

The Upside Down Organization is proud to support the 17th Annual Risky Business Conference!

June 18, 2013 | Martin's West, Westminster, MD

PRESENTER:

HEATHER HIGGINS, LCSW-C

“Trouble Letting Go: Understanding
Addiction and the Developing Brain”

KEY MESSAGE

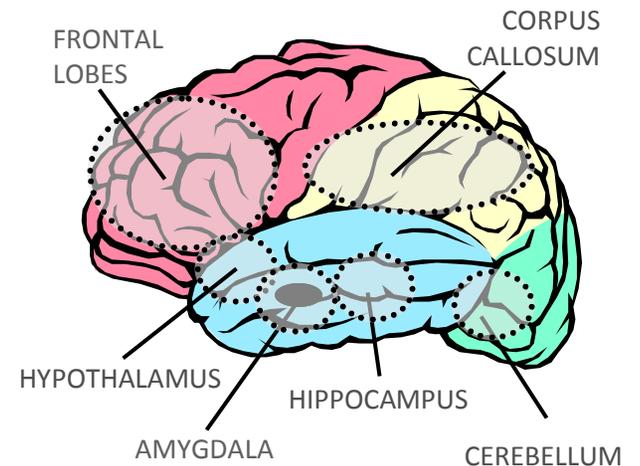
5 Most Important Steps in Intervention

1. Delayed Experimentation (Montana Meth Project).
2. Early Intervention. Damage happens faster in younger brains.
3. Abstinence (w/motivation) will heal many brains.
4. Medications are the future. (Ironic, isn't it?)
5. **Identify and reinforce healthy activities that stimulate the reward system (dopamine).**

TODAY'S ITINERARY

1. Why the BRAIN?
2. Why the HIGH?
3. Why the Need for MORE, MORE, MORE?
4. Why the CRAVING?
5. Why the SLIDE?

BASIC BRAIN ANATOMY



helping adults help kids

The Upside Down Organization is a nonprofit organization dedicated to improving the lives of the children and youth we serve. UDO bases its learning experiences on a highly successful philosophy called Transformation Education and infuses its teachings with the latest neuroscience research. UDO offers professional development experiences, mentoring services, learning tools and organizational branding that help improve the skills of people who educate, parent, guide and care for young people. The Upside Down Organization is owned and operated by The Children's Guild, one of the largest private providers of special education services in Maryland.

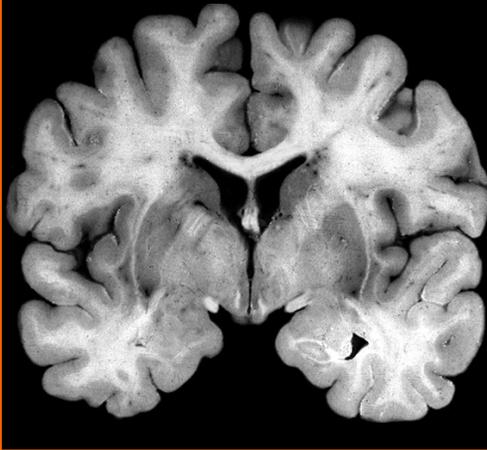
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www.upsidedownorganization.org





The Neuroscience of Addiction: The Five “Whys”



1. Why the BRAIN?
2. Why the HIGH?
3. Why the Need for MORE, MORE, MORE?
4. Why the CRAVING?
5. Why the SLIDE?

Why the BRAIN?

- It is where addiction works its potent power.
- If you know what happens in the brain, then you will understand why addiction makes you/them feel and behave the way you/they do.
- You can judge whether you/they are in control or whether the addiction is in control.
- If you know the physiological actions of addiction, you can strategize how to fight back when your/their brain craves more, even when you/they want less.

Why the HIGH?

The Pursuit of Pleasure

The motivation to pursue a beneficial act to enhance survival is driven in part by giving the brain a brief squirt of **euphoria** — the reward system.

What activities result in enhanced dopamine levels at the NAc?

- Romantic Love | Music | Humor |
Expectation of Money | Inflicting
Punishment | Looking at Beautiful Faces |
Social Cooperation | Chocolate
AND...
Cocaine | Alcohol | Amphetamines |
Nicotine | Methylphenidate

Why the Need for MORE, MORE, MORE (Tolerance)?

ADDITION CHANGES THE BRAIN

Damage to Dopamine Receptors

- Excessive use of hedonic substances results in a decrease of dopamine receptors. With fewer dopamine receptors, the addicted brain:
- Will develop tolerance and the need to take more
 - Will have difficulty experiencing pleasure with natural reinforcers.

Why the CRAVING?

- Craving can be thought of as a “Glutamate Headache.”
 - Glutamate helps you “think.” But, too much can result in compulsive, obsessive thoughts. Too little can slow thinking.
 - Interferes with PFC activity that might otherwise help you resist the craving while heightening sensitivity to drug cues.
 - Fewer resources to fight the “urge.” The PFC “rewires” for glutamate use.

Why the SLIDE (Relapse)?

Three well-known causes of relapse:

- Use of drug or similar drug
- Exposure to cues associated with drug use.
- Stress

Dopamine at NAc