

A Brief History of Everything Neurochemical

based on the book

Meet Your Happy Chemicals

Dopamine, Endorphin, Oxytocin, Serotonin

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Dopamine tells a mammal that a reward is at hand. This releases energy for the quest, and it feels good. Dopamine is triggered by things that promote survival in the state of nature (rich foods, mating opportunity), and by things that triggered it in your past. Any surge of dopamine paves neural pathways that tell a mammal how to meet its needs in the future. These pathways give you a good feeling when you take a step in the direction of an expected reward.



Serotonin is the feeling of social importance. In the state of nature, a mammal releases the nice calm feeling of serotonin when it's in the stronger position. Then it asserts itself over food or mating opportunity. Most of the time, a mammal restrains itself to avoid conflict with stronger individuals. You may hate it when others seize the one-up position, but when you find a safe way to assert yourself, your mammal brain rewards you with serotonin.



Endorphin is euphoria that masks pain. Endorphin helps an injured mammal do what it takes to survive. The oblivion only lasts for a short time because pain is a vital signal that an injury needs protecting. Endorphin is triggered by physical rather than emotional pain, but the exertions of laughing, crying, and exercise can stimulate a bit too.



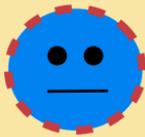
Oxytocin is a sense of safety in the presence of others. Oxytocin flows when a mammal is with its herd or pack or troop. A surge of oxytocin at birth causes attachment, and sex stimulates it too. Touch triggers oxytocin, but an individual close enough to touch you is close enough to harm you. Experience tells the mammal brain when to release the good feeling of social trust, and when when to withhold it.



* * * * **But it's complicated** * * * *

Habituation

A mammal's brain soon habituates to whatever triggers it. To get more happy chemicals, you have to do more. That motivates behavior that has promoted survival for millions of years, even though it causes frustration today.



Cortisol

A bad feeling is released when the mammal brain sees a risk of harm. Cortisol gets your attention and motivates you to do something to make it stop. Each time cortisol flows, it connects neurons that help you avoid potential threats in the future. Anything associated with past pain gives a mammal a bad feeling.



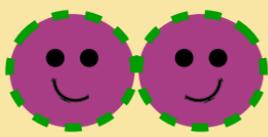
Myelin

A mammal is born with lots of neurons but few connections between them. Experience builds connections, but early experience builds bigger connections because of myelin. This substance is like paving that turns neural trails into superhighways because of myelin. Our myelin levels are high before age eight, and during puberty. The ups and downs of those years build the infrastructure of the mammal brain. Electricity flows effortlessly through your myelinated pathways, which gives you the feeling that you are on the track to get rewards and avoid pain. Leaving your myelinated pathways tends to feel like a survival threat.



Mirror Neurons

These special neurons fire when a mammal observes others. When you see another mammal get a reward or risk pain, your mirror neurons activate the same pattern as if you executed the behavior yourself. This wires you to mirror the behaviors you observe, without effort or intent. Young mammal seeks what works for others, which wires it to seek rewards and avoid pain in those ways.



Re-wire yourself for more happy chemicals
in 45 days with the book

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