

11/07/06
Acalanes High School
AUHSD Adult Education Night

**Facing the Difficult Truth:
The Teen Culture and Social Scene that
Enables Drug and Alcohol Use**



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Parent Drug Education Process & Content

- What's out there
- The adolescent brain
- Endorphin model / Reward System
- Marijuana
- Alcohol
- Influencing our children

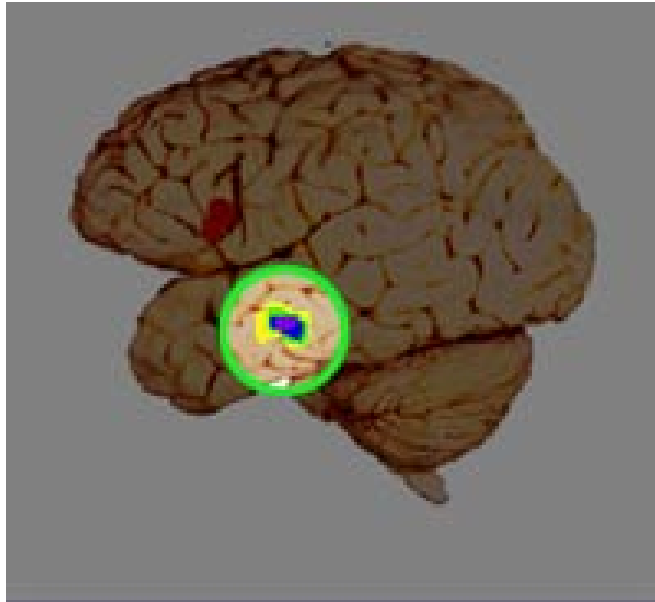
Statistics

In Last 30 Days	7th grade	9th grade	11th grade
Used Alcohol	11%	23%	32%
Used Marijuana	5%	11%	17%
Have ever ridden in car with ANYONE under influence	7th grade		
	41%		
Have ever ridden in car with A FRIEND under influence	7th grade	9th grade	11th grade
	20%	25%	49%

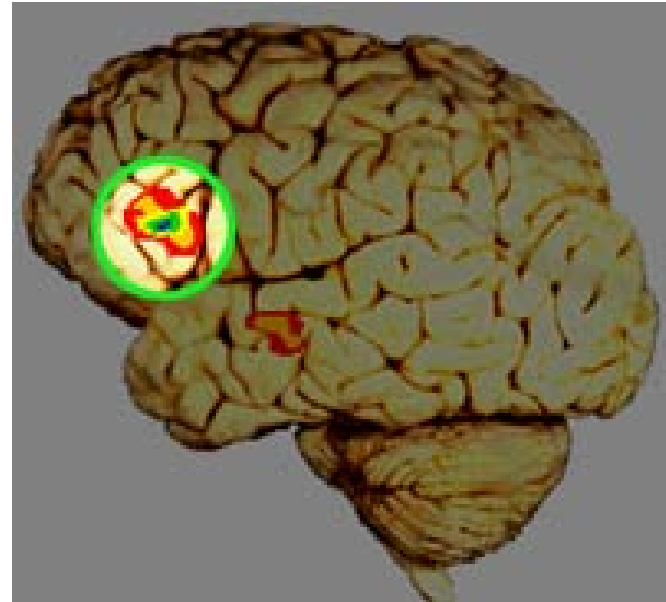
Perception of use

Perceived difficulty in obtaining Alcohol or Marijuana		90% perceive it to be more difficult to obtain than reality	
Perceived ease of obtaining as <u>EASY</u> or <u>VERY EASY</u>	7th grade	9th grade	11th grade
Alcohol	28%	62%	76%
Marijuana	19%	32%	70%

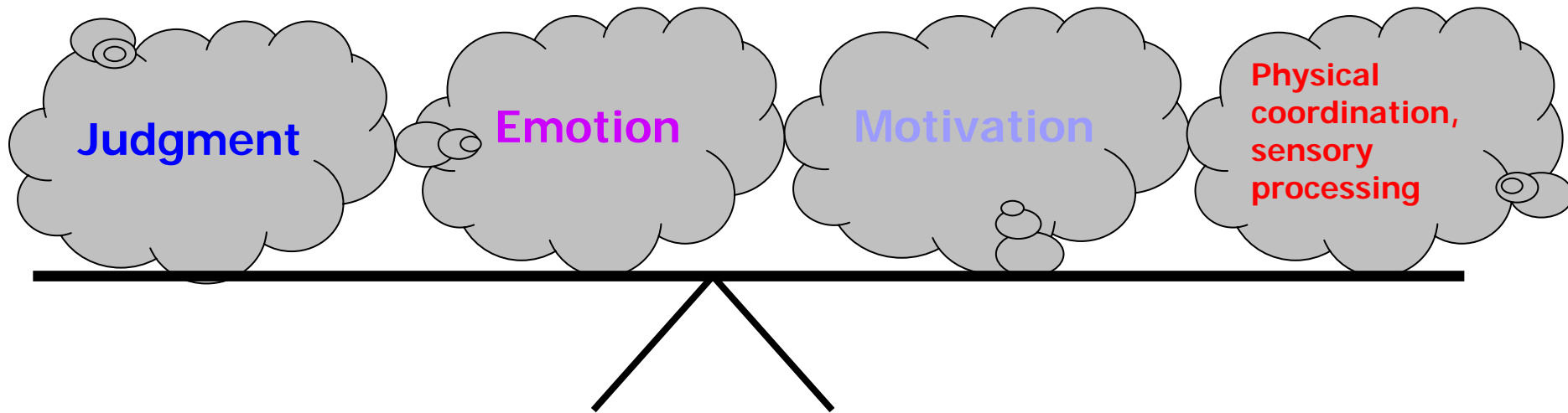
Adolescent Brain



Adult Brain



Age 24



Ahh... Balance, Finally!

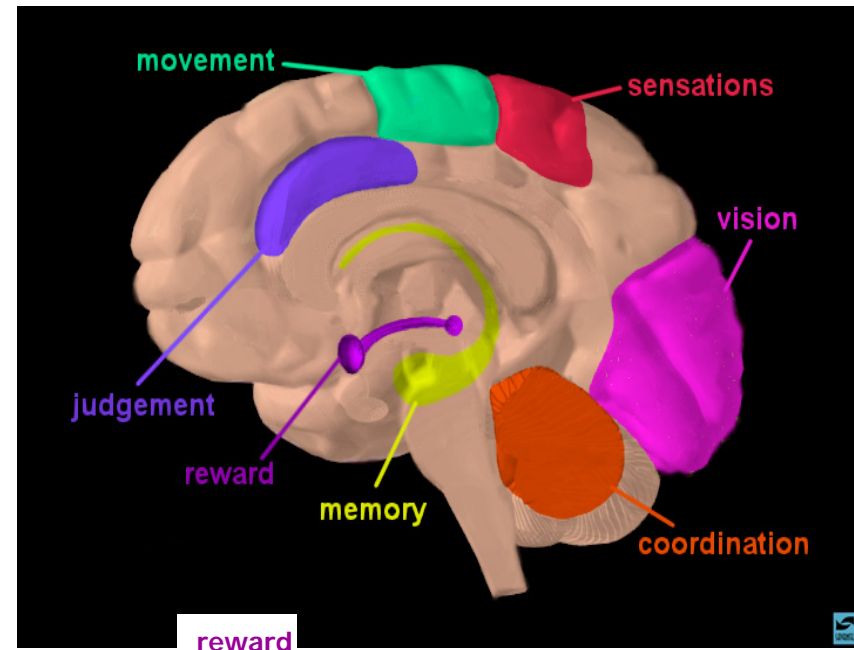
Pruning

- **“USE IT OR LOSE IT”**— Reading, sports, music, video games, x-box, hanging out—whatever a child/teen is doing—these are the neural synapses that will be retained
- How children/teens spend their time is **CRUCIAL** to brain development since their activities guide the structure of the brain



Reward System

- The reward system is responsible for seeking natural rewards that have survival value
 - seeking food, water, sex, and nurturing
- Dopamine is this system's primary neurotransmitter

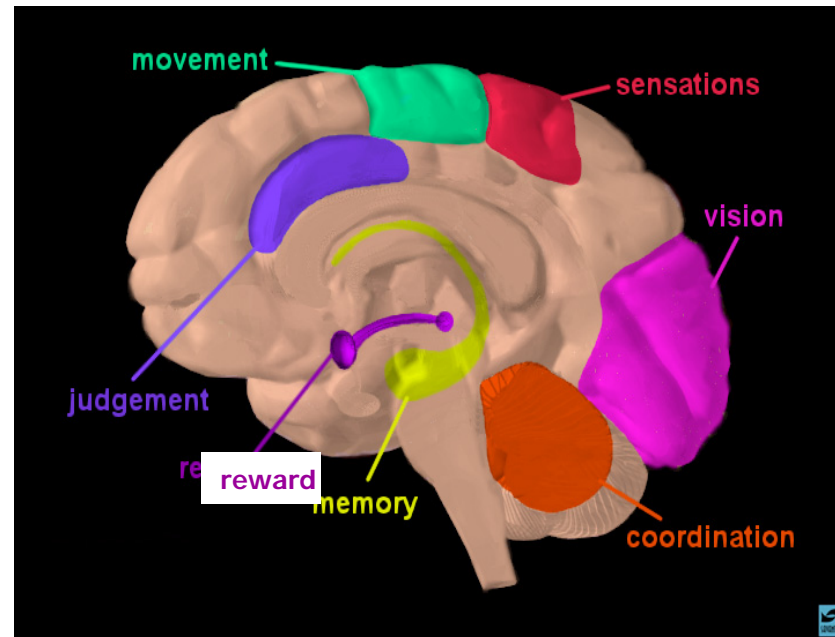




Dopamine Release

Drugs Hijack the Brain's Reward Circuitry

- Immediate effect of drug use is an increase in dopamine
- Continued use of drugs reduces the brain's dopamine production.
- Because dopamine is part of the reward system, the brain is “fooled” that the drug has survival value for the organism.
- The reward system responds with “drug seeking behaviors”
- Craving occurs and, eventually, dependence.





Serotonin & Dopamine

Neurons and the Synaptic Space

- Difference between happiness and pleasure (depth vs intensity)
- Getting a life
- Serotonin vs. Dopamine
- Developing skills, interest, relationships, meaning
- Resiliency
- Wizard of Oz

Marijuana Receptor Sites

■ Hippocampus

- Memory, memory, say what, memory

■ Amygdala

- Novelty Threshold
- Attention effects
- Motivation
- Sensory input
- Noticing differences

■ Cerebellum

- Motor Coordination
- Flow, time & ADD

■ Basal Ganglia

- Reward system
- The final common pathway for drugs



Marijuana Notes

Hippocampus

Are adolescents more susceptible to alcohol than adults?

Most certainly YES

1. Reduced sensitivity to intoxication
2. Increased sensitivity to social disinhibitions
3. Greater adverse effects to cognitive functioning
4. Medicates “excitability”



Notes for alcohol

- *Extent of binge drinking
- *The alcohol industry
- *Integrated in society
- *Shifting gears, events, stress – substitute
- *Modeling



Talk to your child

- I care, I see, I feel, Listen
- Clear expectations and consequences
- Communication & Monitoring
- Integrity & Self Assessment – Modeling
- Teen-proof your home
- Connection

Self Assessment

- **Andrew Weil – Unhealthy relationship**
 - Ignorance that the substance is a drug and what it does to the body
 - Loss of desired effect w/increasing frequency
 - Difficulty separating from the drug
 - Impairment of health or social function

Bibliography / References

- **Marijuana: What's a Parent to believe?**
Tim Cermak 2003, Hazelden
- **Uppers, Downers, All Arounders** Darryl
Inaba 1997, CNS Publications



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