# Does Treatment Work?

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Clinical Associate Professor, WSU School of Medicine
Medical Director, Dawn Farm
Medical Director, Mich Health Recovery Prof Program

## Disclaimers

- Methadone provider, WSU
- Medical Director, Dawn Farm (12 step)
- Buprenorphine provide
- Naltrexone provider
- Consultant for DEA/DOJ
- Advisory Board, Families Against Narcotics

## Addiction and Recovery News

https://addictionandrecoverynews.wordpress.com/


## What is Addiction?

- Physiologic Dependence?
- Lack of willpower?
- An "amoral" condition?
- A brain disease?

## Physiologic Dependence: Tolerance and Withdrawal

- Tolerance: requiring increasing amounts of drug to get the same effect
- Withdrawal: the opposite effect of the drug when it is removed
- NEITHER of these imply chemical dependency (addiction)

## Lack of Willpower?



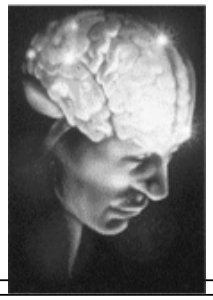

## An "amoral" condition?

## An "amoral" condition?

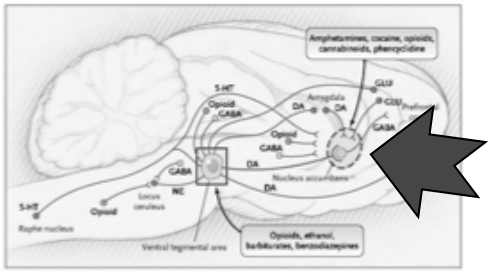
Halstead

Freud

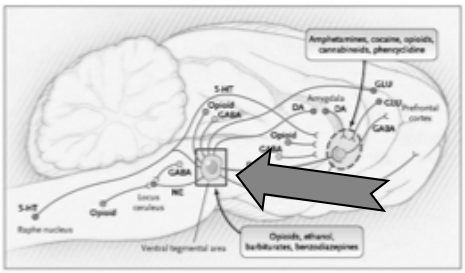
## Brain disease?



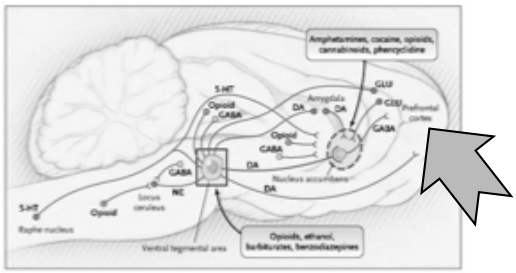
## The Nucleus Accumbens: craving and reward

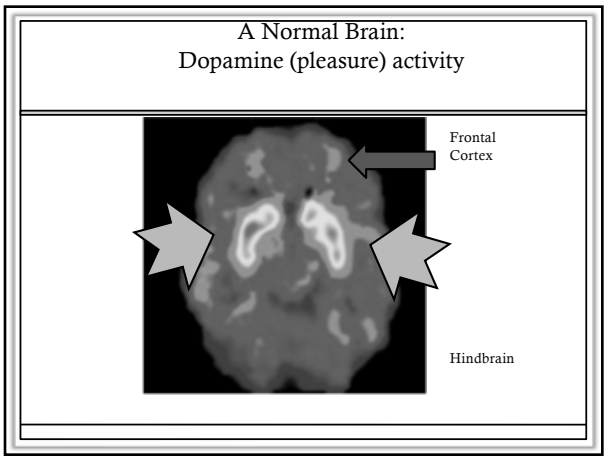


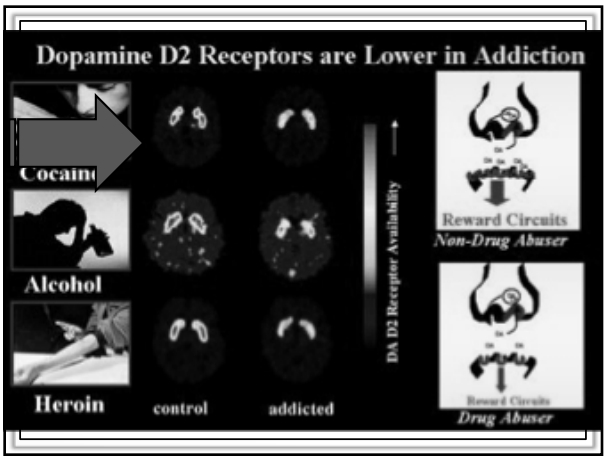

## VTA: the "gas tank": supplies dopamine to the Nucleus Accumbens




## Frontal Cortex: Inhibition of the pleasure center

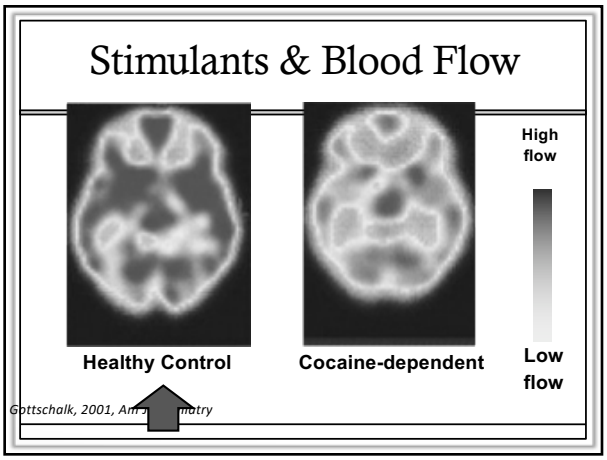


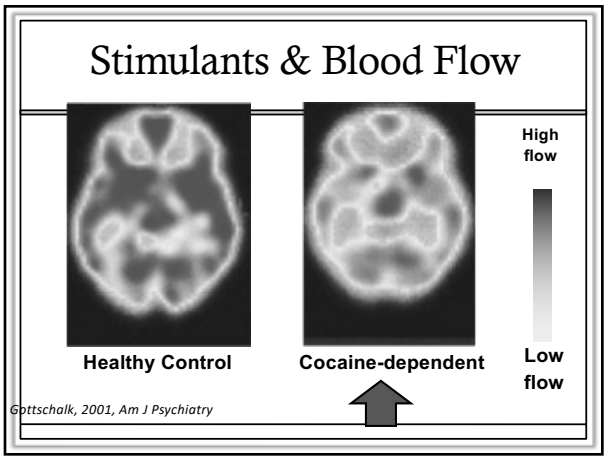


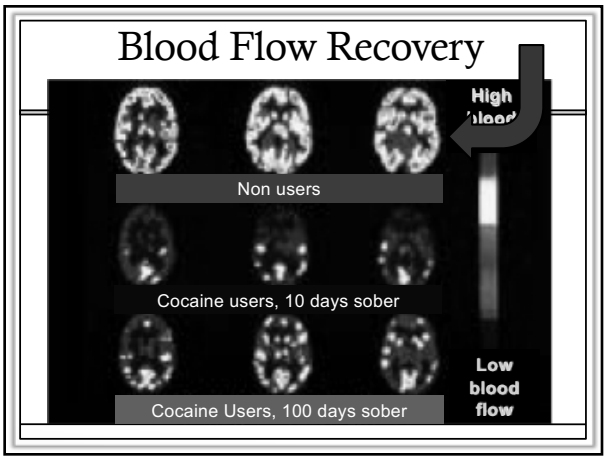




## Why Can't They (Stay) Stopped?????

- Alcoholics/addicts who finish treatment will often relapse when they re-enter society.
- They will almost ALWAYS relapse if they undergo quick detox and re-enter society.
- But: their withdrawal is gone.
- SO: why do they relapse?????



## BUT:

- "This isn't a disease. This is just brain damage".


## Do people have different pleasure centers BEFORE they use drugs?

- Volunteers (who weren't using drugs) were given brain scans.
- They were then given IV methylphenidate (Ritalin).
- They were asked if they enjoyed the "High" (or not).
- FINDINGS: volunteers who "enjoyed" injecting stimulants had lower Dopamine BEFORE they used drugs!

## Treatment: What Are We Looking For?

- Harm Reduction
- Abstinence
- Recovery



## Harm Reduction

- Heroin addicts in Belgium are given Heroin
- Heroin addicts in Canada are given Dilaudid
- Methadone clinic patients are allowed to use Xanax and Norco
- Aim is to avoid the harmful effects of the drug (heroin) on patient and **society**
- Outcomes are HIV, HCV, crime, mortality, incarceration.
- Treatment can be med or med + psychosocial treatment.

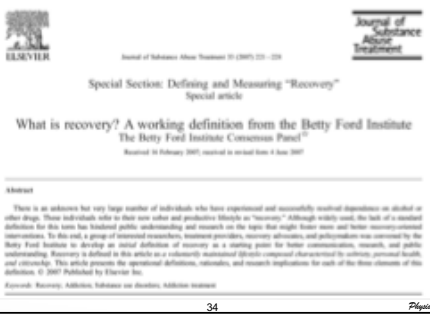


## Abstinence

- = absence of the drug
- Often measured by drug screens, etc
- Can apply to either ALL drugs or just the drug being treated (ie, opioids)
  - I.e., High rate of cocaine use in methadone clinics
- Treatment can be med or med + psychosocial treatment.



## What is Recovery ?


ELSEVIER

Journal of Substance Abuse Treatment

Special Section: Defining and Measuring "Recovery"
Special article

What is recovery? A working definition from the Betty Ford Institute
The Betty Ford Institute Consensus Panel

## A voluntarily maintained lifestyle with:

- Sobriety (abstinence)
- Health (physical, mental and social well-being)
- Citizenship (giving back = spirituality)
- Quality of Life?
- http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3188817/

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## How are these Studies done?

- Anecdotal: rare events become common (Thalidomide)
- Observational: compare risk (smoking) and disease (lung cancer)
- Experimental: do a treatment (fluoride) and see the outcome (decreased cavities)
- Randomized: two or more groups, based on statistics
- Controlled: non-treatment group
- Blinded: don't know which treatment you're giving

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## What is the Gold Standard of Research?

- Level I: randomized, controlled experimental trial
- Level IIA: level I without randomization or other
- Level IIB: population studies: don't control the research (case-control and cohort)
- Level IIC: no control group
- Level III: opinions of respected experts (Cochrane and other hot air)

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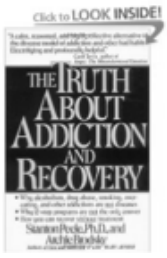
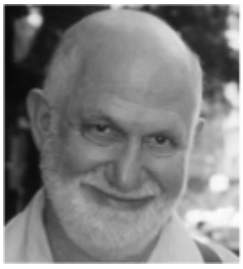
## Level III: Cochrane Database

Physiology of Addiction

## Addiction: Do We Need to Be Here?

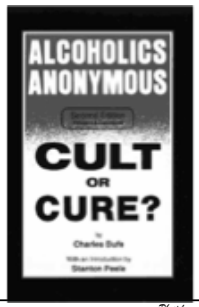


## Is addiction a myth?

http://www.peele.net/

- Most people who have a problem with alcohol or drugs will stop on their own
- The majority of people who stop do so without treatment. (MAYBE)
- Even many heroin "addicts" will "quit" and resume normal lives.

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## Is ~~addiction~~ cancer a myth?

- Only about 1 out of 100 women will get ovarian cancer.
- Many women have ovarian tumors during their lifetime; almost all of them are benign.
- Many of these patients have surgery, only to find out that they do not have cancer.
- Even when diagnosed, the complete cure rate for ovarian cancer is low.
- Thus, ovarian cancer is a fraud created by the medical establishment.

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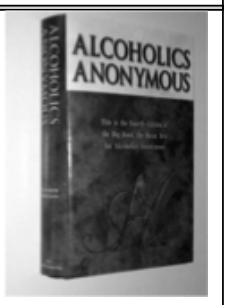
## **How** Do You Treat Addiction?

- Voluntary/Forced Abstinence
- Counseling (CBT)
- Mutual Help Groups (AA/NA)
- Motivational Enhancement
- Medication Assisted Therapy

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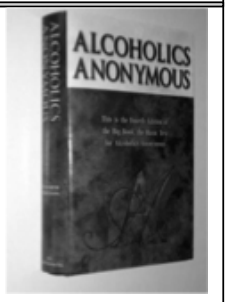


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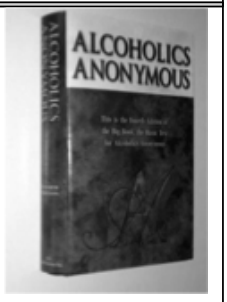


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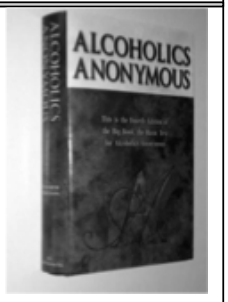
## **Where** Do You Treat Addiction?

- Outpatient (1x/week)
- Intensive outpatient (3x+/week)
- Residential treatment (> 30 days)
- Therapeutic community (halfway house)
- Doc's office (buprenorphine, naltrexone)

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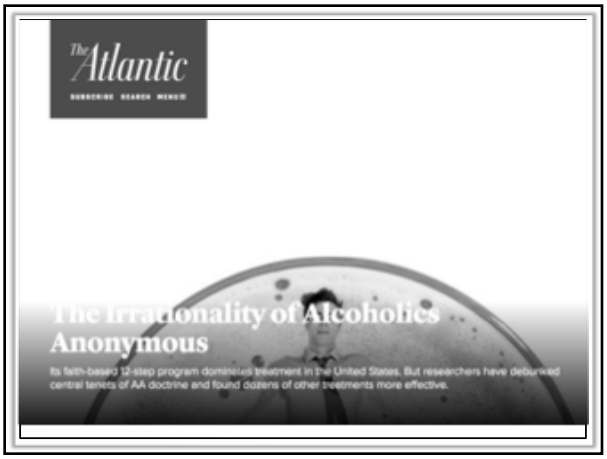
## Treatments for Alcohol Dependence

- Alcoholics Anonymous
- SMART Recovery (Self Management and Recovery Training)
- CBT: Cognitive Behavioral Therapy
- MET: Motivational Enhancement Therapy
- "I Hate AA!!" (and Buy My Book)
- Medications for Alcohol Dependence

## Does AA work? http://addictionmyth.com

- "But in actuality, AA is the opposite: it is a society for people to remain sober temporarily and pretend to address their problems, while keeping open the possibility of relapsing and returning to drink and drugs at any time, which gives them the freedom (or excuse) to do whatever they want".
- "…Something about it seems creepy and manipulative….. In fact, AA is a haven for liars, criminals and sociopaths…AA is a school for scoundrels.




## Cochrane Database?

- AUTHORS' CONCLUSIONS: No experimental studies unequivocally demonstrated the effectiveness of AA or TSF approaches for reducing alcohol dependence or problems.
  - Ferri, 2006.
  - WHY?

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## Cochrane Database?

- AUTHORS' CONCLUSIONS: No experimental studies unequivocally demonstrated the effectiveness of AA or TSF approaches for reducing alcohol dependence or problems.
  - Ferri, 2006.
  - WHY? Not LEVEL 1 research (double blinded, randomized, controlled study)

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## Treatments for Alcohol Dependence

- Project MATCH: compared CBT, MET and TSF (AA) in a randomized trial.
- Tried to "match" patient's personalities with treatments.
- NO CONTROL GROUP ; no medications

## Treatments for Alcohol Dependence

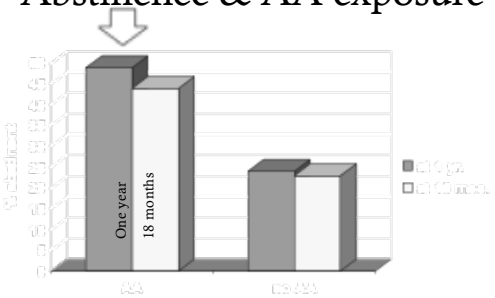
- Patients who were "angry" did better with MET.
- Otherwise, AA was similar or superior to other groups.
- Confirmed at 10 years after that study!
- Pagano et al. The 10 Year Course of AA Participation and Long Term Outcomes: A follow up Study of outpatient Subjects in Project MATCH. Subst Abus 2013 Jan; 34(1): 51-59.

# AA Effectiveness – Faith Meets Science

**Lee Ann Kaskutas, Dr.P.H.**
**Alcohol Research Group, Emeryville, CA**
**School of Public Health, UC Berkeley**

Presented at the Annual Meeting and Conference of the Federation of State Physician Health Programs (FSPHP)
April 25, 2012
Fort Worth, TX

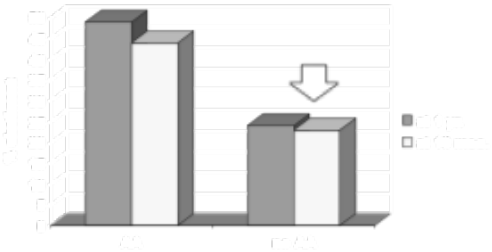
## Abstinence & AA exposure




male VA inpatients
1 yr *n* = 3018; 18 mo *n* = 91

Ouimette et al., *J Stud Alcohol* 1998
Thurstin et al., *Int J Addict* 1987

## Abstinence & AA exposure



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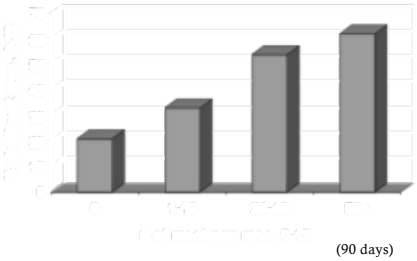
## Abstinence & meeting amount

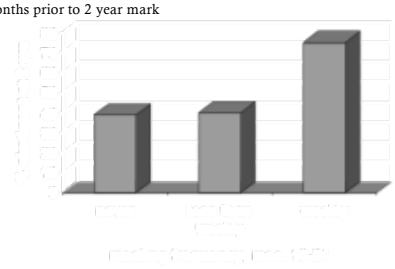



Male VA residential patients
n = 2376

Moos et al., *J Clin Psychol* 2001

## Abstinence & meeting frequency

6 months prior to 2 year mark

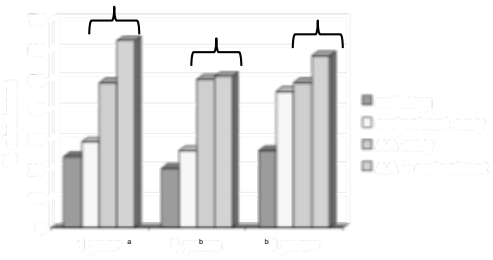


LA Target Cities, outpatients
n = 262

Fiorentine, *Am J Drug Alcohol Ab* 1999

## Consistency across samples & time

= AA involvement



[a]Male VA inpatients
n = 3018

[b]Previously untx prob drnkrs
n = 466

[a] Ouimette et al., *J Stud Alcohol* 1998
[b] Timko et al., *J Stud Alcohol* 2000

# Medications for alcohol dependence

## Alcohol Metabolism and Disulfiram (Antabuse)

Ethanol--→Acetaldehyde--→ C02

(1) (2)

1: **alcohol dehydrogenase**:
- M>W; younger>older; protective
- metabolizes 1 drink/hour

2: **aldehyde dehydrogenase:**
- Detoxifies acetaldehyde
- Inhibited by Disulfiram (Antabuse)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## Naltrexone (Rivea®)

- Blocks the opiate (μ) receptor
- Prevents you from using opiates
- Also blocks your endogenous (own) opiates: endorphins
- Opiate receptors responsible for alcohol craving
- Has been shown to reduce drinking when taken daily (but only in research studies)

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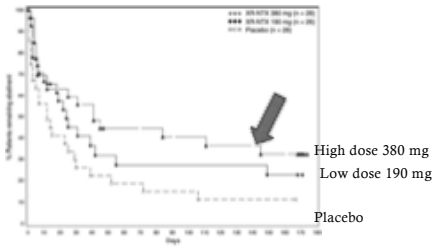
## Injectable naltrexone (Vivitrol): O'Malley 2007

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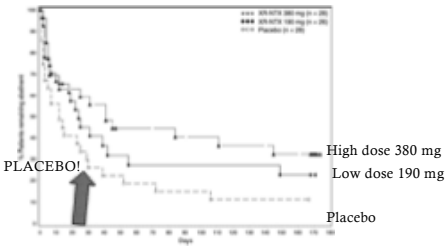
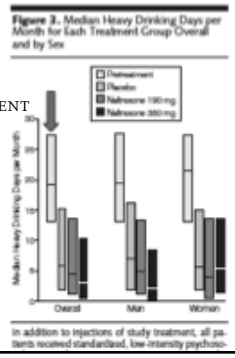



## PLACEBO EFFECT!!!



## Acamprosate (Campral®)

- Thought that it worked through GABA
- Not known how it works-NMDA/Glutamate
- May decrease "number of drinking days"
- May reduce craving
- Often being used by patients being admitted to detox units.

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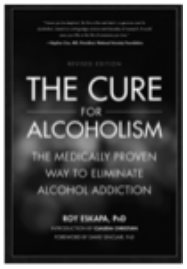
## The COMBINE trial

- Combinations of:
  - CBT
  - Placebo medication
  - Naltrexone (daily)
  - Acamprosate

## COMBINE Trial: take a pill!!!!

- Patients receiving naltrexone or CBT + placebo had higher percent days abstinent (80.6 and 79.2) compared to the other groups; the combination of naltrexone and CBI was not more effective (77.1) than either intervention alone.
- Acamprosate, alone or combined with naltrexone or CBI, was not more effective than placebo.

## The Sinclair Method:
"pharmacologic extinction"



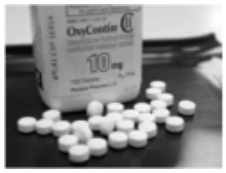

## The Sinclair Method:
"pharmacologic extinction"

- Taking/injecting naltrexone BEFORE you stop drinking leads to craving→relapse.
- BUT: Taking oral naltrexone **one hour** before drinking leads to extinction of reward (pleasure)
- Other activities are not affected
- Claims better response than with abstinence based tx.
- Ms. Glaser used it in her article for her risky drinking behavior
- Only three docs in Michigan offer it on the Sinclair website

## Baclofen

- Used for muscle spasticity in spinal cord injuries
- Acts similar to alcohol and benzodiazepines, but binds to its own site in the brain.
- Withdrawal cannot be treated; withdrawal seizures may occur.
- Has been used at high doses for alcohol dependence.
- Reports of decrease in daily drinking with high dose.

## Treatment of Opioid Dependence




## How Do You Treat Addiction?

~~Medication Assisted Therapy: opiates~~

- **Agonists**
  - Methadone
  - Buprenorphine +/- Naloxone
- **Antagonists** (NOT FOR PREGNANCY)
  - Naltrexone
    - Rivea (tablets)
    - Vivitrol (injections)

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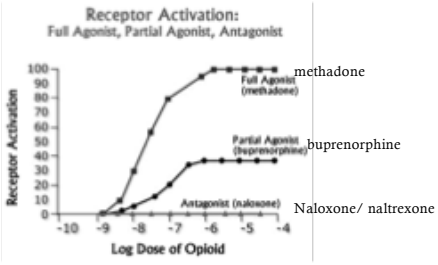
## Agonist, partial agonist, antagonist….




## Medication Assisted Therapy (MAT): ~~Agonists vs. Antagonists~~

| Drug | Type | Analogy |
|---|---|---|
| Methadone | Full Agonist | High Octane |
| Buprenorphine* | Partial Agonist | Low Octane |
| Naltrexone | Antagonist | Water |

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## Medication Assisted Therapy (MAT): ~~Methadone~~


## Medication Assisted Therapy (MAT buprenorphine


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## Medication Assisted Therapy (M.A.T.): naltrexone

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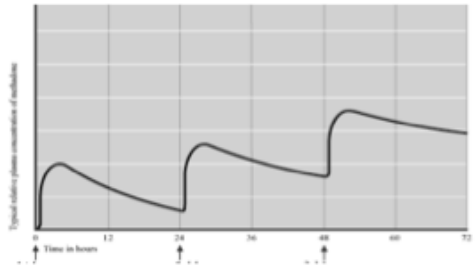
## Benefits of Methadone Maintenance Therapy (MMT)

http://www.jstor.org/stable/2137033?origin=JSTOR-pdf

- Reduction in death rates
- Reduction in IVDU
- Reduction in # of crime days
- Reduced HIV seroconversion / HCV conversion
- Reduction to relapse to IVDU
- Improvement in health, employment & functional level Am J Drug Alcohol Abuse. 2007;33(5):631-42

## CAREFUL!

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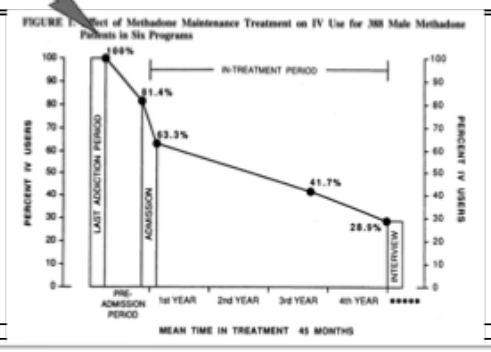
## Ball 1988: reduction in IVDU

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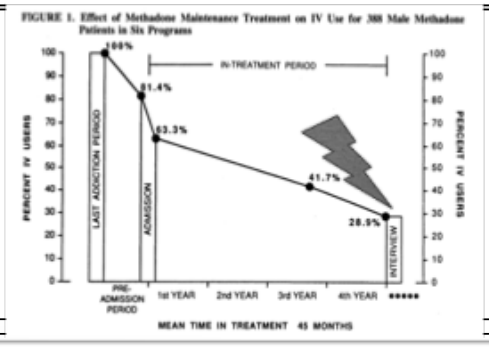
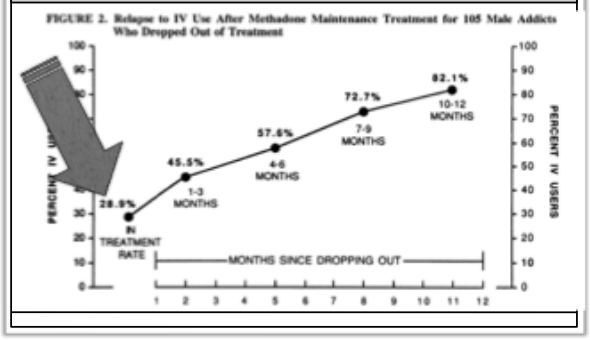



## Ball 1988: resumption of IVDU!



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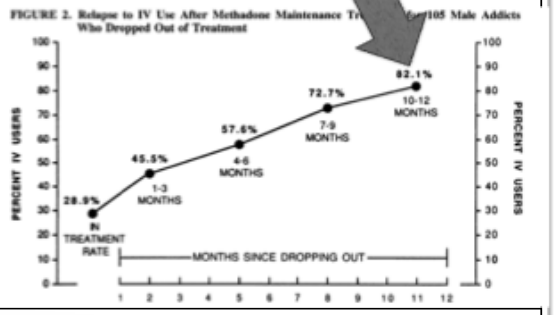
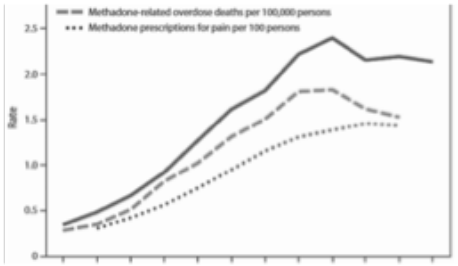



## Quality of Life with Methadone Maintenance Therapy (MMT): ????

- High mortality (>20%) and continued drug use in parents who attended MMT. J Addict Dis 2011 Jan; 30(1): 17-26
- Patients in Taiwan had improvement in QOL with MMT.
  - Chou et al. BMC Psychiatry 2013, 13: 190
- MMT patients get "better faster" than buprenorphine patients Am J Drug Alc Abuse 2007; 33(5) 631-642.
- MMT patients regain cognitive function
  - PLOS ONE 2014: 9; (40) e 94589

## Methadone PILLS: for pain only
## 2% of prescriptions
## 30% of deaths




## Buprenorphine

- A partial opiate agonist
  - Less effective for withdrawal
  - Less analgesic effect
  - Less respiratory depression
  - 4000+ PER YEAR WITH METHADONE
  - Few OD deaths with buprenorphine
  - Relative Risk of death: >4
    - Drug Alcohol Dep 2009: 104, 73-77
    - http://buprenorphine.samhsa.gov/UPDATED_Bup_Lit_Review_Feb_07_rev.pdf

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## Buprenorphine long-term follow up: Fiellin, 2008

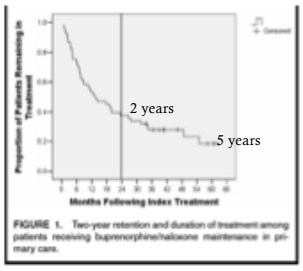


FIGURE 1. Two-year retention and duration of treatment among patients receiving buprenorphine/naloxone maintenance in primary care.

## Buprenorphine long-term follow up: Fiellin, 2008

- Of those who remained in treatment:
- 91% were negative for opioids
- 96% were negative for cocaine!
- Satisfaction score: "86%"

## Methadone vs. Bupx: Cochrane database

- "Buprenorphine is an effective treatment for heroin use in a maintenance therapy approach compared with placebo. **However, methadone maintenance treatment at high dose is associated with higher rates of retention in treatment and better suppression of heroin than buprenorphine maintenance treatment**."
- Methadone, however, has been found to be associated with **more frequent overdose and death** (4.8 vs 0.9/1000 patient-years) (Bell, 2009)

## What about pregnancy?

## Treatment Improvement Protocol (TIP)#40: SAMHSA

- Methadone is currently the standard of care in the United States for the treatment of heroin addiction in pregnant women.
- If such specialized services are refused by a patient or are unavailable in the community, maintenance treatment with the buprenorphine monotherapy formulation may be considered as an alternative.

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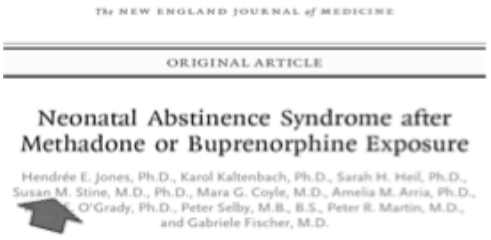
## MOTHER STUDY


The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Neonatal Abstinence Syndrome after Methadone or Buprenorphine Exposure

Hendrée E. Jones, Ph.D., Karol Kaltenbach, Ph.D., Sarah H. Heil, Ph.D., Susan M. Stine, M.D., Ph.D., Mara G. Coyle, M.D., Amelia M. Arria, Ph.D., [illegible] O'Grady, Ph.D., Peter Selby, M.B., B.S., Peter R. Martin, M.D., and Gabriele Fischer, M.D.

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## Methadone vs. Buprenorphine: the MOTHER study

MS = morphine; NAS = neontal abstinence syndrome)

| Measure | Methadone | Buprenorphine |
|---|---|---|
| Amount of MS required | 10.4 | 1.1 |
| # of days in hospital | 17.5 | 10 |
| Duration of treatment for NAS | 9.9 | 4.1 |
| Birthweight | 2878 | 3093 |
| % preterm delivery | 19 | 7* |
| Positive drug screen at delivery | 15% | 9%* |
| Dropped out (why?) | 18% | 33 |

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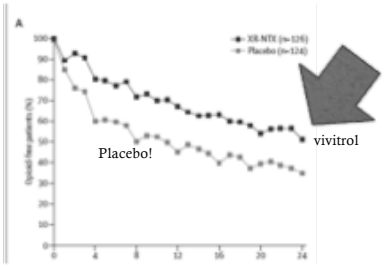
## Vivitrol® (naltrexone) for opioid dependence

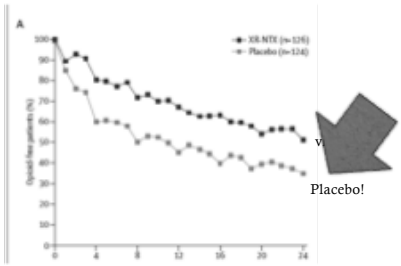
Krupitsky et al, Lancet 2011; 377: 1506-13
Comer et al, Arch Gen Psychiatry 2006; 63: 210-218

## Addiction Tx in Russia

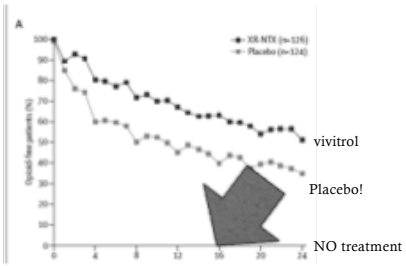
## Vivitrol: abstinence




## Placebo group: abstinence




## No treatment: abstinence



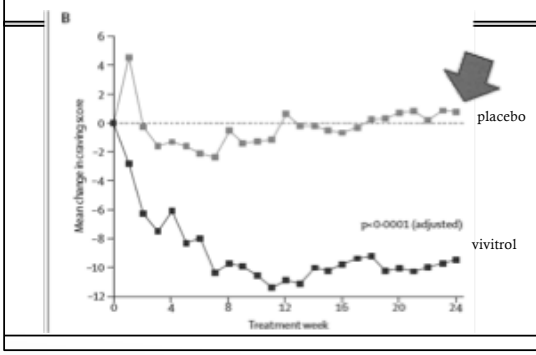

## Why the Handcuffs?

## CRAVING

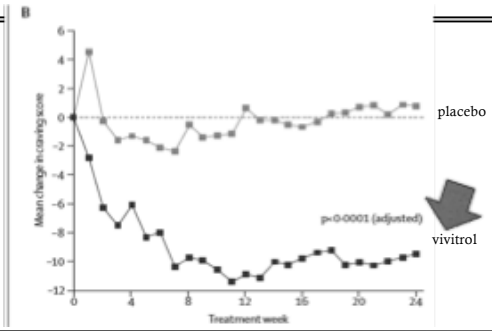
## Addiction is Not Withdrawal. Addiction Is:

- Craving
- Compulsive Use
- Loss of Control
- Use Despite Consequences

## Placebo: craving




## Vivitrol: craving




## Doc, when can I get off this sh*t (medication)?

## Detoxing During Pregnancy? Luty 2003

- 101 women underwent detox during pregnancy
- 40 successfully detoxed.
- No adverse fetal effects documented

- Luty et al, J Sub Abuse Treat 24 (2003); 363 - 367

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## Detoxing During Pregnancy? Luty 2003

- 101 women underwent detox during pregnancy
- 40 successfully detoxed.
- No adverse fetal effects documented
- But: only **1/101** patients documented to be abstinent at time of delivery!

- Luty et al, J Sub Abuse Treat 24 (2003); 363 - 367

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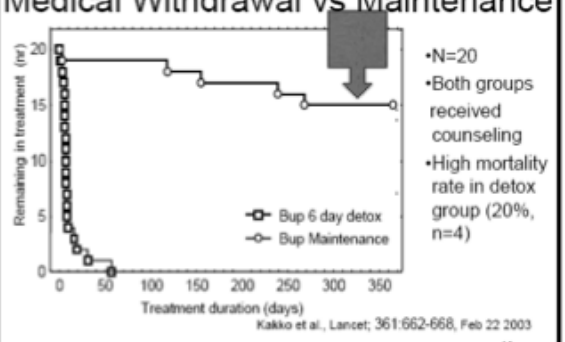
## Detox from heroin using buprenorphine: Kakko

- 40 heroin addicts in Sweden were recruited.
- All were given buprenorphine and offered counseling.
- 20 were allowed to taper off.
- 20 remained on buprenorphine and continued counseling..
- A year later…..

## Medical Withdrawal vs Maintenance




- N=20
- Both groups received counseling
- High mortality rate in detox group (20%, n=4)

Kakko et al., Lancet; 361:662-668, Feb 22 2003

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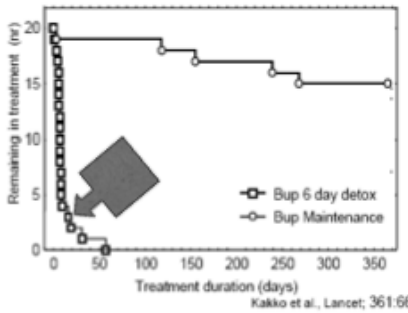
## Medical Withdrawal vs Maintenance




- N=20
- Both groups received counseling
- High mortality rate in detox group (20%, n=4)

Kakko et al., Lancet; 361:662-668, Feb 22 2003

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## Can you taper off buprenorphine without relapse?

ONLINE FIRST

**Adjunctive Counseling During Brief and Extended Buprenorphine-Naloxone Treatment for Prescription Opioid Dependence**

*A 2-Phase Randomized Controlled Trial*

Roger D. Weiss, MD; Jennifer Sharpe Potter, PhD; David A. Fiellin, MD; Marilyn Byrne, MSW; Hilary S. Connery, MD, PhD; William Dickinson, DO; John Gardin, PhD; Margaret L. Griffin, PhD; Marc N. Gourevitch, MD, MPH; Deborah L. Haller, PhD; Albert L. Hasson, MSW; Zhen Huang, MS; Petros Jacobs, MD; Andrzej S. Kosinski, PhD; Robert Lindblad, MD; Eleuvo P. McCance-Katz, MD; Scott E. Provost, MSW; Jeffrey Selzer, MD; Eugene C. Somoza, MD, PhD; Susan C. Stone, PharmD; Walter Ling, MD

## Phase 1


## Outcome Phase 1

- Only 43 of 653 patients remained abstinent (6.6%)
- All others relapsed!!
- On to Phase 2!

## Phase 2


## Outcomes Phase 2

- 49% stayed abstinent when they went back on buprenorphine!
- But when they were taken off buprenorphine again, only 8.6% remained abstinent!

## Conclusions

- Buprenorphine was effective (≅ 50%) at treating prescription pill addiction.
- Chronic pain was not a barrier to success.
- Less than 10% were able to remain abstinent during 2 attempts to taper off buprenorphine.
- Medication alone was as good as Medication plus Opioid Dependence Counseling.

## No Mo MAT???

Friedmann and Schwartz *Addiction Science & Clinical Practice* 2012, **7**:10
http://www.ascpjournal.org/content/7/1/10

COMMENTARY

Just call it "treatment"

Peter D Friedmann[1*] and Robert P Schwartz[2]

## Conclusions: Medication Assisted Therapy

- "MAT" is effective-at decreasing opioid use.
- Stopping MAT will usually result in relapse & increased chance of death.
  - Why would you expect otherwise?
- Buprenorphine and MMT have similar efficacy. Buprenorphine has a superior safety profile.
- Vivitrol® (injectable naltrexone) is effective at reducing opioid use.

## Medication Free Treatment for Opioid Dependence

- Minimal information available
- Psychosocial treatments (not mutual help) have not shown large effects.
- Studies regarding residential treatment have been largely ignored.*
  - *Gossop M. The National Treatment Outcomes Research Study (NTORS) and its influence on addiction treatment policy in the United Kingdom. Addiction 2015 Jul; 110 Suppl 2: 50-3.
- Any Exceptions?

## Safety Sensitive Professions




## Physicians Health Programs (PHP): the Gold Standard

The success rate of PHP is 80+% at 5 to 10 years.
Opioid addicts were as successful as alcoholics.
Medications were not used.

Dupont et al; J Substance Abuse Treatment 36 (2009) 159-171

## PHP

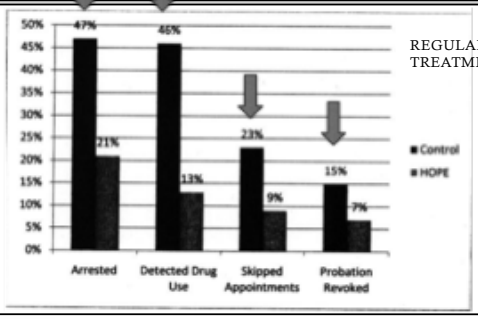
- Physicians, nurses, pharmacists (varies by state)
- Evaluation, treatment (IOP/residential)
- Require mutual help groups: 12 step or SMART
- Monitor ~weekly
- 3 to 5 year contracts
- Similar to pilots and lawyers
- MOST do NOT allow MAT
- Immediate intervention for positive urine drug screens.

## Why do PHPs work?

- "They work because doctors have more to lose".
- "They work because doctors are smarter"
- "They work because doctors can afford treatment".
- "They work because doctors get special treatment"

## Hawaii's HOPE program

http://www.courts.state.hi.us/docs/news_and_reports_docs/State_of_%20the_Art_of_HOPE_Probation.pdf

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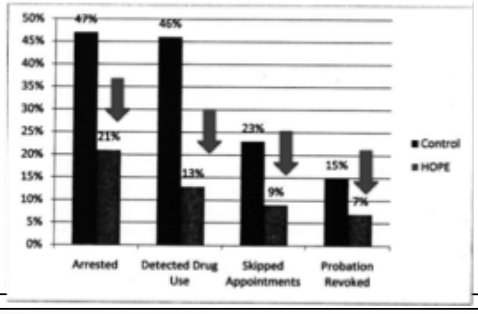

## Swift and Certain (SAC)


## The Opioid Epidemic & Naloxone (Narcan®) Rescue

Developed for Families Against Narcotics
http://www.familiesagainstnarcotics.org/

## Naltrexone vs. Naloxone

| Naltrexone | Naloxone |
|---|---|
| • Oral (Rivea®) or IM (Vivitrol®) | • IV, IM, SC or IN (Narcan®, Evzio®) |
| • Slow onset | • Rapid Onset |
| • Long acting (hours to weeks) | • Short acting (minutes) |
| • Tightest binding to brain | • Less tightly bound |
| • Used for PREVENTION of overdose (FDA) | • Used for TREATMENT of overdose (FDA) |

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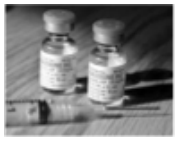
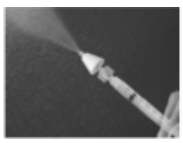
## What Does Narcan NOT Do?

- It will not reverse an overdose from alcohol, sedatives (Benzodiazepines such as Xanax, Valium and Klonopin), muscle relaxants, or stimulants like Cocaine or Amphetamines.
- If there is more than one drug involved (usually Benzodiazepines and Opioids), it may partially revive the patient until EMS arrives.

## Naloxone formulations:



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## Who is at Greatest Risk?

- **Abstinence > 2 weeks**: treatment; jail; relapse.
- **Discontinuing MAT**: methadone; buprenorphine; Vivitrol® (naltrexone). (Volkow 2014: 50% decr in OD deaths with MAT)
- **Mixing opioids with sedatives**: alcohol, benzodiazepines, muscle relaxers
- **FENTANYL**

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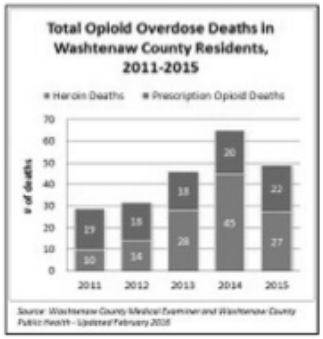
## OD deaths: pills vs. heroin Washtenaw Co.




## Fentanyl on Urine Drug Screen Pregnant Patient

1. Illicit Drugs
   Marijuana Metabolite(THCA)

2. Medications Or Metabolites Detected But Not Listed On Requisition
   Codeine
   Fentanyl
   Morphine
   Norfentanyl
   Hydromorphone

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## How To Do A Naloxone Rescue

- Make Sure They are Not Breathing
- (always) Call 911
- Do Rescue Breaths (not compressions)
- Give Naloxone
- Resume Rescue Breaths
- Repeat Naloxone every 3 mins

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## Confirm OD

- Breathing: gurgling/snoring
- Pale, clammy skin
- Lim body
- Blue lips or fingernails
- Cannot wake with shout
- May have a pulse!

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## Sternal/Nasal RUB

- Sternal Rub
- Under the nose
- Trapezius Squeeze
- Fingernail Squeeze
- Changing Level of Consciousness (LOC)-treat as OD

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## Call 911

- The most critical step
- The most easily FORGOTTEN step
- Leave phone on speaker
- Lay next to you.

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## Start Rescue Breathing (Not CPR)

- Flat on Back
- Tilt the head back
- If no mask-pinch nose
- Give 2 breaths, one second each.
- Chest wall should move 1 inch
- Abdomen should NOT move

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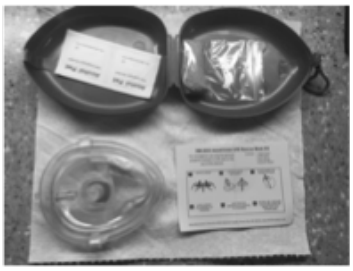
## Rescue Breathing Mask



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## Rescue Breathing Mask

Narrow end up

Fit firmly on face

Press down when breathing

One way valve protects you

One second x 2

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## Naloxone formulations:

## After EMS arrives…..

- Watch out for needles!
- Clean up all blood!
- You now have a "window of opportunity"…..

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## Window of Opportunity


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## WHY BOTHER TO TREAT ADDICTION?

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## Why Treat Addiction?

**Drug Dependence, a Chronic Medical Illness: Implications for Treatment, Insurance, and Outcomes Evaluation**

A. Thomas McLellan; David C. Lewis; Charles P. O'Brien; et al.

*JAMA*. 2000;284(13):1689-1695 (doi:10.1001/jama.284.13.1689)

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## Drug Dependence, a Chronic Medical Illness: McLellan 2000

- Only about 40% of patients will be abstinent at one year after treatment.
- Failure rates may be due to lack of aftercare, often due to insurance difficulties
- Low economic status, psych comorbidity and lack of family/social supports also predict relapse.
- Relapse is often viewed as "inevitable" and drug dependence as "hopeless"*

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## Drug Dependence, a Chronic Medical Illness: McLellan 2000

- ONLY 60% OF TYPE I DIABETICS ADHERE TO MEDICATION SCHEDULE
- LESS THAN 40% OF ASTHMATICS ADHERE TO TREATMENT REGIMEN
- LESS THAN 40% OF HYPERTENSIVES ADHERE TO THEIR TREATMENT REGIMEN
- DRUG DEPENDENCE =40 TO 60% ADHERENCE

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## Addiction: a chronic illness

- If you were to stop taking your insulin, and you wound up in a coma in the ICU, your doctor would say:
- "you need to go back on insulin! You could have died!"
- If you were to stop your Suboxone/methadone/12 step treatment, and wind up in the ICU, your doctor would say:
- "You're an addict. You're hopeless!!!!!"

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## Chronic, Treatable but Incurable Diseases

- Obesity
- Hypertension
- Diabetes
- Asthma
- Addiction

200 Physiology of Addiction

## Contact info: Carl Christensen

- ccmdphd@mac.com
- Voice mail: 734 448 0226
- Christensen Recovery Services: www.christensenrecovery.com

202 Physiology of Addiction