Addiction 101: Harm Reduction

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Why Talk About It

- As a society we do not treat addiction as a disease
  - Diabetes vs cancer vs addiction
  - Stigma both in and out of the 'circle' of recovery

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A Disease or Not a Disease

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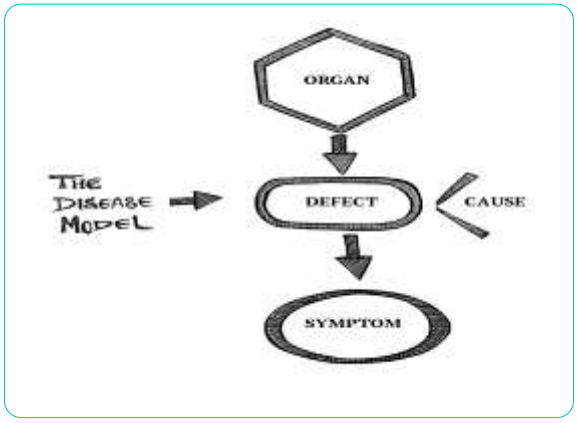

DEFINING DISEASE

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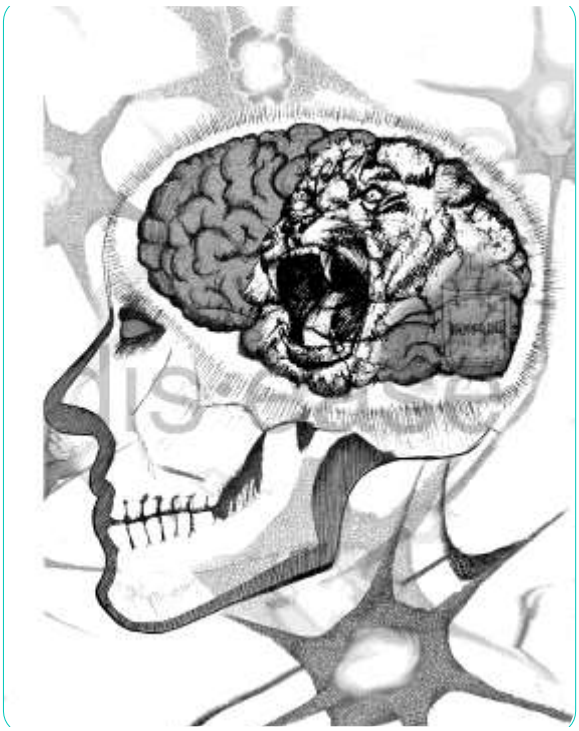
THE BRAIN… The GREATEST INSTRUMENT WE WILL NEVER FULLY UNDERSTAND

- The BRAIN is the organ involved in the disease of addiction
- Expensive (and honestly, not that great)
- So people with brain diseases start out at a disadvantage
- Everything we think, feel, do, say, imagine arises from direct and indirect electrical and chemical activity in the brain (if you are a reductionist)



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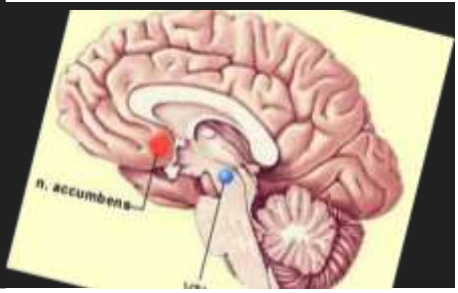
THE MIDBRAIN: A.K.A The TIGER

- Not conscious
- Acts immediately
- No goal planning
- No 'pros and cons'
- A life-or-death processing station



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The Midbrain (aka Limbic Brain) is the SURVIVAL brain. It handles:

- EAT!!
- KILL!!
- SEX!!!

I do NOT have permission to use these photos

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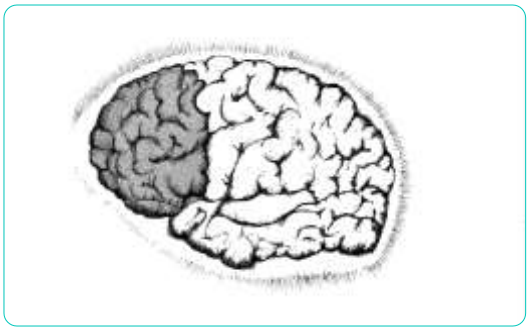

THE FRONTAL CORTEX: A.K.A The SUPERHERO

- It's what makes "You"
- Seat of the Self and Personality
- Love, Morality, Decency,Responsibility,Spirituality
- Conscious "choice" and 'willpower
- Where all your superpowers are located

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DRUGS WORK IN THE MIDBRAIN…

- NOT in the Cortex…
- (how do we know?)
  - The Olds Experiments
    - We thought for many years…
- Mice hit the lever to administer stimulation (SUPER REWARDS) to the midbrain to the exclusion of all their mouse responsibilities and obligations

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Mice get addicted to SUPER REWARDS but…

- Mice don't have morals
- Mice don't have religion
- Mice aren't sociopaths
- Mice don't have bad parents
- Mice are not a product of the public education system

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IN ADDICTION, SUPER REWARDS CAUSE THE BRAIN TO 'REWIRE'

- NEW!!! #1 SUPER REWARD!!!
- #2 Eat
- #3 Kill
- #4 Sex

dis·ease
/dəˈzēz/

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People dying of thirst in the desert will risk losing everything they value for a drink of water→ this is the midbrain in action shutting down the frontal cortex in an effort to SURVIVE

SUPER REWARDS BECOME EQUIVELANT WITH SURVIVAL

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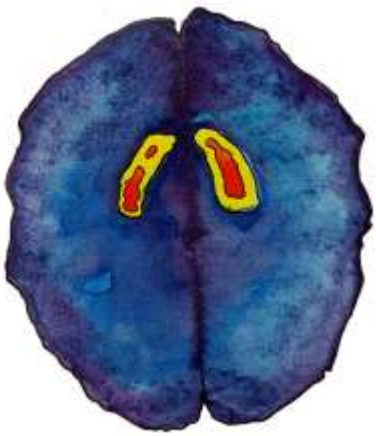

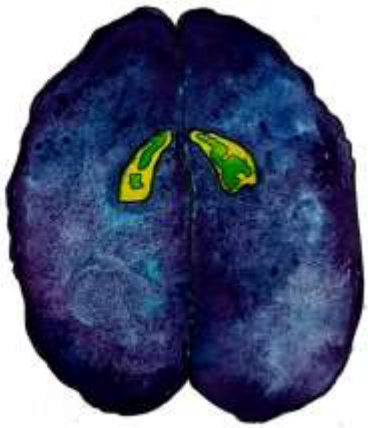

Cortex changes

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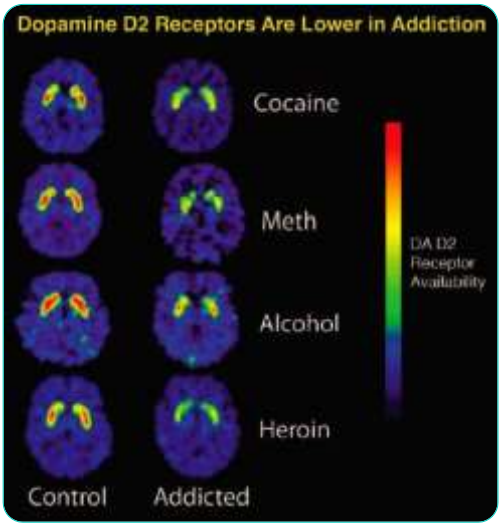
Midbrain changes



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GET ON WITH THE DISEASE PROCESS ALREADY

ADDICTION IS A BROKEN 'PLEASURE SENSE' IN THE BRAIN

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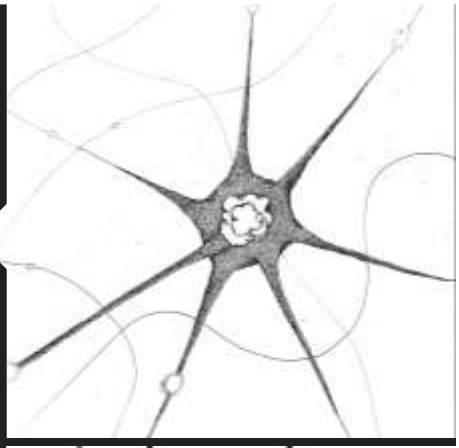
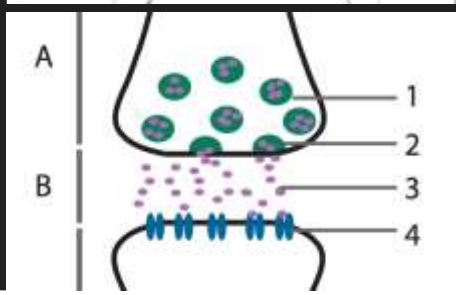
HOW THE BRAIN WORKS…

- A= presynaptic neuron
- B= synapse
- C= postsynaptic neuron

- 1. neurotransmitter(NT) in vesicle
- 2. NT being released/taken back up
- 3. receptor for NT= effects!!!





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HOW THE BRAIN WORKS:
Brain Perceptual Systems (all of them):

- **1. Vision**
- **2. Hearing**
- **3. Touch**
- **4. Smell**
- **5. Taste**
- **6. Linear Acceleration**
- **7. Angular Acceleration**
- **8. Gravity (Proprioception) ← perceptual construct**
- **9. Blood pO_2 and pCO_2**
- **10. Pleasure ← perceptual construct**

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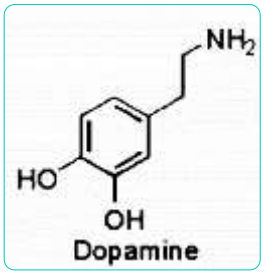

- •All drugs of abuse and potential compulsive behaviors release Dopamine
- •Dopamine is first chemical of a pleasurable experience - at the heart of all reinforcing experiences
- •DA is the neurochemical of salience (it signals survival importance)
- •Tells the brain this is "better than expected"

Addiction Neurotransmitter # 1 : Dopamine
ONE OF THE ONLY THINGS IN LIFE WE ENJOY

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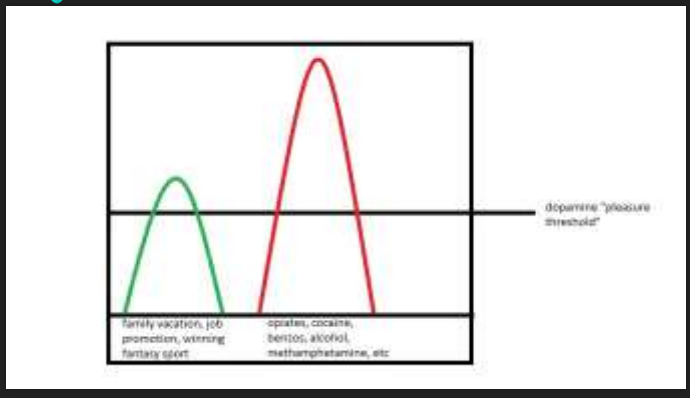
The Brain has a Hedonic "Set Point"



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Fewer dopamine receptors means more dopamine needed to feel "normal pleasure"

control addicted

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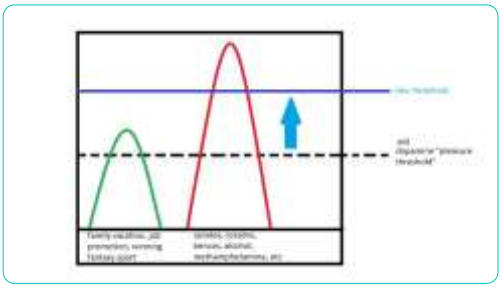
Increased drug use reset the brain's pleasure "set point"



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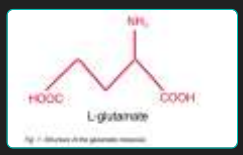
Addiction Neurotransmitter #2: Glutamate
THE EXECUTIVE ASSISTANT TO DOPAMINE

- •THE MOST ABUNDANT NEUROCHEMICAL IN THE BRAIN
- •CRITICAL IN MEMORY FORMATION & CONSOLIDATION
- •ALL DRUGS OF ABUSE AND MANY ADDICTING BEHAVIORS EFFECT GLUTAMATE WHICH PRESERVES DRUG MEMORIES AND CREATES DRUG CUES (TRIGGERS, PEOPLE, PLACES AND THINGS)
- •AND … GLUTAMATE IS THE NEUROCHEMICAL OF "MOTIVATION" (IT INITIATES DRUG SEEKING)



PEOPLE and PLACES and THINGS, OH MY

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TRAUMA DRAMA

CHRONIC, SEVERE STRESS =↑CRF

And ↑CRF =↓DAD2 receptors

And ↓DAD2 receptors = Anhedonia (BROKEN PLEASURE SENSE)

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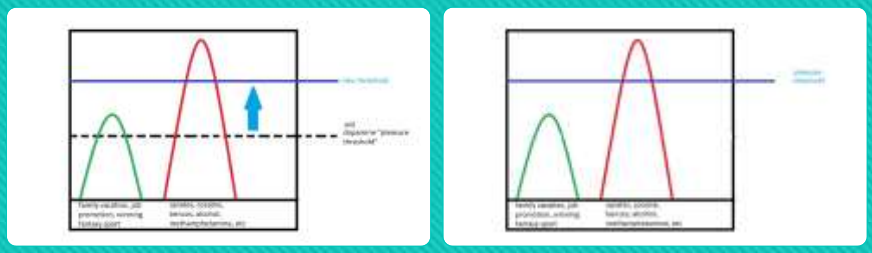

High stress hormone levels ALSO reset the brain's pleasure "set point"

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Anhedonia: Pleasure "deafness"

- The patient is no longer able to derive normal pleasure from those things that have been pleasurable in the past

- Addiction is a stress-induced "hedonic dysregulation"

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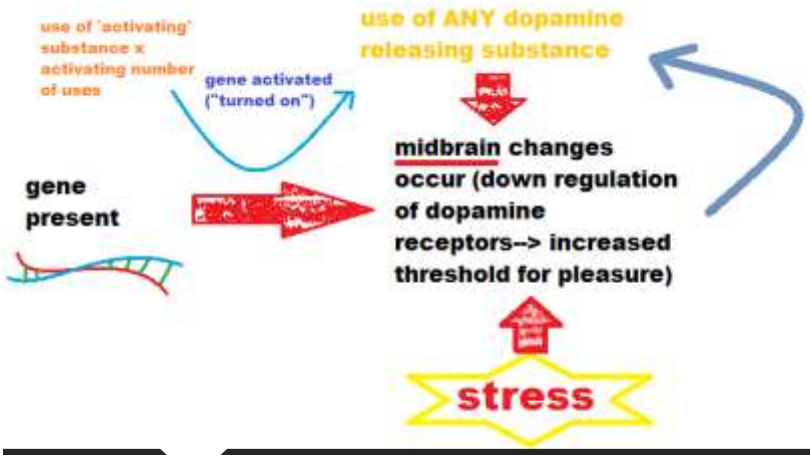

THE SKINNY ON GENES (NOT TO BE MISTAKEN FOR SKINNY JEANS)

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Relapse

1. **Brief exposure to ANY abusable drug OR compulsive behavior (DA release and DA receptor down regulation)**
2. **Stress (CRF release and DA receptor down regulation)**
3. **Exposure to drug cues (people, places and things)**

THREE THINGS ARE KNOWN TO CAUSE RELAPSE IN HUMANS

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- **Now that the midbrain has found what secures survival…**
- *… how does it motivate the individual to repeat that behavior?*

OKAY, FINE, HOW DOES THIS EXPLAIN ALL THE SHENANIGANS

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craving

- Increased stress = increased pleasure threshold = increased need for dopamine= midbrain thinks it is dying= CRAVING
- CRAVING is a physiological response to a neurochemical deficiency resulting in symptoms including sweating, stomach cramps, obsession, increased respirations, etc.
- CRAVING IS THE REASON THE "CHOICE" ARGUMENT FAILS.
  - No person can choose to crave or not.
  - **<u>You don't actually have to have drug use for the defective physiology of addiction to be active</u>**

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Once Craving sets in, how does it control behavior??? (A.K.A the shenanigans)

- The midbrain (like a ninja) hijacks the abilities of the frontal cortex…
  - The brain will utilize the most likely reasoning to get the addict to feel like they have to use
    - Pain (won't cause death)
    - Anxiety (won't cause death)
    - Stress (won't cause death)
    - Specific people or events/reservations (ALWAYS a choice)
  - Brings the 'reason' up to the level of the conscious… so when the craving passes (time or use)…

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Once there is a "reason", suddenly behaviors become "justified"

This is what "WE" see

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SO WHAT'S GOING ON IN THE CORTEX?

- SKILL SETS ARE BUILD OVER TIME, WITH PRACTICE
  - THINK OF A PATH THROUGH THE WOODS
- DRUGS/MALADAPTIVE COPING MECHANISMS REPLACE EXISTING PATHWAYS AS THEY ARE DEEMED 'MORE APPEALING'
  - THINK: INSTANT, HIGHLY REWARDING
- EXISTING PATHWAYS (IF THEY WERE PRESENT AT ALL) DETERIORATE IN FAVOR OF THE HIGH DOPAMINE COPING
  - CAN'T ACCESS THEM EASILY

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THIS IS EVIDENCED BY THE FACT THAT ONCE THE MALADAPTIVE BEHAVIORS BECOME HABITUAL COPING SKILLS, THOSE SKILLS BECOME PART OF THE DISEASE

The need for instant gratification

And subsequent inability to wait or practice

Needing a pill or chemical for EVERYTHING - while OTC sleep medications have few addictive properties, the BEHAVIOR of needing something to make the body do what it should naturally learn to do, IS addictive

Looking for reasons to avoid recovery related behaviors and activities

Seeking reasons to use

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THE DISEASE MODEL… I DIDN'T FORGET, *YOU* FORGOT

- Addiction is a dysregulation of the midbrain dopamine (pleasure) system due to unmanaged stress resulting in symptoms of decreased functioning IN BOTH the midbrain and the cortex, Specifically:
  - **1. Loss of control**
  - **2. Craving**
  - **3. Persistent drug use despite negative consequences**

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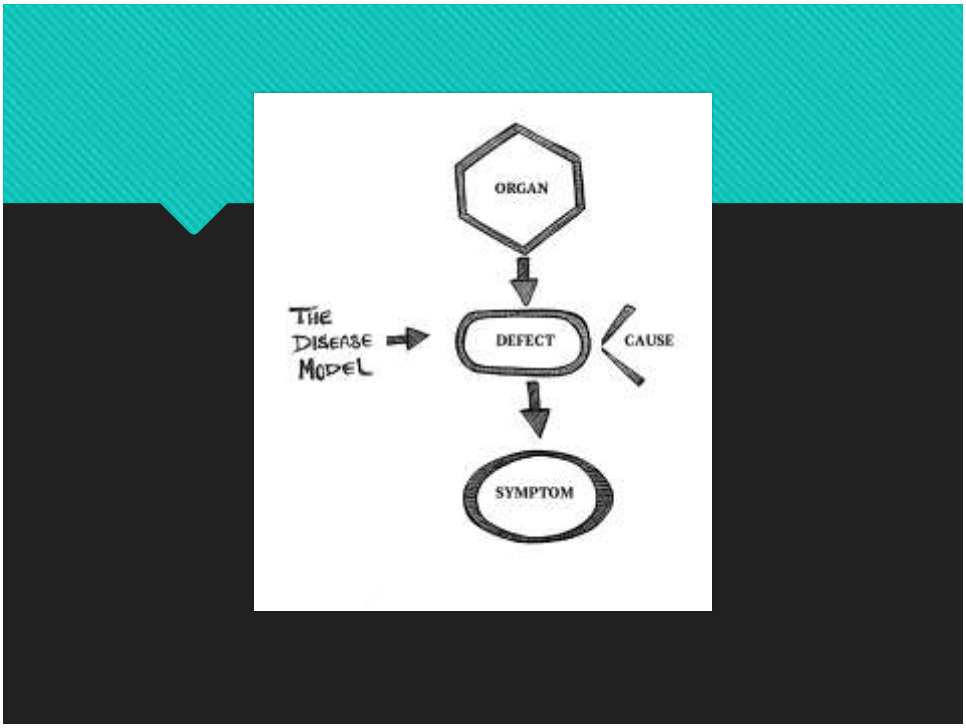

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IF I BUY INTO THE DISEASE CONCEPT, WILL YOU TELL ME HOW TO FIX IT?

- Treat most acute medical issues first/Reduce harm
- Detox
- (quiet the midbrain with medication or abstinence)
- Restore cortex/thrive

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Chronic disease

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BUT FIRST, DO NO HARM… NO, WAIT: FIRST, REDUCE HARM

Strategies and ideas aimed at reducing harm

- Needle exchange
- Fentanyl testing strips
- Safe injection sites
- Free condoms
- Narcan availability (naloxbox)
- Drunk driving laws (they are NOT zero tolerance)

Movement for social justice and reduction of stigma

- Reduce/remove the need for anyone to have opinions on anyone else's journey to recover
- Establish quality of life for individuals with/without cessation
- Recognize real obstacles to recovery (poverty, racism, resource availability
- Empower addicts to help themselves and each other

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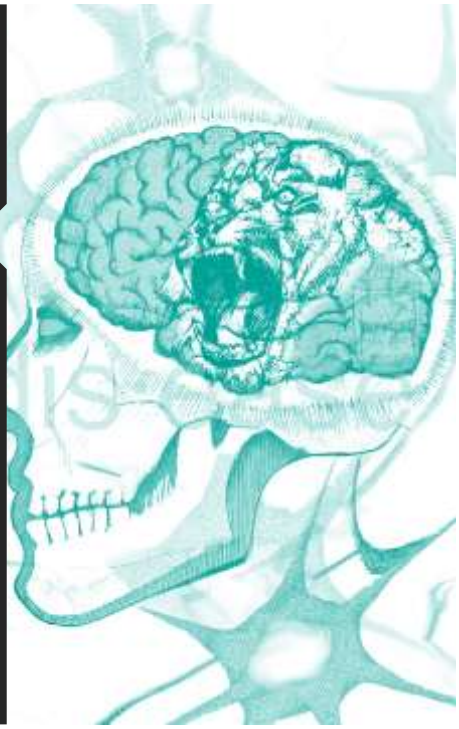
IT ALL BEGINS WITH harm reduction

- Accepts, for better and or worse, that licit and illicit drug use is part of our world and chooses to work to minimize its harmful effects rather than simply ignore or condemn.
- Understands drug use as a complex, multi-faceted phenomenon that encompasses a continuum of behaviors from severe abuse to total abstinence, and acknowledges that some ways of using drugs are clearly safer than others.
- Establishes quality of individual and community life and well-being–not necessarily cessation of all drug use–as the criteria for successful interventions and policies.



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Harm reduction: Looks very different from the treatment pieces

- Calls for the non-judgmental, non-coercive provision of services and resources to people who use drugs and the communities in which they live in order to assist them in reducing attendant harm.
- Ensures that drug users and those with a history of drug use routinely have a real voice in the creation of programs and policies designed to serve them.
- Affirms drugs users themselves as the primary agents of reducing the harms of their drug use, and seeks to empower users to share information and support each other in strategies which meet their actual conditions of use.

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options

Harm Reduction Coalition – www.harmreduction.org The Stanton Peele Addiction Website –www.peele.net Motivational Interviewing - www.motivationalinterview.org/ Drug Policy Alliance Network- www.drugpolicy.org/ 12 Step (AA, NA, CA, MA etc.) Rational recovery - https://rational.org SMART Recovery - http://www.smartrecovery.org/ Dual Recovery Anonymous, Dual Diagnoses Anonymous http://www.draonline.org/ Religion - http://www.celebraterecovery.com/ Moderation management - http://moderation.org/ Housing first and rapid re-housing: http://www.freedomcenter.org/section/resources

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Studies on low threshold housing demonstrate:

(http://desc.org/research.html, http:/nrepp.samhsa.govViewIntervention.aspx?id=365, Larimer et.al, 2009)

- •A reduction in medical and social service costs
- •Longer retention in housing
- •Reduced drinking,
- •Increased substance use treatment
- •Decreased jail time
- •Increased quality of life

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Basic harm reduction

Housing readiness/sober housing

- In other words, sobriety or abstinence (along with other skills) are a prerequisite to housing levels and independence.
- Housing/Independence may be jeopardized by substance use ("relapse") or treatment "non-compliance."
- Historically predominant approach: Steps towards housing is determined by providers.

Housing as a human right/low threshold

- Permanent housing is not dependent on compliance to treatment— drug or psychiatric treatment.
- Housing is seen as a very valuable intervention that creates stability.
- Low-threshold approach: Steps towards stability defined by consumers.

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The Tasks of harm Reduction

1. Safer active use
2. Moderatation of use
3. Variables of abstinence

Reduce harm but not necessarily exclusive of abstinence.

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Challenges of harm reduction

There are difficulties, of course

Negotiating Community/Neighbor Complaints

- Aromas, Noise

Staff Challenges

- Buy-In, Personal Reactions, Us Vs Them Factor

Navigating the "Rules," including leases and policy language

- Interactions with outside "traditional" providers

Complexity of information surrounding issues such as medications, laws

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No harm reduction means…

- Stigma/Discrimination
- Higher rates of HIV/AIDS
- Increase in drug overdoses & deaths
- Discrimination in health care
- Individual seen as "disposable" and "to blame"
- Increased drug use

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Harm reduction practices

- Condoms/Variety of Safer Sex Supplies
- Narcan
- Safer Injection Facilities
- Safer Use Supplies for Injecting, Smoking, Sniffing
- Any Resources That Might Help: Know Your Rights, Bad Date Lists, Adulterated Drug Warnings, etc.

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more

- E-Cigs/Nicotine Replacement
- Budgeting for Use
- Planning for Safer Use
- ACU-Detox/Alternatives to Standard Medical Model Options
- Methadone/Suboxone/Other Medication
- Housing: Including supportive housing and wet houses
- Real Info- "Just Say Know"

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MAT vs MAT

Medication AS treatment

- Replacement
- No other 'requirements'
- Goal to reduce harm/feel better/prevent OD
- Client directed

Medication ASSISTED treatment

- Titration/stabilization
- Generally require 'treatment' to continue
- Goal is abstinence (other than medication)
- Provider directed

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Treatment- middle of the bookshelf

- Varies from harm reduction with minimal treatment (individual counseling etc) up through abstinence based residential treatment.
- Can hop from 'volume to volume' back and forth along the shelf.
- Ultimate goal to restore the cortex so person no longer needs nor wants substances

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The other bookend Reconstructed… THRIVE

Recover

- A Chronic disease with a chronic timeline
- Relapse/remission/recovery can be like sliding back and forth
- Where do we go after 'recovery'

Reconstruction

- Improving all areas of wellness
- Nutrition
- Movement
- Mindfulness
- Savings (finances and memories/experiences)

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Prevention…

- The truth is that we will never treat this disease to extinction
- We need to develop tools to prevent it.
- We can look at current treatment and utilize those strategies to help prevent it
- Addiction is an adolescent disease, so we must start there

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resources

- Harm Reduction Coalition http://harmreduction.org
- Erowid https://www.erowid.org
- International Harm Reduction Association http://www.ihra.net
- Woodhull Foundation http://www.woodhullfoundation.org
- International Network of People Who Use Drugs http://www.inpud.net
- Sex Workers Outreach Project http://www.swopusa.org
- Drug Policy Alliance http://www.drugpolicy.org
- Icarus Project http://theicarusproject.net

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PAGE of SHIT THAT NOBODY CARES ABOUT

except editors and maybe some academics. AKA works cited

- It has been about 2000 years since i was in any kind of academic situation where I had to properly cite my work. I have no recollection of proper formatting and am not going to relearn it.
- That's the best you are going to get. Again, I accept full responsibilty for the fact that this level of laziness makes me a shittier presenter.
- Have a nice day.
- You have to actually get the book if you want to know what I am talking about here
- SAMHSA, NIDA, NIH and the DEA are legit sources
- All illustrations not stolen directly from the internet are by Kevin Kolankowski

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Questions????

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Or You can follow me:

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@theaddictsdoc or Nicole Labor, Addiction Assassin

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The Addictoholic Deconstructed: An irreverently quick and dirty education by a doctor who says f*ck, a lot

Available in paperback and digital at amazon.com

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