Addiction and the Brain

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My question:
- How do the mechanisms of the brain lead to addiction?
- Is there one singular attribute in the brain that can explain addictive tendencies?

Interest:
Reversal of symptoms
- If we can isolate one single function that leads to addiction how would this change the research and development of a cure and a means of damage reversal

Regulation of medicine:
- How would this change the regulations on opioids

Hypothesis
- **Hypothesis One**: Brain disease model of addiction
- **Hypothesis Two**: Excessive stimulation of the brain reward circuit

Brain Disease Model of Addiction

Excessive Stimulation of Reward Circuit
Results:

No singular function in the brain has been proven to be the cause of addiction. Assumed that Mesolimbic pathway and dopamine receptors are the main functions that lead to addiction:

- A majority of the papers I researched based their theories off the idea of the brain disease model of addiction and stated that the main assumption is that addiction is based in the Mesolimbic pathway and is directly correlated to the dopamine receptors.
- While this idea is seen throughout all my research papers not a single paper could support the idea of one single mechanism causing addiction.
- All of the papers made speculations on different systems or combinations of mechanisms causing addiction.