



Prevention and the 18-25 year old population

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Take Home Message #1

- Though adolescence may be the **most** vulnerable time for addiction, 18-25 year olds still technically have “developing brains”.

Take Home Message #2

- The brain chemistry is no different

Opioid Use Disorder = A Disease of the Brain

1. Humans have brain systems that motivate us to seek out pleasure, avoid distress, and learn behaviors that help us do these things.
2. Addictive substances hijack these basic systems by activating them more powerfully than natural experiences.
3. Addiction involves long-term changes in the brain that decrease pleasure, increase distress, and impair decision-making.
4. Adolescent and young adult brains have enhanced susceptibility.

Opioid Use Disorder = A Disease of the Brain

Positive reinforcement

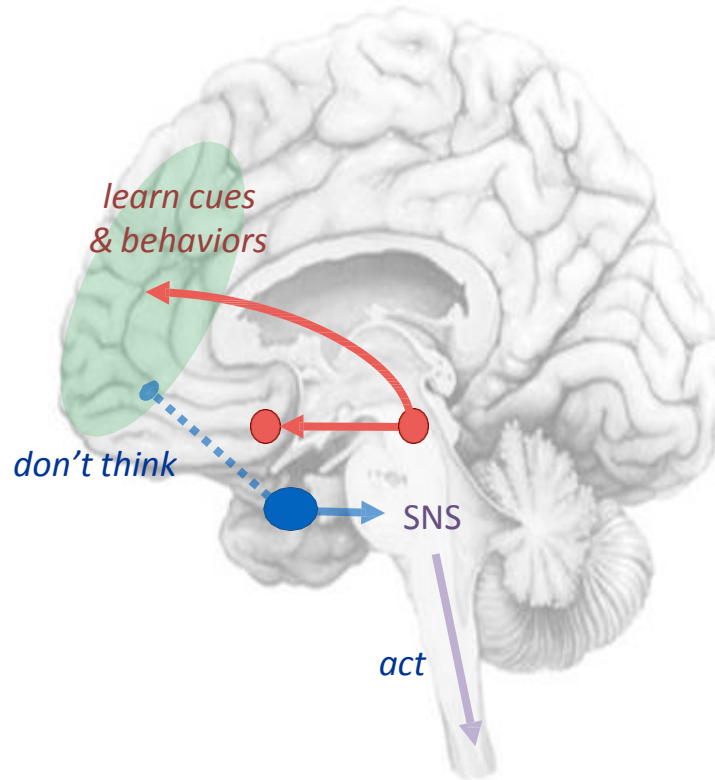
cells in the brainstem
release **dopamine** in the
nucleus accumbens



liking and wanting



seek out and do more



Negative reinforcement

cells in the **amygdala** are
stimulated (by sensations,
thoughts, memories)



anxiety, fear, distress



avoid things that cause,
do things that relieve

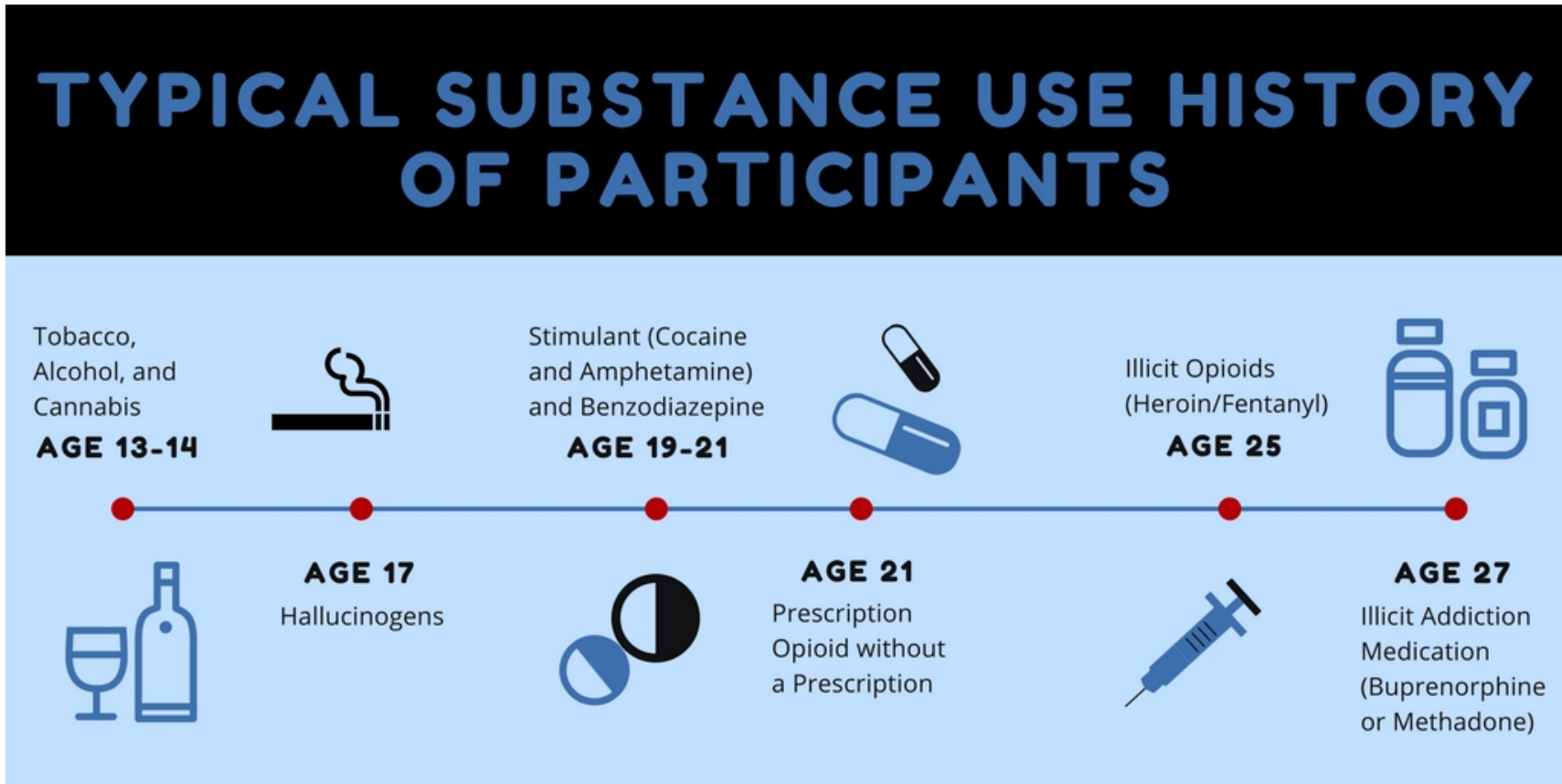
Attention, thinking, and judgment use the **prefrontal cortex**

Volkow et al 2016
Wise and Koob 2014

Take Home Message #3

- Keep in mind, 18-25 year olds didn't just start down the pathway to SUD when they turned 18.

Hub & Spoke Evaluation: Participants



What I am worried about with 18-25 year olds

- Those **not** in college – who is concerned about them? Who notices them?
- Until primary prevention really takes off, many will not have benefited from the prevention we are focused on from birth->grade school->high school. They will be a vulnerable population for many years.