SUBSTANCE USE AND THE TEENAGE BRAIN

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AGENDA

1) A little bit about the brain
2) A little bit about addiction
3) Why mixing these two things is a bad idea……
4) What to do about it….
For all we know….there is much more that we don’t know….

The brain is not fully done developing until around age 25
A LITTLE ABOUT NEUROCHEMICALS

We have at least 50 different neurotransmitters.
A LITTLE ABOUT NEUROCHEMICALS

Once a message is received at the receptor site, the neurotransmitter returns to be reused for another message or it is broken down by enzymes in the body and destroyed.

Neurotransmitters are made by the body by amino acids (for the most part) that come from foods we eat.
The brain is composed of three parts—brain stem, limbic system and the cerebral cortex—that control all the bodily functions from breathing and digesting food to thinking and controlling emotions.
CHOICE ARE HARD...

Input is filtered through the “emotional brain” (the limbic system)

Addiction targets the “filter” part of the brain due to the large number of dopamine receptors in the limbic system

The frontal cortex (reasoning) isn’t developed until mid 20s; adolescent brains make decisions and solve problems differently than adults—they are more guided by the amygdala
ASAM NEW DEFINITION OF ADDICTION:

“Addiction is a primary, chronic disease of brain reward, motivation, memory & related circuitry. Dysfunction of these circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors.”
WHY IS ADDICTION SO...WELL, ADDICTING...?

**SEROTONIN & DOPAMINE**

Areas of the brain that are responsible for reward, compulsive behaviors all have high concentrations of dopamine.

We know that, despite their differences, mood-altering chemicals/behaviors enhance the dopamine and serotonin systems.

Technically, the only two things you enjoy
SURVIVAL SYSTEM IS HIJACKED

The Drug “hijacks” the reward system.

Non-Addict: Drug=Drug
Addict: Drug=Survival

Our brain is designed to keep us safe. Any perceived threat is registered in the same part of the brain.

Our addiction “hijacks” our brain so when we feel threatened, it’s our addiction that is threatened.
THE DISEASE MODEL

Organ (leg, pancreas)

Defect (physical, cellular level)

Symptoms
ADDITION

Brain (Organ)

Dopamine, Serotonin (Defect)

Mal-Adaptive behavioral patterns & Choices (Symptoms)
“ADDICTED” HAS BECOME A BUZZ-WORD

Shopping
Internet
Work
Television
Video Games
M&Ms

The question becomes: Is it impacting my life in a negative way and preventing me from living the way I want and within my value system?

“Some people do drugs…I buy shoes.”

-Celine Dion
WHAT IS NORMAL VS WHAT IS HEALTHY
OTHERS....

Facebook

Amazon

Netflix
WHAT WERE YOU THINKING?!!?!?

When our beliefs are irrational,

Our thought patterns are irrational,

And our behavior frequently results in unexpected negative consequences.

methamphetamine
Brain imaging of drug-addicted individuals show physical changes in the brain that are critical to judgment, decision making, learning and memory.

MACs alter the pathways of the brain by interfering the communication of the neuro-chemicals in the brain, specifically the reward system.
Why is recovery so difficult?

Addiction is a disease of the brain and a disease of the brain’s ability to make healthy, responsible choices.

For recovery to “work”, the way the brain operates has to change.

It’s easy to get the brain to change patterns..........right?
RECOVERY MEANS....

Changing the way the brain is working

1) Impulse control
2) Emotional regulation
3) Making judgements and weighing long/short term consequences
WHY DOES IT MATTER?

We are the most obese society.

We use more prescription drugs than any other society.

We are the number one producers of porn.

The first 2-3 years of life are the most formative & can set the template for addiction & mental health disorders.

We must be willing to look at the whole picture and change public policy to care for the youngest brains........
AMERICA ON DRUGS

We are the only industrialized country that allows pharmaceutical companies to market directly to the consumer.

We create “disease awareness” and diagnostic inflation.

$700 billion in sales each year; half in North America.

We can no longer tolerate being “uncomfortable.”
2010 Nearly 9 percent of Americans aged 12 and older—an estimated 22.6 million people—reported using illicit drugs in the month prior to the survey.

Drug abuse is linked to nearly half of all crimes in the US—typically 2/3 of those in jail & prison are there for substance-related crimes

71% of all illegal-drug users are employed

Alcohol accounts for 500 million lost work days/year

4 out of 10 US AIDS deaths are due to drug abuse

“Every dollar spent on treating addictions will save 5 dollars in healthcare (AIDS, HTN, diabetes, STDs, anxiety, depression…….)”

---Patrick J. Carnes, PhD
HOW TO HELP

Offer to help them into treatment
Let them know you care about them
Don’t force the issue; they have to decide that they want help
Offer the opportunity for support groups
WHAT TREATMENT LOOKS LIKE

Individualized Assessment and Treatment Plan
Group & Individual Therapy
Continuing care
Supportive recovery environment
Life Skills & Coping skills
Case Management
Mental Health Assessment, medications

Rimrock:
- Alcohol & Drug Addiction
- Process Addictions
- Mental Health
We create opportunity and balance to overcome the chaos of addiction through innovative, compassionate, whole person care. Rimrock is your choice for new beginnings.
THANK YOU!

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Making choices isn't always easy. But, you always have a choice.

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