impact usually isn’t a helpful one.

Coming soon: How Anger Affects Your Brain and Body, Part 2 – Looking closer into what the stress hormones are up to.