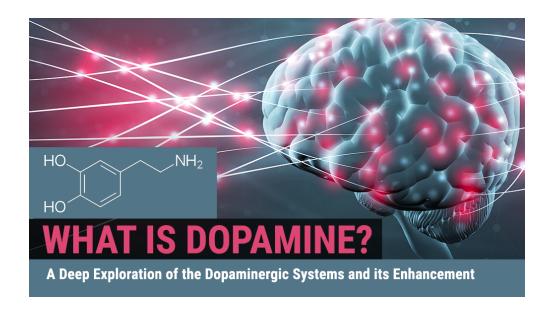
The Constructive & Destructive Power of Dopamine



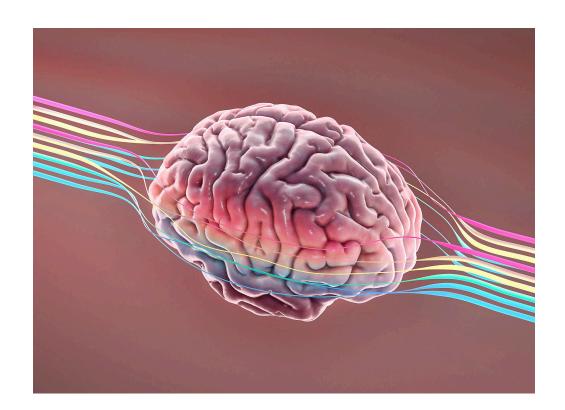
Please watch this short video about how dopamine affects your brain:

Video @ How dopamine affects your brain (5:27 minutes)

So, let's say you're hungry, dopamine starts rising, then you think about a burger and it rises more when the burger is sizzling. Dopamine is going way up. It peaks right about your first bite, then you take some more bites, and it starts to drop off. Finally, it drops back down to normal levels and you're full.

The rise of dopamine levels could also represent anything new or novel, because dopamine loves novelty. A new car, a just released movie, the latest gadget. We're all hooked on dopamine. You can have a spike of dopamine just by ordering dessert. Even though you haven't finished what's on your plate, dessert is something new.

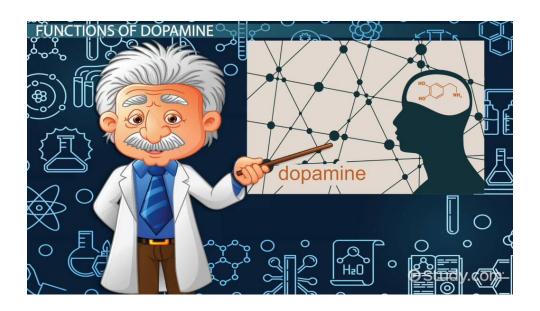
Okay. Let's give another nickname for dopamine. Let's call it the molecule of addiction. It's because changes in your brain that lead to addiction are caused by changes in your dopamine levels. Cocaine, alcohol, nicotine flood the reward circuitry with dopamine. All addictive chemicals and activities raise dopamine levels. It's what makes them potentially addictive. Of course, you need continued use of the addictive substance or activity to cause physical changes that lead to addiction.



Dopamine is released in response to expectations rather than actual levels of pleasure. It's the drive to get it. It's the craving, but as I've mentioned, the actual pleasure of eating or orgasm, it's probably opioids. Those are morphine like chemicals being released in the brain. Dopamine is wanting it. Opiates is liking it.

Addictions are basically chasing after dopamine. So, what happens is addiction is wanting more but liking it less. Speaking of wanting and the power of the reward circuitry. Here's an experiment. We have a rat and you see there's a wire and then there's this electrode that's actually going to the reward circuitry of the rat. And the rat has its little paw on a lever and whenever it hits that lever it sends just enough electricity to the reward circuitry to stimulate it. Now, what will happen is this rat will just keep hitting the lever and hitting the lever thousands of times an hour until it drops. It won't stop to eat, sleep, have sex or even take care of the pups. It'll give up everything just to press that lever as we know this behavior is not unlike some serious drug addicts.

Here's another experiment, they take the same rat and they have an electric grid between the lever and the rat. So the rat has to feel painful shock in its little paws to go over to the lever and press it. Well, the rat will actually cross the bridge and endure the shock, but if you take the rat and put an electric grid between them and food, they will not across the electric grid. They will not undergo shocks to eat food. They would rather starve.



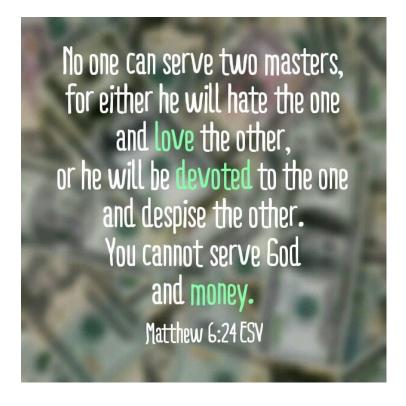
Here's one more experiment to show you the power of dopamine in your reward circuitry. If you take rats and block their dopamine, they have absolutely no motivation, not even to eat. They won't walk over to the food dish and they'll starve to death, but they still like food. If you

drop food into their mouths, they eat it and show little rat smiles. They just have no motivation to go get it. They lie around. They won't have sex either. The male rat shows no sign of libido.

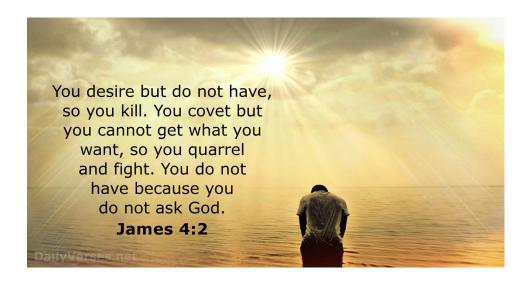
The key point is you need the right level of dopamine to function. Normally, it does lots of important jobs. Dopamine gives you that positive outlook, good attitude, keeps you motivated, keeps you happy.

Here are some neurospiritual Scriptures about carnal and spiritual dopamine activation:

Decisions that divide our dopamine releases will drive us nuts:



Carnal wants will activate destructive dopamine that motivates us toward ruin:



"Where do wars and fights *come* from among you? Do *they* not *come* from your *desires for* pleasure that war in your members? You lust and do not have. You murder and covet and cannot obtain. You fight and war. Yet you do not have because you do not ask. You ask and do not receive, because you ask amiss, that you may spend *it* on your pleasures." James 4:1-4

Spiritual wants will activate constructive dopamine that motivates toward blessings:



God designed our brain with the ability to change what we want and therefore control the direction our dopamine moves us toward what we like:

Romans 6:17-18 (pg.236)

17 But God be thanked that though you were slaves of sin, yet you obeyed from the heart that form of doctrine to which you were delivered. 18 And having been set free from sin, you became slaves of righteousness.

Philippians 3:12-15 implies how we create constructive dopamine that drives us toward constructive spiritual goal. The following phrases describe how to create constructive dopamine: "I press on" "reaching forward" "I press toward the goal" "have this mind:"

Philippians 3:13~15

Brethren, I count not myself to have apprehended; but this one thing I do, forgetting those things which are behind, and reaching forth unto those things which are before, I press toward the mark for the prize of the high calling of God in Christ Jesus. Let us therefore, as many as be perfect, be thus minded: and if in any thing ye be otherwise minded, God shall reveal even this unto you.

"Not that I have already attained, or am already perfected; but I press on, that I may lay hold of that for which Christ Jesus has also laid hold of me. Brethren, I do not count myself to have apprehended; but one thing *I do*, forgetting those things which are behind and reaching forward to those things which are ahead, I press toward the goal for the prize of the upward call of God in Christ Jesus. Therefore let us, as many as are mature, have this mind; and if in anything you think otherwise, God will reveal even this to



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Test and Answers

What causes the rise of dopamine levels in our minds?

The rise of dopamine levels could also represent anything new or novel, because dopamine loves novelty. A new car, a just released movie, the latest gadget. We're all hooked on dopamine.

Explain the difference between craving and pleasure?

Dopamine is released in response to expectations rather than actual levels of pleasure. It's the drive to get it. It's the craving, but as I've mentioned, the actual pleasure of eating or orgasm, it's probably opioids.

Explain the experiment where the rat hits a lever to stimulate his reward circuitry?

Here's an experiment. We have a rat and you see there's a wire and then there's this electrode that's actually going to the reward circuitry of the rat. And the rat has its little paw on a lever and whenever it hits that lever it sends just enough electricity to the reward circuitry to stimulate it. Now, what will happen is this rat will just keep hitting the lever and hitting the lever thousands of times an hour until it drops. It won't stop to eat, sleep, have sex or even take care of the pups. It'll give up everything just to press that lever as we know this behavior is not unlike some serious drug addicts.

Explain the experiment of having the rat getting painfully shocked as he crosses a grid to pull the lever:

Here's another experiment, they take the same rat and they have an electric grid between the lever and the rat. So the rat has to feel painful shock in its little paws to go over to the lever and press it. Well, the rat will actually cross the bridge and endure the shock, but if you take the rat and put an electric grid between them and food, they will not across the electric grid. They will not undergo shocks to eat food. They would rather starve.

Explain the experiment where the rat's dopamine was blocked:

Here's one more experiment to show you the power of dopamine in your reward circuitry. If you take rats and block their dopamine, they have absolutely no motivation, not even to eat. They won't walk over to the food dish and they'll starve to death, but they still like food. If you drop food into their mouths, they eat it and show little rat smiles. They just have no motivation to go get it. They lie around. They won't have sex either. The male rat shows no sign of libido.

Name 3 good things that dopamine does:

The key point is you need the right level of dopamine to function. Normally, it does lots of important jobs. Dopamine gives you that positive outlook, good attitude, keeps you motivated, keeps you happy.

Here are some neurospiritual Scriptures about carnal and spiritual dopamine activation:

Explain Matthew 6:24 and what happens when our dopamine is divided:
Decisions that divide our dopamine releases will drive us nuts:
Explain how James 4:1-4 relates to dopamine activation:
Carnal wants will activate destructive dopamine that motivate us toward ruin:
Explain the dopamine Romans 8:28 is discussing:
Spiritual wants will activate constructive dopamine that will motivate us toward blessings:
Explain how Romans 6:17,18 is implying how we control our dopamine activations:
God designed our brain with the ability to change what we want and therefore control the direction our dopamine moves us toward:
Write the phrases in Philippians 3:12-15 that imply the activation of good constructive dopamine leading us toward a spiritual goal:
"I press on"
"reaching forward"
"I press toward the goal"

"have this mind"