


Random thoughts on Opioid Use Disorder and methamphetamine

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Effect of Opioid vs Nonopioid Medications on Pain-related Function

- Chronic back pain or hip or knee osteoarthritis pain
- Moderate to severe pain
- 244 randomized patients
- Opioids vs. acetaminophen or NSAID
- Opioids were not superior to non-opioids over 12 mos. JAMA 2018;319(9):872-882.



Non-cancer chronic opioid pain management

- ▶ “If you don’t know how to land don’t take off!”
- 



The US Burden of Disease Collaborators 1990-2016

- OUDs moved from 11th to 7th in disability adjusted life years
- OUDs moved from 52nd to 15th in years of life lost
- JAMA.2018;319(14):1444-1472.




Synthetic Opioids Implicated in Nearly Half of Opioid OD Deaths in US

- OD deaths nationwide 2010-2016
- Of 42,000 in 2016, 46% involved synthetic opioids
- 72,000 deaths 2017 ? 36,000 related to synthetics
- In 2010 only 14% involved synthetics
- 80% of deaths in 2016 involved alcohol or another drug
- NEED FOR MULTIPLE DOSES OF NALOXONE!



Naloxone rescue in MAT

- 244 patients on MAT
- Provided naloxone kits
- At 3 mos, 31 (12.7%) reported using the kits to reverse 38 overdoses
- Medpage Today, April 15, 2018
- Don't forget CPR and AED training



Effects of Enhanced Services for Patients on Methadone Maintenance

- Wrap around services 70%
- Standard counseling 55%
- Meds only 30%

➤ McClellan et al, JAMA 1993



Programs prescribing buprenorphine

- Med management: maintenance but no ongoing psychosocial programming.
- Limited psychosocial: provides case management and periodic 1:1 counseling.
- Recovery-oriented: full range of individual, group and family counseling, 12 step orientation, and case management.



Urine Tox + opioids

22 states, N of 20,972


- | Med mgmt only | Ltd PS | Rec oriented |
|---------------|--------|--------------|
| ➤ 5227 total | 3390 | 11,343 |
| ➤ 3047 + | 1150 | 3457 |
| ➤ 58%+ | 46%+ | 31%+ |
- Dominion Diagnostics
 - Marc Galanter, MD ASAM, San Diego, 2018



MAT and Opioid Mortality


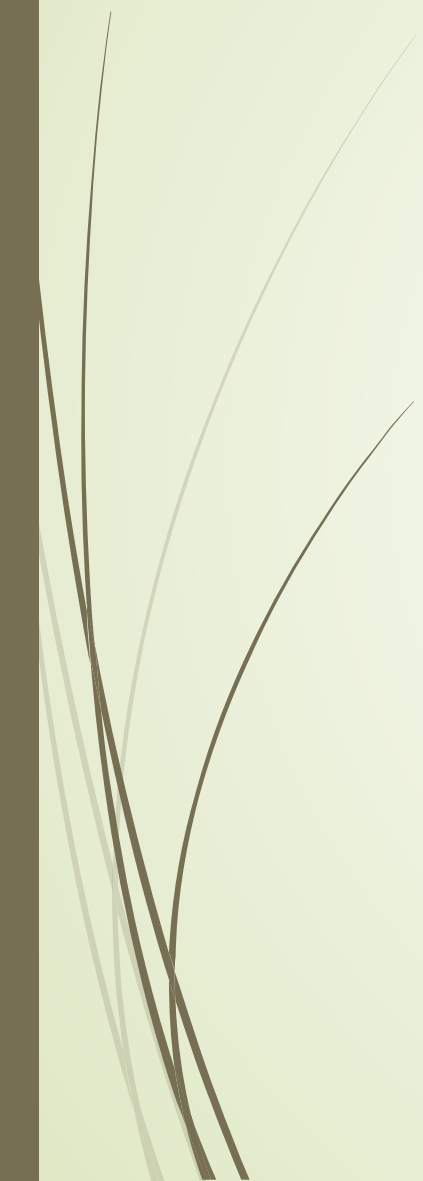
17568 OD survivors to MAT


- **Decrease in opioid related mortality**
 - *59% methadone*
 - *38% buprenorphine*
 - *Both meds associated with a decrease in all cause mortality*
- **No association found between Naltrexone and mortality!**
- **Marc Larochelle, Annals of Internal Med, Aug 2018**



Opioid Detox During Pregnancy Remains Inadvisable

- Data from 2000 women
- Significant risk of relapse 30-60%
- Imperative to provide information on the benefits of opioid agonist pharmacotherapy which is widely recommended over medically supervised withdrawal
- Advocate for universal availability of MAT for pregnant women

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- Terplan M et al. Obstet Gynecol 2018
 - Obstet Gynecol 2017; 130:488



Systems Failures, Not Patient Failures

- ▶ Patient admitted to the hospital with heart attack...
 - ▶ Told it's her fault b/c of diet, stress, and tobacco use
 - ▶ Advised to call a list of cardiologists/cath labs
 - ▶ Told she can't get ASA, or cholesterol medication until she sees a nutritionist first
 - ▶ Sent home with a stern reminder to not have another MI




Continued

- ▶ Patient admitted to the hospital with endocarditis
- ▶ Told it's her fault b/c of SUD
- ▶ Advised to call a list of treatment programs
- ▶ Told she can't get addiction meds until she sees a counselor first
- ▶ Sent home with a stern reminder not to use drugs



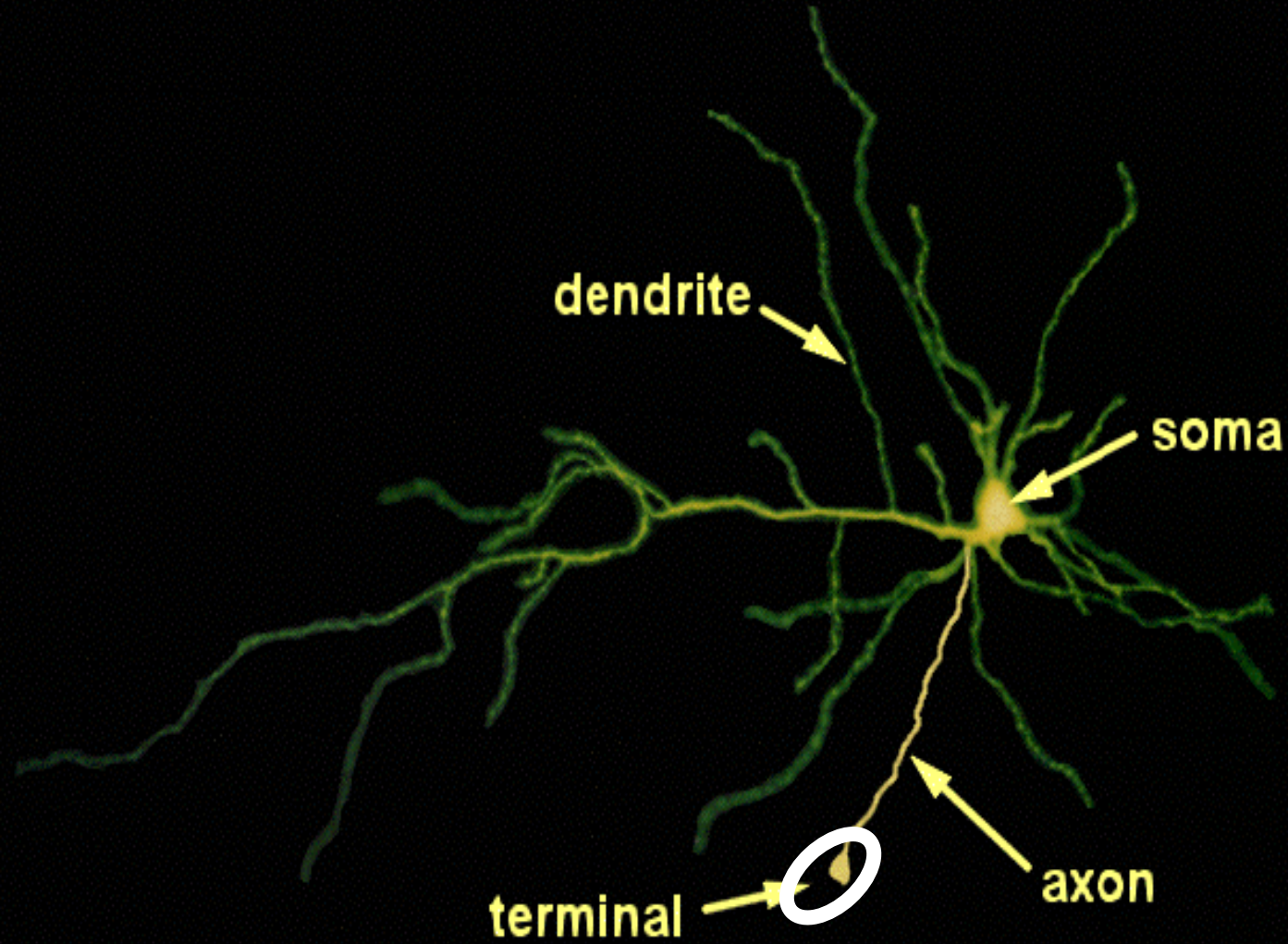
A Patient

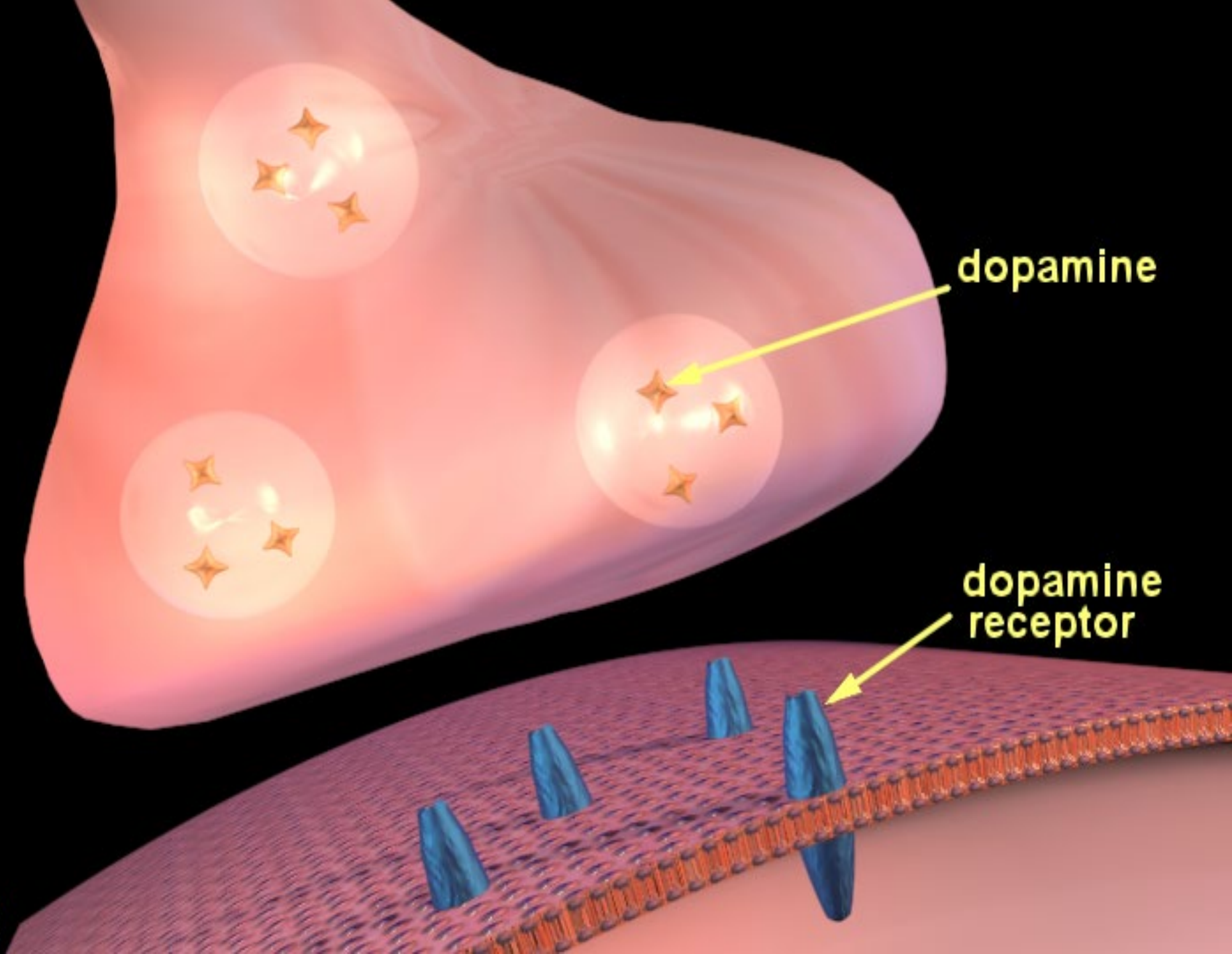
- Don't hate the Addict
- Hate the disease
- Don't hate the person
- Hate the behavior
- If it is hard to watch, imagine how hard it is to be living it
- MGH Bridges Program, ASAM 4/2018



Patient-Centered Opioid Addiction Treatment (P-COAT)

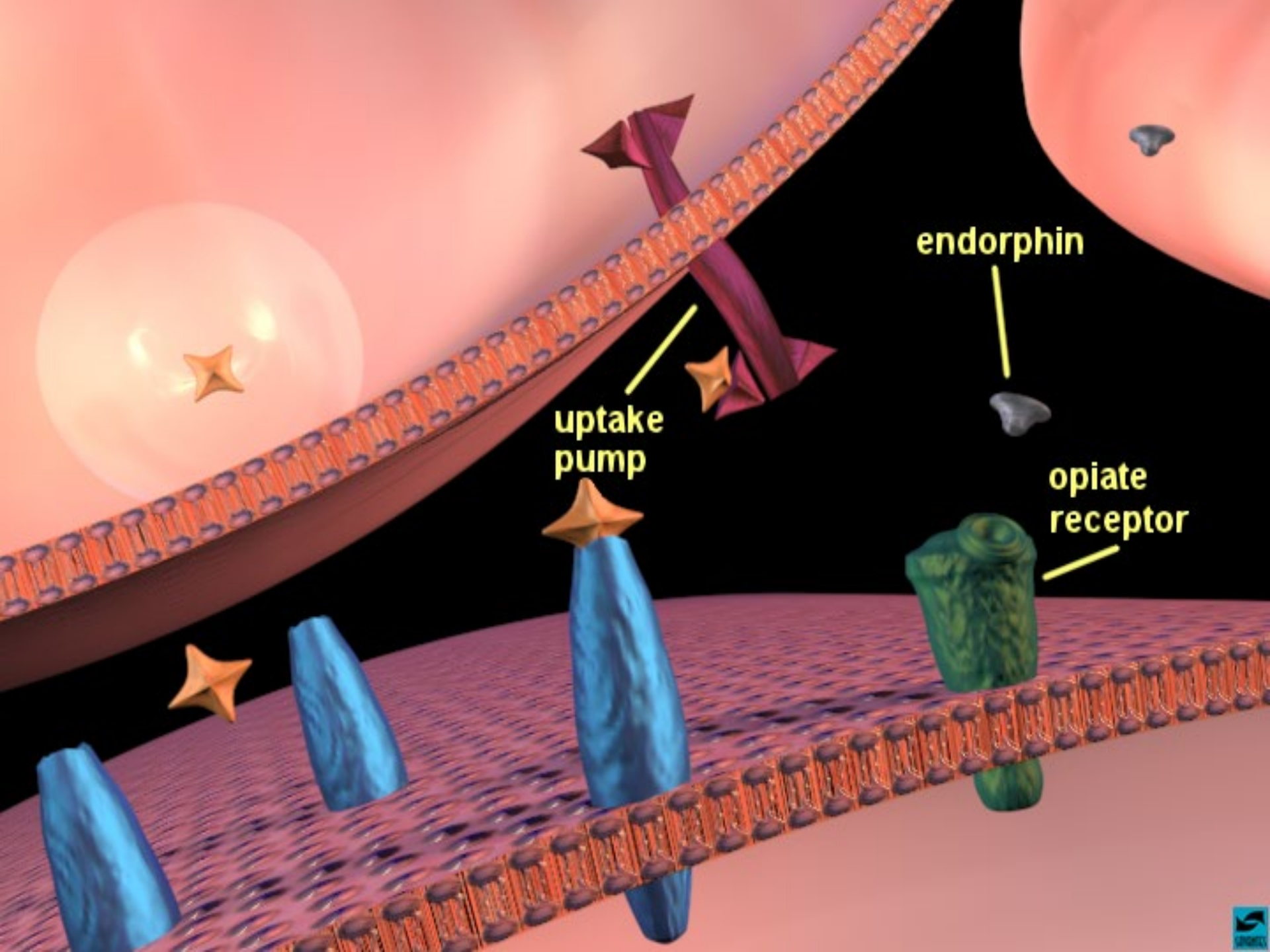
- Alternative Payment Model (APM)
- Collaboration of ASAM and AMA





dopamine

dopamine
receptor



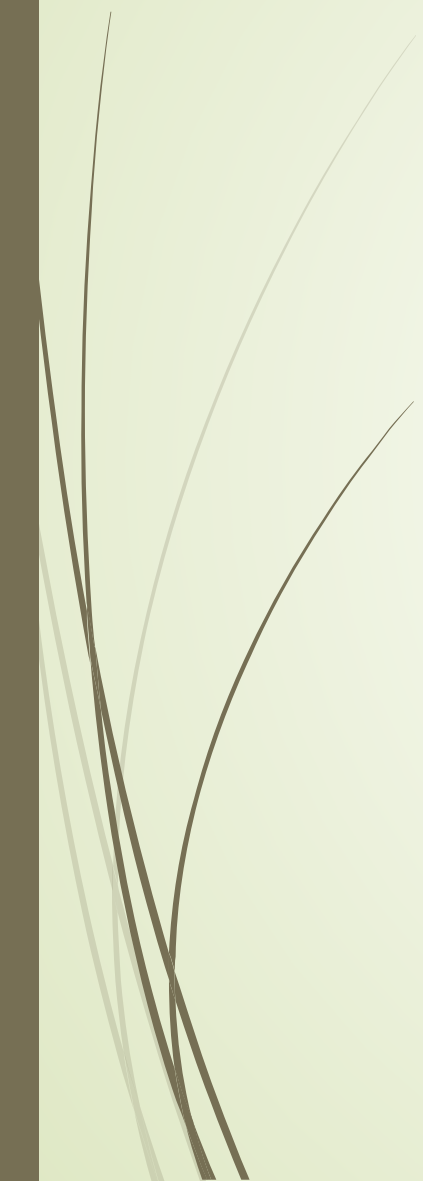
endorphin

uptake pump

opiate receptor

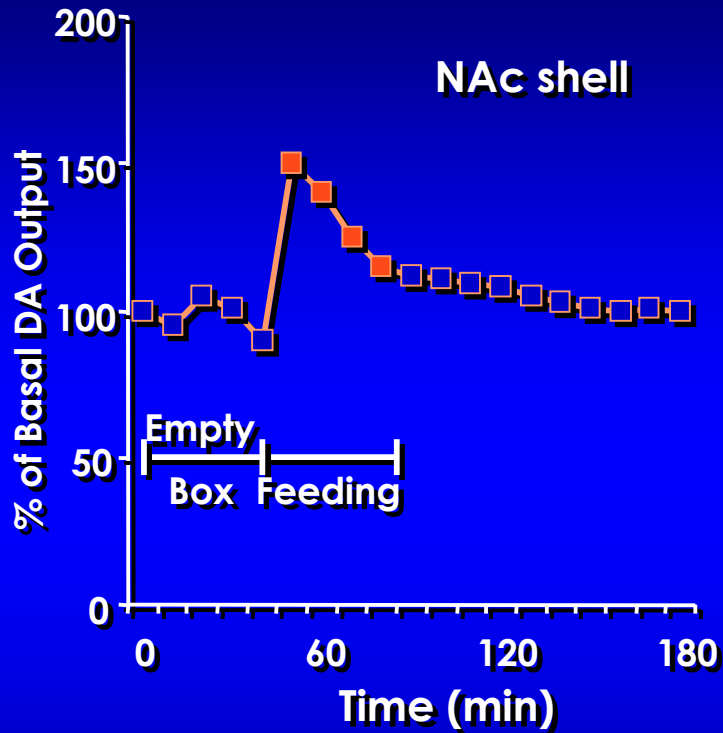


Transporters

- Brain's chemical recyclers
 - Located on the neuron that released the neurotransmitter and they bring them back into the cell that released them.
 - Shuts off the signal between neurons.
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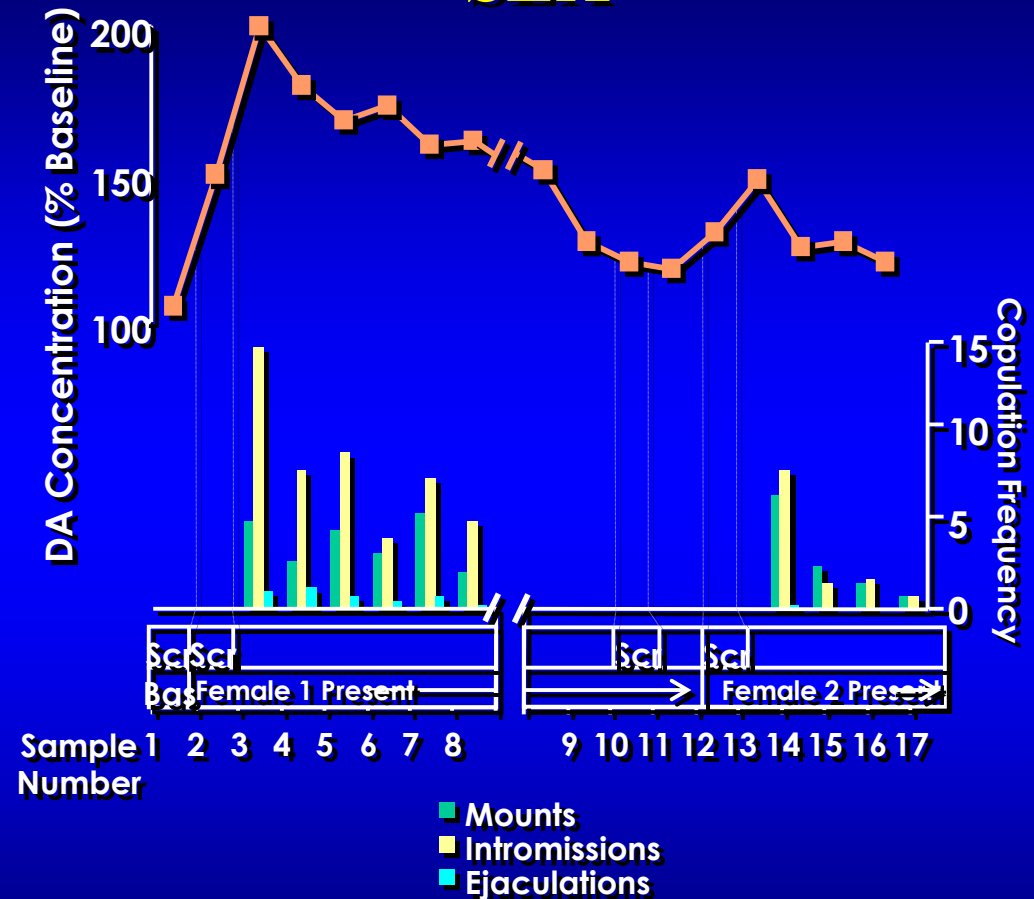
Natural Rewards Elevate Dopamine Levels

FOOD



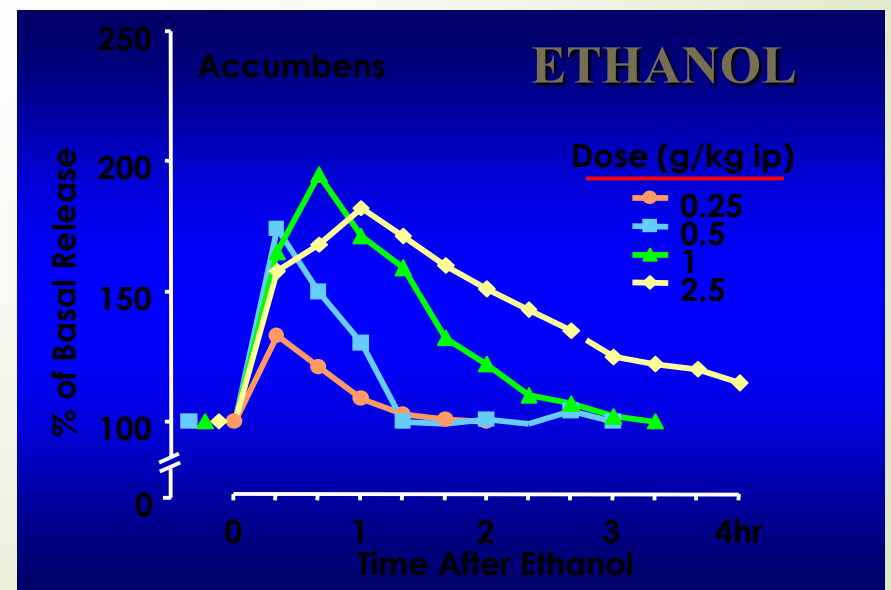
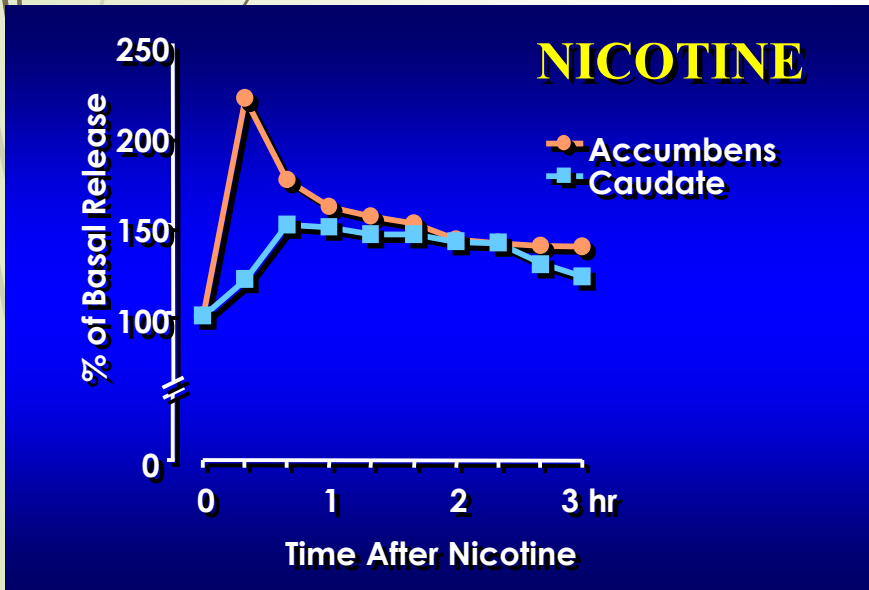
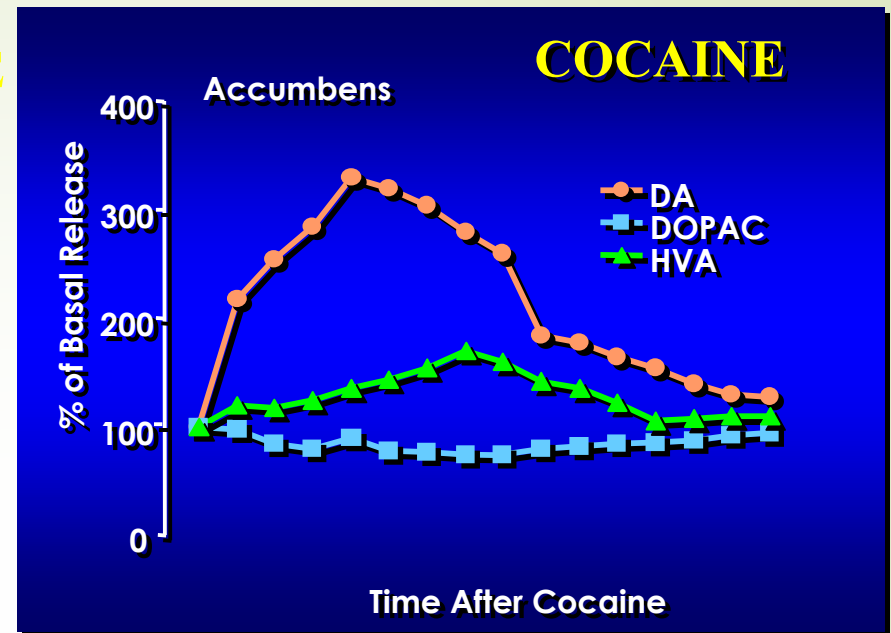
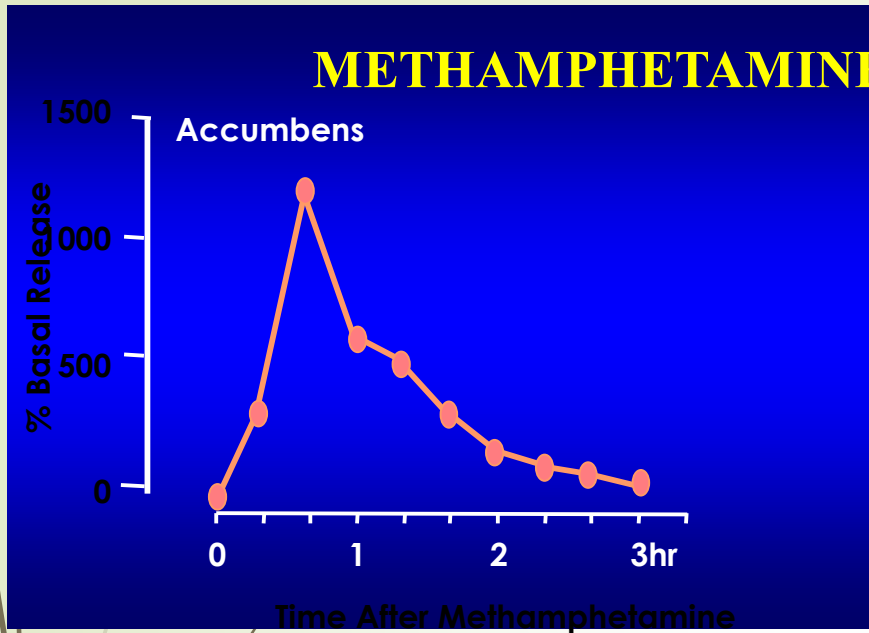
Source: Di Chiara et al.

SEX

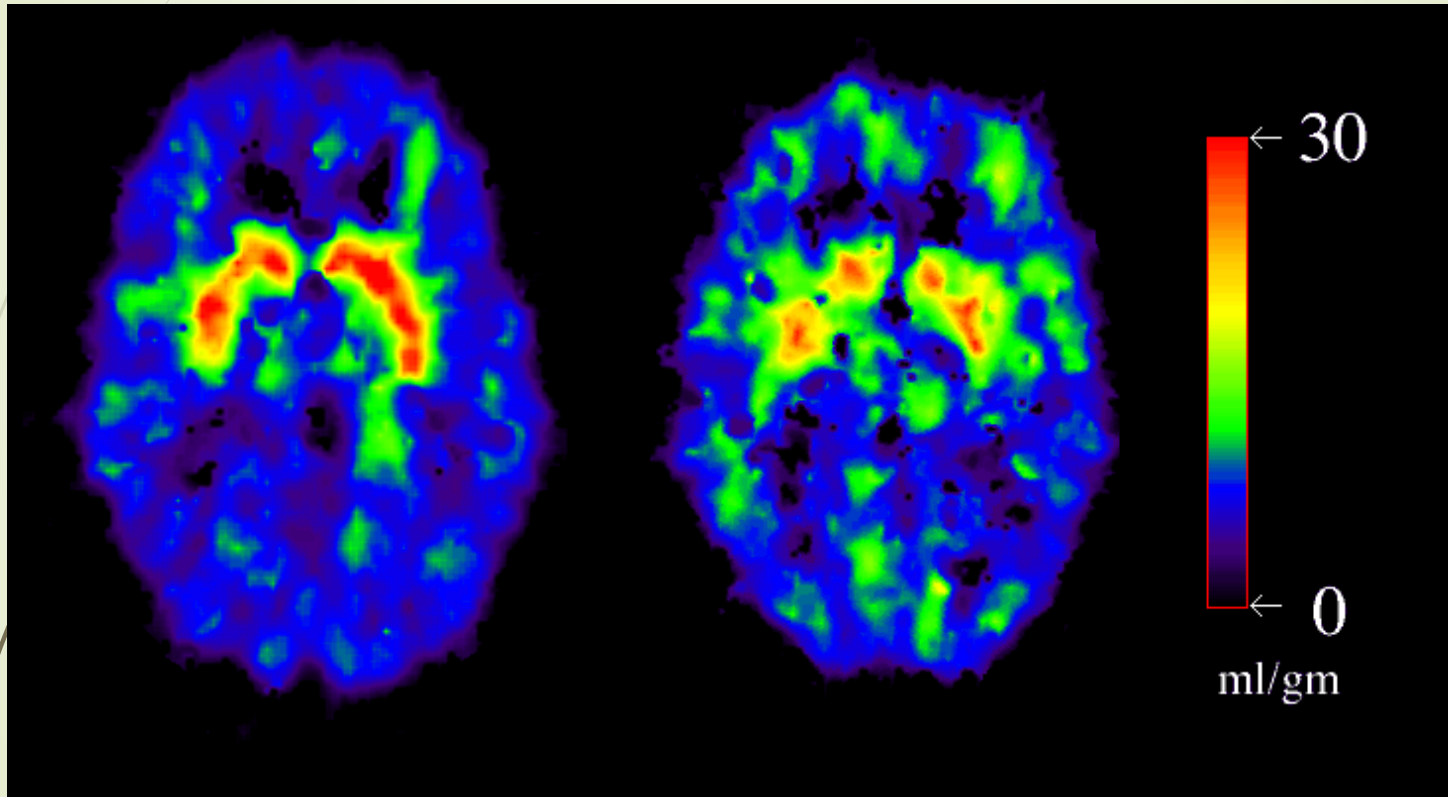


Source: Fiorino and Phillips

Effects of Drugs on Dopamine Release



Dopamine Transporter Loss After Heavy Methamphetamine Use

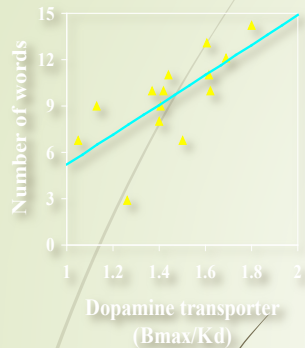


Comparison Subject

METH Abuser

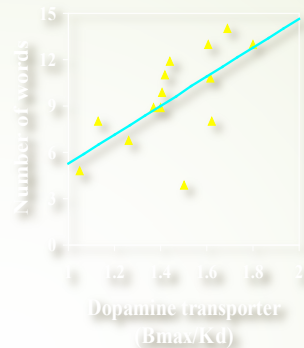
Dependence of Verbal Memory on Striatal DAT

Interference recall



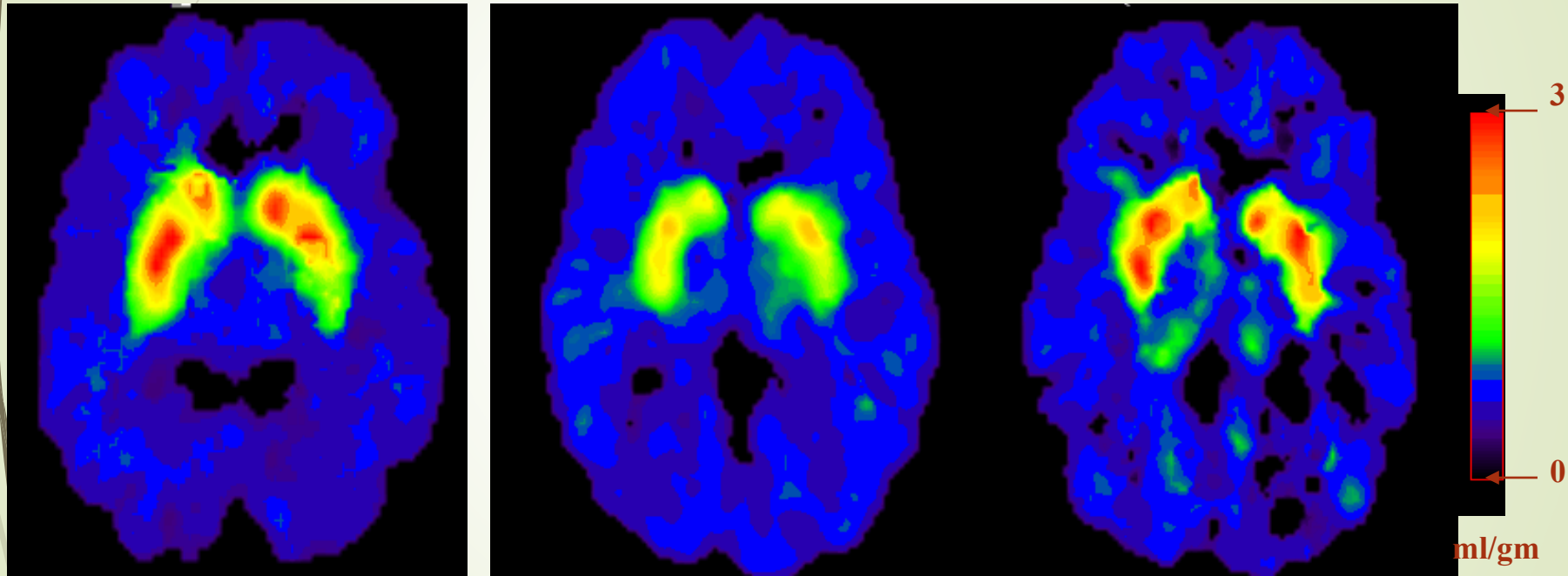
R = 0.70
p < 0.005

Delayed recall



R = 0.64
p < 0.01

Partial Recovery of Brain Dopamine Transporters in Methamphetamine (METH) Abuser After Protracted Abstinence



Normal Control

METH Abuser (1 month detox)

METH Abuser
(24 months detox)



Gabapentinoids—“a wolf in sheep’s clothing”

- Approved 1993
- Partial seizures >3yo
- 2002 post-herpetic neuralgia
- Never approved for diabetic neuropathy
- 85% prescriptions off label--\$2 billion
- Gabapentin increased absorption with opioids
- Cognitive impairment with decreased renal function
- Withdrawal similar to alcohol and BZDs
- Cochrane reviews no evidence of benefit in chronic pain management



Misuse



- High doses IN and IV
- 2nd most diverted med in prison, #1 is tramadol
- 1% misuse in normal, 15-65% misuse with SUD
- Gabapentinoids potentiates effect of methadone
 - Euphoria
 - Boost methadone and buprenorphine sedation/relaxation/calmness
 - Improve sociability
- OD uncommon alone but increases 49% if on opioids
- Should they be on UDT? And MPDR?



Rate of HCV among women delivering at Pitt

- Increased by 60% over the 9 yr study period from 2006-2014
- Chappell, C.; et al, Pediatrics, May 2018.



Hepatitis C-Exposed Infants Not Getting Adequate Screening

- 1000 infants born to mothers with HCV
- <1/3 infants received screening
- Guidelines recommend screening 18 mos or later to avoid false +
- Pitt Med Ctr 2006-2014 32% received well child care only 30% tested for HCV, 3/4ths optimal screening, 8% SHOWED EVIDENCE OF PERINATAL TRANSMISSION!!!