

Dr Tiffany Explains How Reward System Is Hijacked

You could also quickly see how too much motivation for any of these could be harmful. In the same way, drug of abuse can cause the reward pathway to produce too much dopamine and our motivations driven by this pathway are overtaken by the pursuit of these drugs. Drugs of abuse actually do release much more dopamine than any of our natural or learned rewards. Drugs of abuse have a particular advantage in activating the reward pathway. Remember that the neurons and the reward pathway are talking via chemicals. Drugs of abuse have chemical structures that allow them to get in on this conversation directly. Even more they can communicate with the pathway more directly than natural rewards. For example, imagine that you've just eaten a slice of pizza, signals from your mouth have to be sent up to your brain to tell the brain that you've just eaten something tasty. However, when you consume a drug, it can reach the brain much more quickly, but not having to wait on these internal signals. So, while the reward pathway is important for motivation and for deciding what things the environment, we like it, can also easily be hijacked creating excessive motivation for behaviors, like eating, winning, or sex or for certain chemicals like drugs of abuse