

Part B



HealthLink
Alberta Health
Ministry
Health

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Tel.: (780) 471-2866 Fax: (780) 471-2868



Name _____ Age _____

Address _____

Date _____

R

VOID

- May Substitute
 No substitution
 Parts _____

Signature

M.D.

Original



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 Parts _____

Signature

M.D.

Photocopy

2

SAN DIEGO SPORTS MEDICINE AND ORTHOPAEDIC CENTER

87101-6

CALC

NAME Jane Diff AOE _____

ADDRESS _____ DATE **JUN 07 1999**

R

*Uvadol 2% 150 mg
(16.1g)*

Refill 4 TIMES

DEA # 22488-7

DO NOT SUBSTITUTE

To ensure brand name dispensing, check state by state

7629590 07/30/99 SOC

[REDACTED] 04/07/74

[REDACTED] AGE 25

AM

PCP

(MD)

103-024-402

GROSSMONT HOSPITAL

Emergency Room

P.O. Box 158

La Mesa, CA 91944-0158

(619) 644-4401

DATE 7/30/99

R	mg	once	bid	qd	qd	pm	AM	PM
Vicodin 80	1			4-6	pm	#	120	
Soma 300	1			x	pm	grain	#	20

NO REFILLS

D. [Signature]

DONALD J. BUTERA, M.D., DEA #03994132 CA #042087

THE GENERIC EQUIVALENT MAY BE DISPENSED WHEN THE PROPRIETARY NAME IS USED UNLESS CHECKED

Overdose Treatment

►Naloxone

depression of the CNS and
respiratory system







Heroin (“Junk, Smack, Horse”)

monoacetylmorphine

Raw Opium Morphine Laboratory

raw opium
water supply
slaked lime
empty oil drum
firewood
ammonium chloride
hydrochloric acid
cheesecloth filter
morphine press

Morphine Base Heroin Base Laboratory

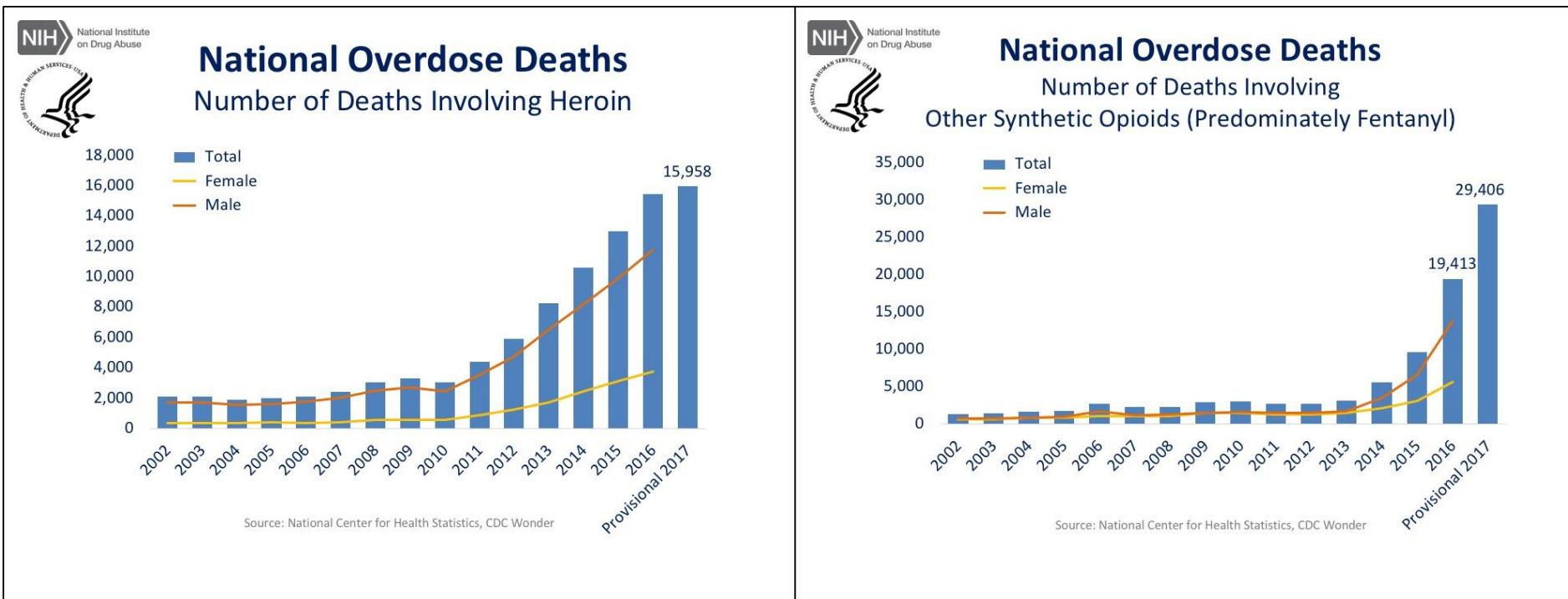
morphine base
acetic anhydride
water supply
activated charcoal
chloroform or cresol
sodium carbonate
enamel pots

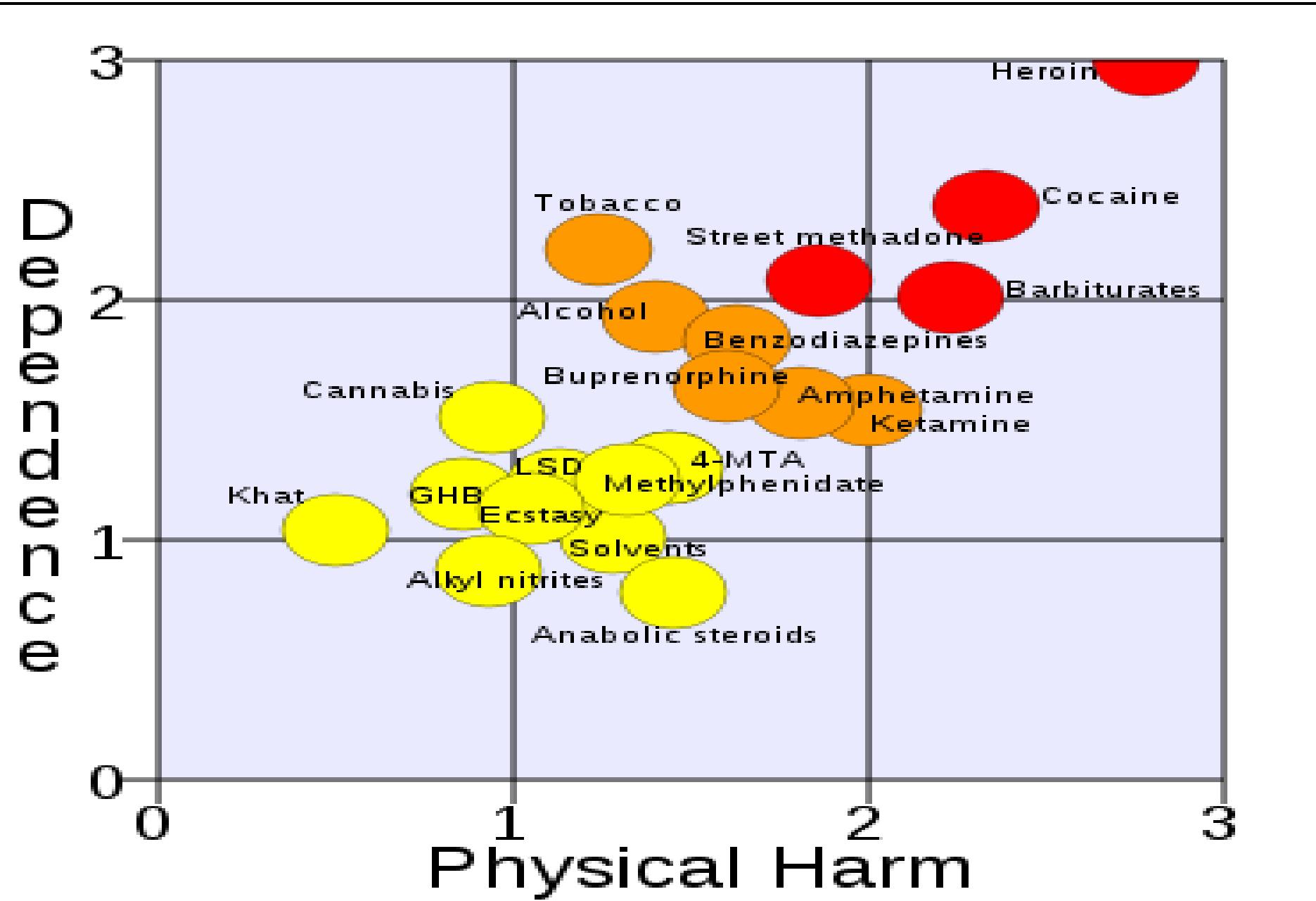
Heroin Base Heroin Refinery

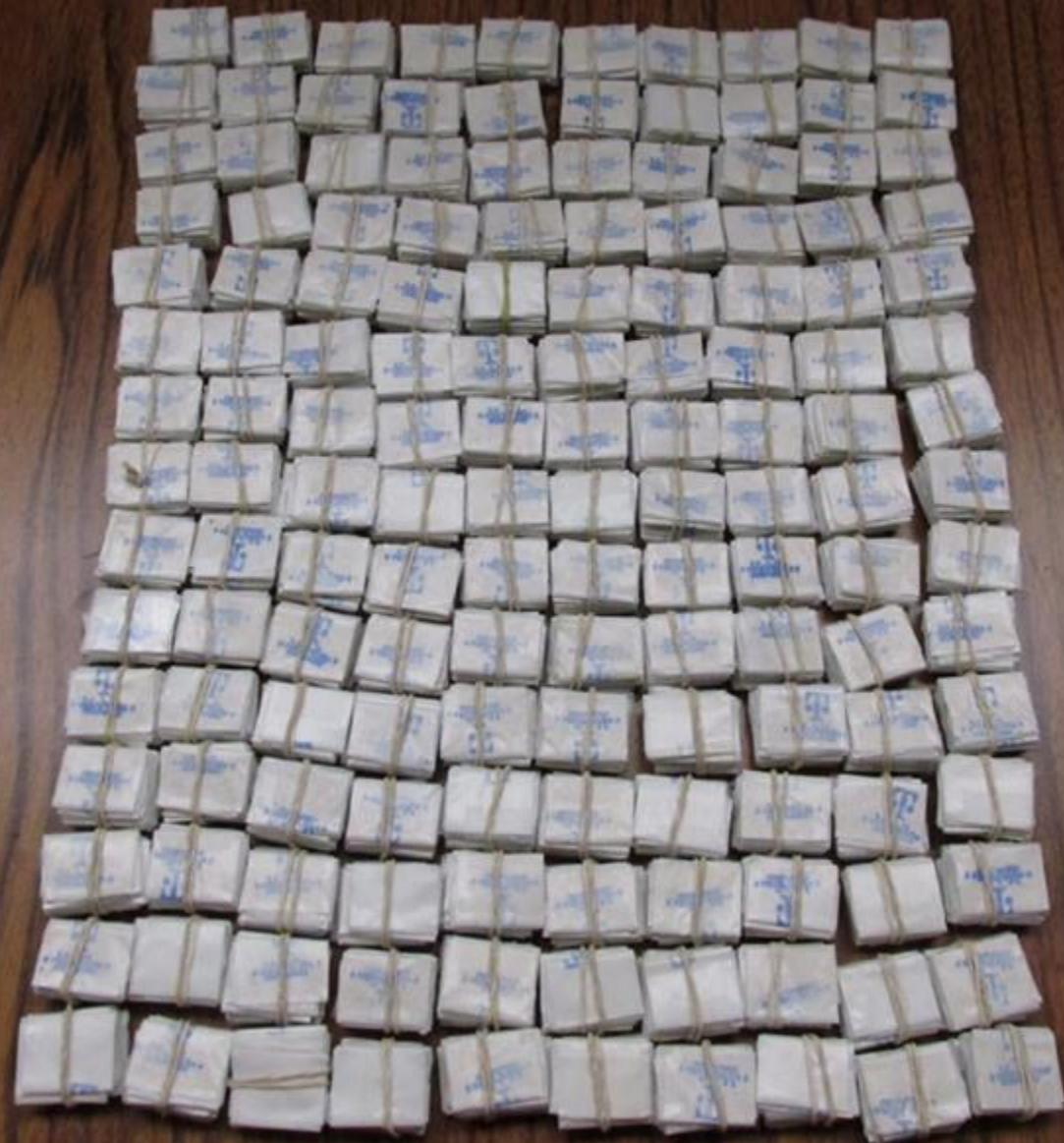
heroin base
indicator (litmus) paper
ethyl alcohol
activated charcoal
drying boxes, lime rock
funnels, beakers
cooking oven
filter cloths or paper
Bunsen burner



Street drugs are coming back...







12/3/2018



12/3/2018





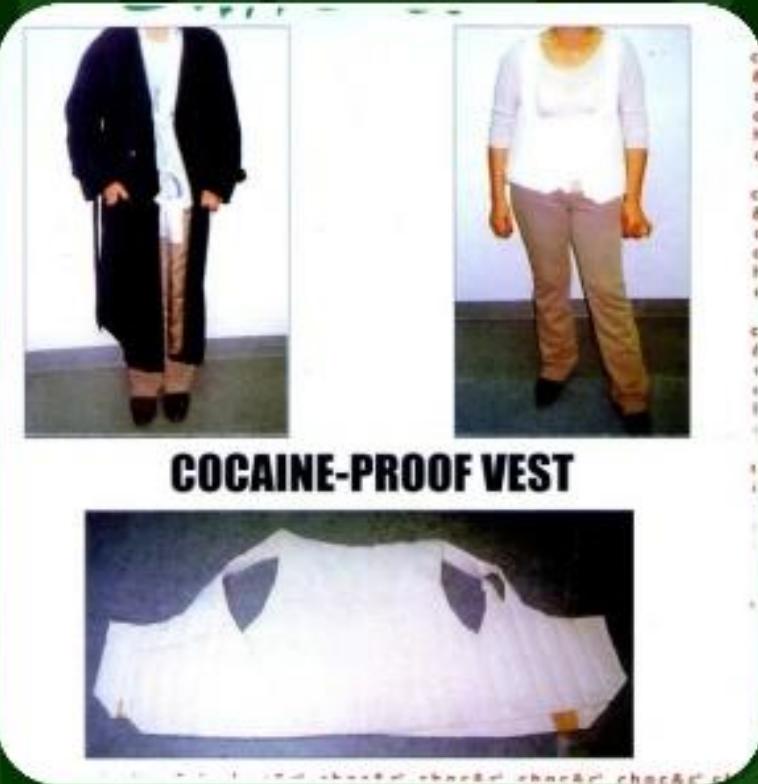


12/3/2018



12/3/2018

The Courier Method



COCAINE-PROOF VEST



6 TATTOOS & 4.2 KG HEROIN

NIHON KS LA SUPPORTED

- Others go as far as wrapping the drugs into their bodies...
(also known as “body-packing”)



12/3/2018



12/3/2018



12/3/2018



12/3/2018





WHAT ARE TRACK MARKS?

Track marks are evidence of chronic intravenous (IV) drug use. This method entails a person injecting or "shooting" the drug directly into their vein.



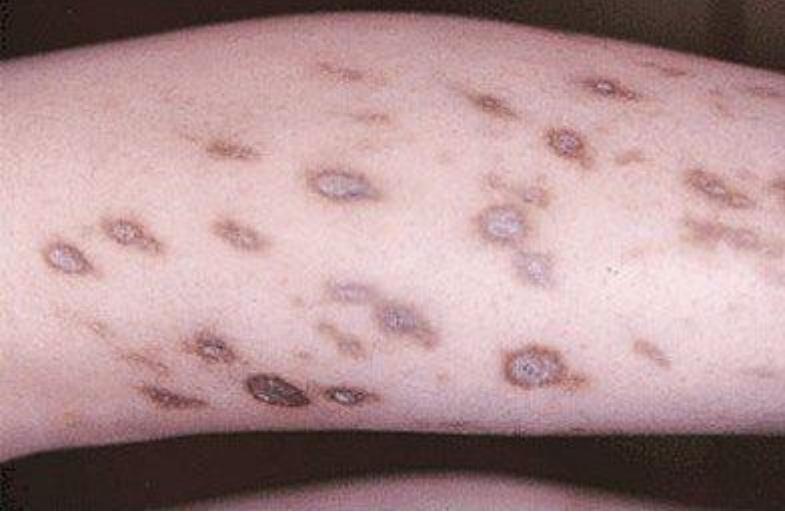




12/3/2018



12/3/2018



12/3/2015

Impact of Maintenance Treatment

- Reduction death rates (Grondblah, '90)
- Reduction IVDU (Ball & Ross, '91)
- Reduction crime days (Ball & Ross)
- Reduction rate of HIV seroconversion (Bourne, '88; Novick '90,; Metzger '93)
- Reduction relapse to IVDU (Ball & Ross)
- Improved employment, health, & social function

Methadone



- Methadone (*Dolophine*) 4,4-Diphenyl-6-dimethylamino-3-heptanone
- Partial agonist
- Daily doses varies-depends on metabolism
- Satiates craving for heroin (in high enough doses), prevents withdrawal symptoms.
- "Dol" comes from the latin word "dolor" which means pain.

OTP Methadone

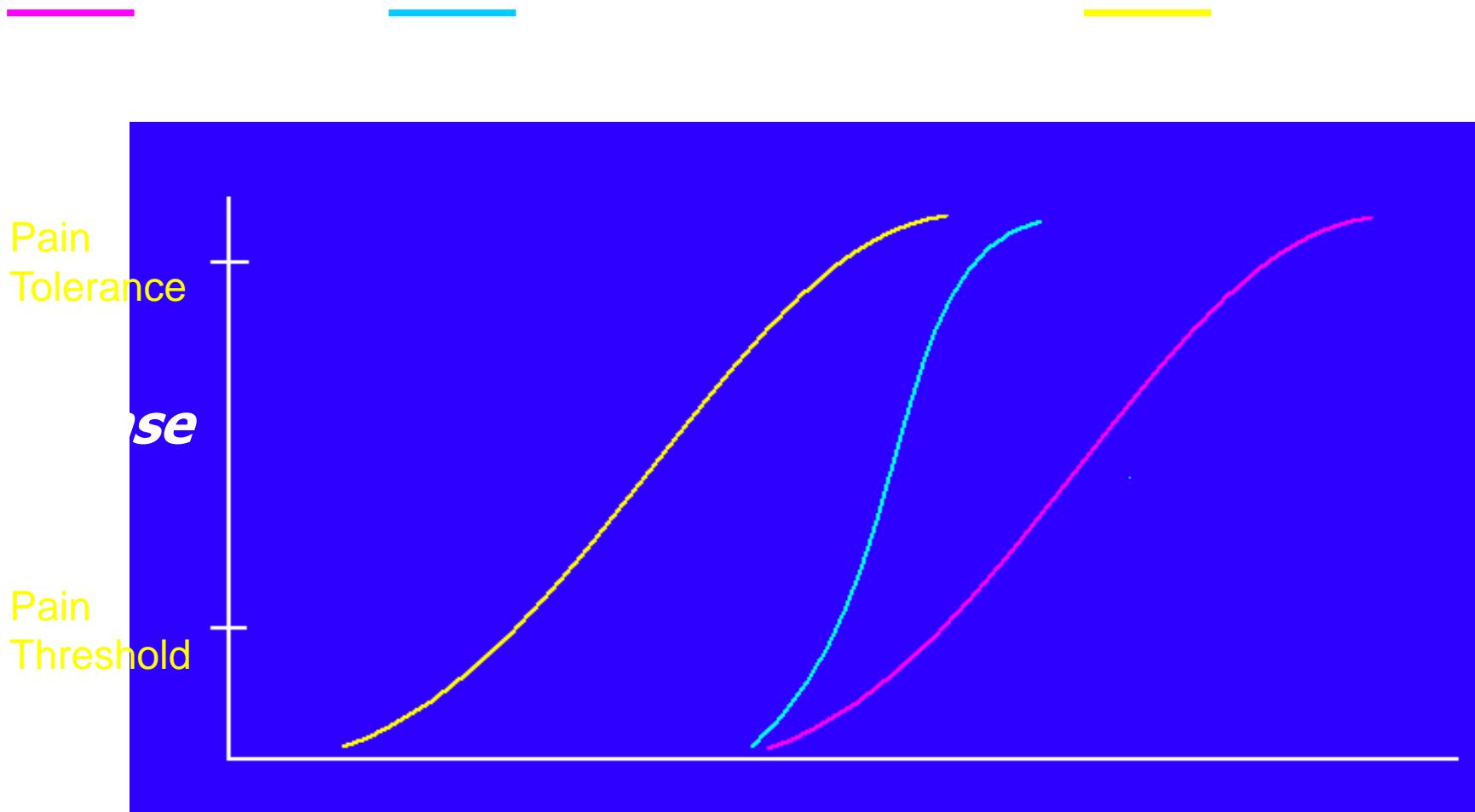
AM



Mysteries...

- *Methadone-maintained* patients are hypersensitive to pain, especially to cold pressor pain.
-
- *Methadone-maintained* patients are very tolerant to methadone & morphine analgesia

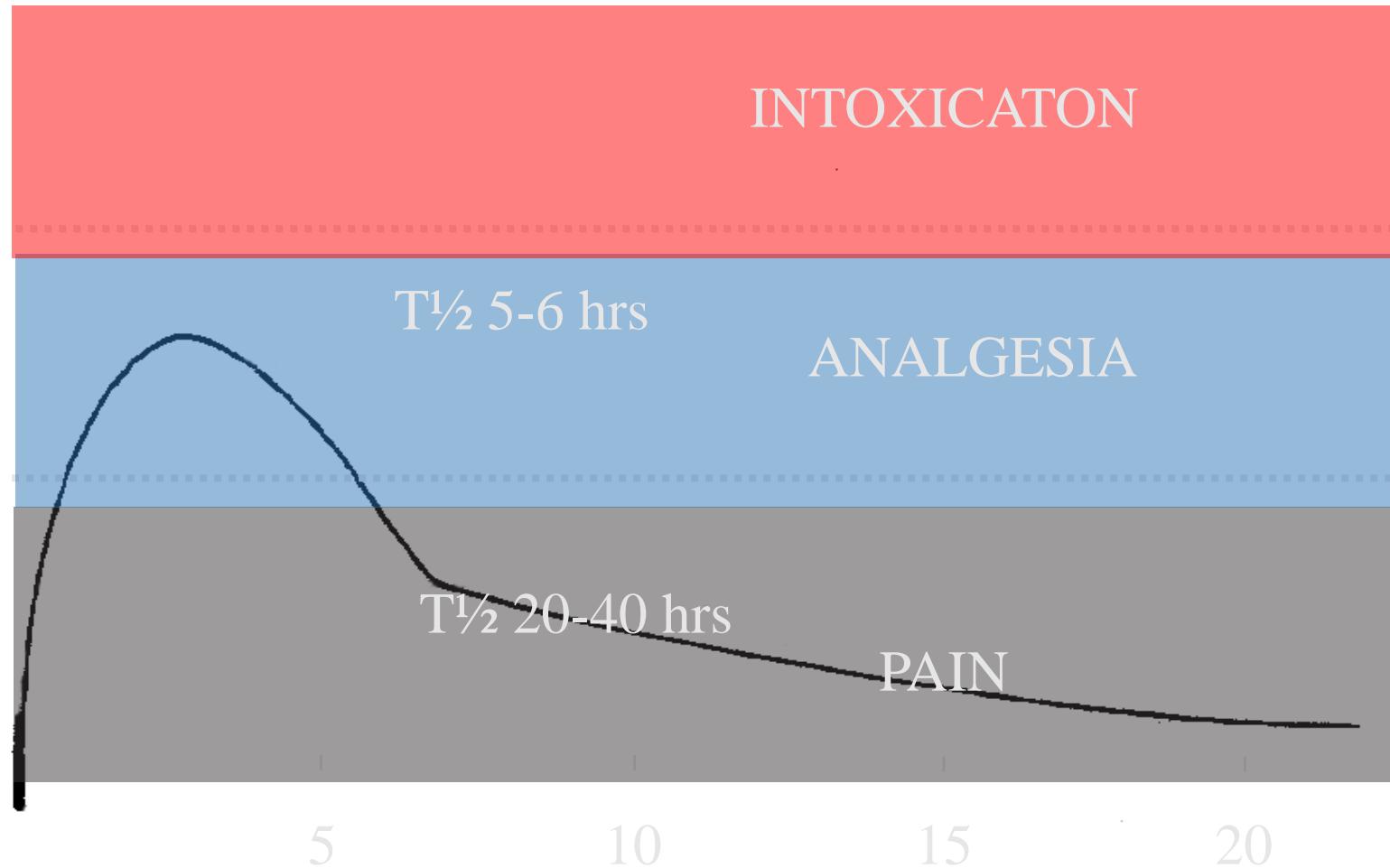
RESPONSE BY STIMULUS INTENSITY



Tolerance vs Opioid Induced Hyperalgesia

- OIH cannot be overcome by increasing dosage
- OIH is a form of pain sensitization induced by opiates which occurs in the CNS
- Pain is worsened with increased opioid dosing
- Pain is improved by reducing/eliminating opioid
- OIH occurs at a certain critical opioid dose
(may be lower in patients with renal dysfunction)
- OIH is often overlooked as a potential complication of opioid therapy

Methadone Single Dose Kinetics



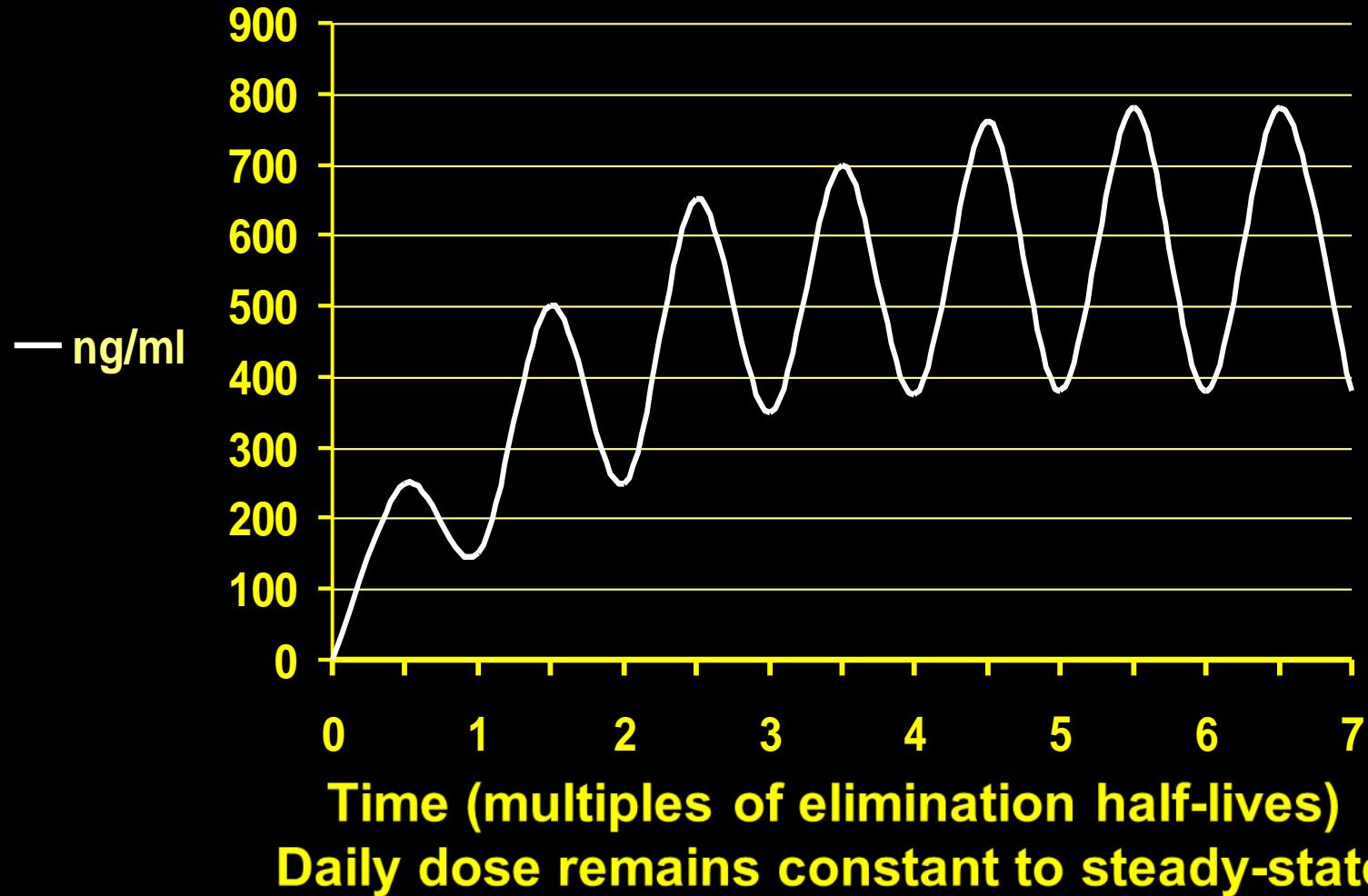
Methadone for Pain Control





<http://www.comproviders.com/files/>
Understanding-Medical-Issues.pps#449,4,
Methadone Distribution* 2000 – 2007**

Steady-State Simulation - Maintenance
Pharmacotherapy
Attained after 4-5 half-times, 1 dose / half-life

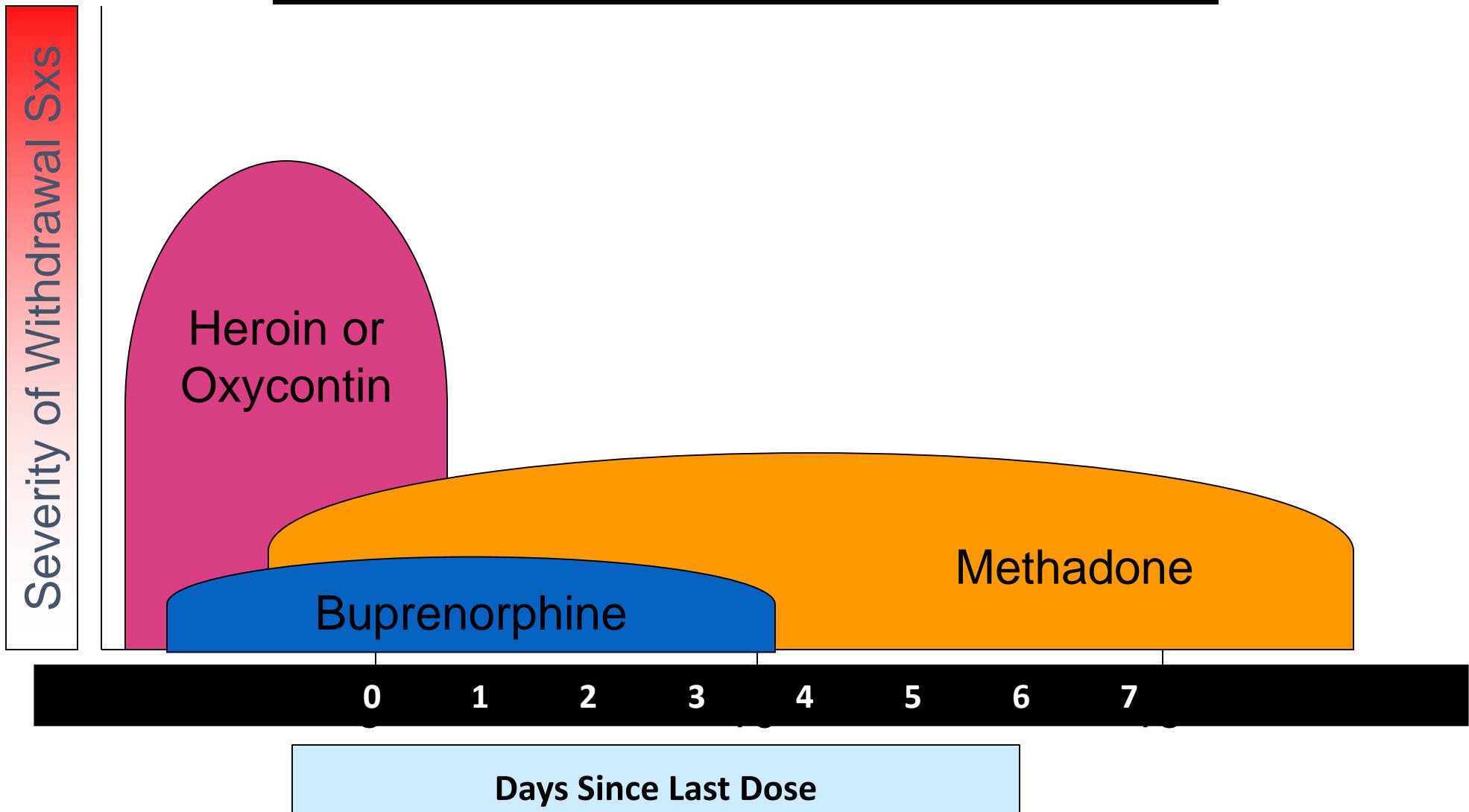


Methadone - USE IN PREGNANCY

Systemic analgesics used for labor and vaginal delivery

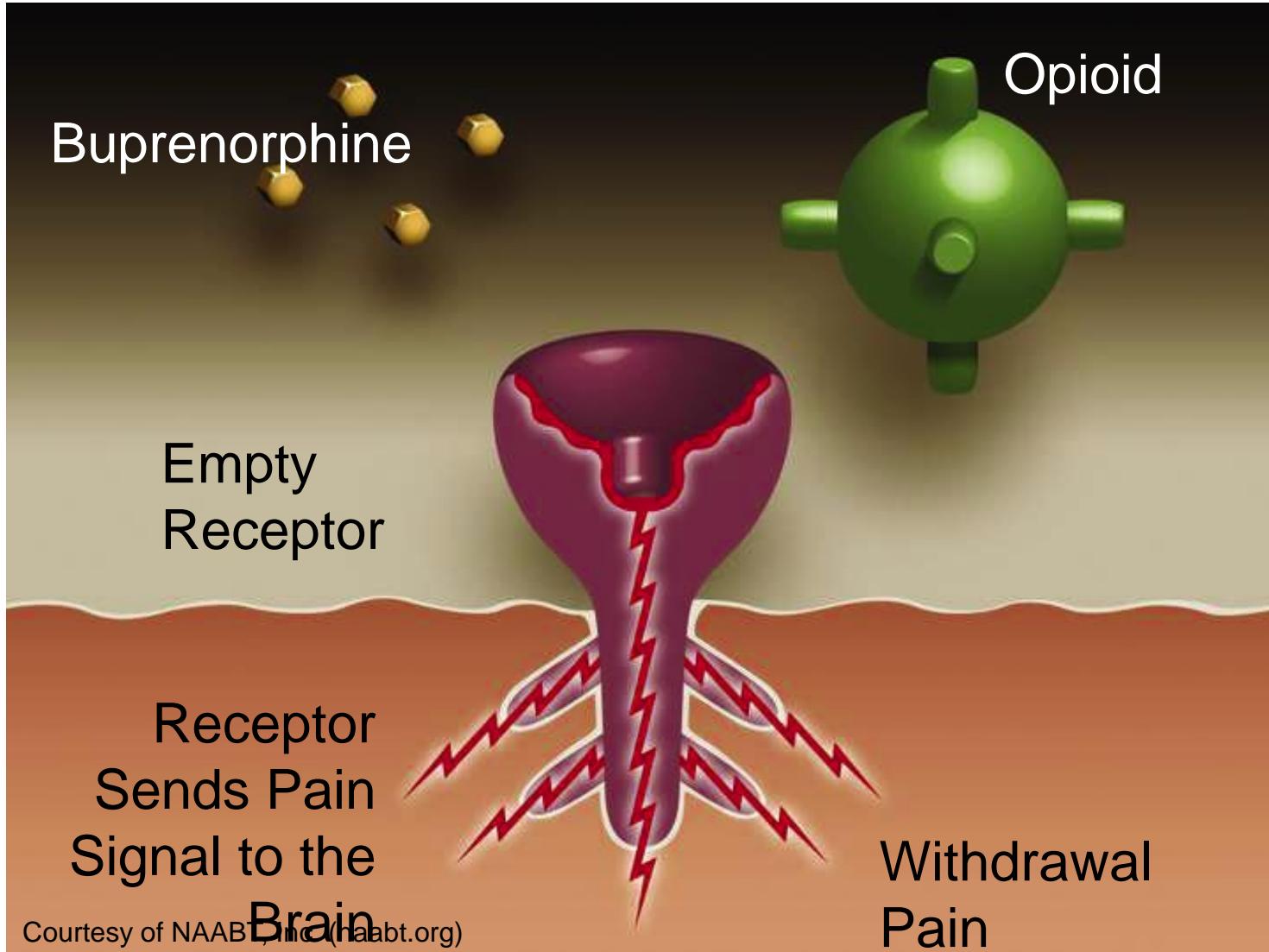
Drug	Class	Dose	Onset	Duration	Comments
Meperidine	Opioid	25-50 mg IV	5 min IV	2-3 hr	Active metabolite is normeperidine a potent respiratory depressant; neonatal effect most likely if delivery occurs between 1 and 4 hr after administration
		50-100 mg IM	40 min IM		
Morphine	Opioid	2-5 mg IV	3-5 min IV	3-4 hr	Infrequent use during labor; greater respiratory depression in neonate than meperidine
		5-10 mg IM	20-40 min IM		
Fentanyl	Opioid	25-50 mcg IV	1-3 min IV	30-60 min IV	Short-acting, potent respiratory depressant; best used by PCA
		100 mcg IM	7-10 min IM		
Nalbuphine	Mixed opioid agonist/antagonist	10-20 mg IV	2-3 min IV	3-6 hr	Agonist/antagonist; less nausea and vomiting than with meperidine; ceiling of respiratory depression
		10-20 mg IM	10-15 min IM		
Butorphanol	Mixed opioid agonist/antagonist	1-2 mg IV or IM	5-10 min IV	3-4 hr	Agonist/antagonist; maternal sedation similar to meperidine + phenothiazine; ceiling of respiratory depression; dysphoria
			10-15 min IM		
Pentazocine (Talwin)	Mixed opioid agonist/antagonist	20-40 mg IV/IM	2-3 min IV	2-3 hr	Agonist/antagonist; ceiling of respiratory depression; dysphoria
			5-20 min IM		

Comparison of Spontaneous Withdrawals



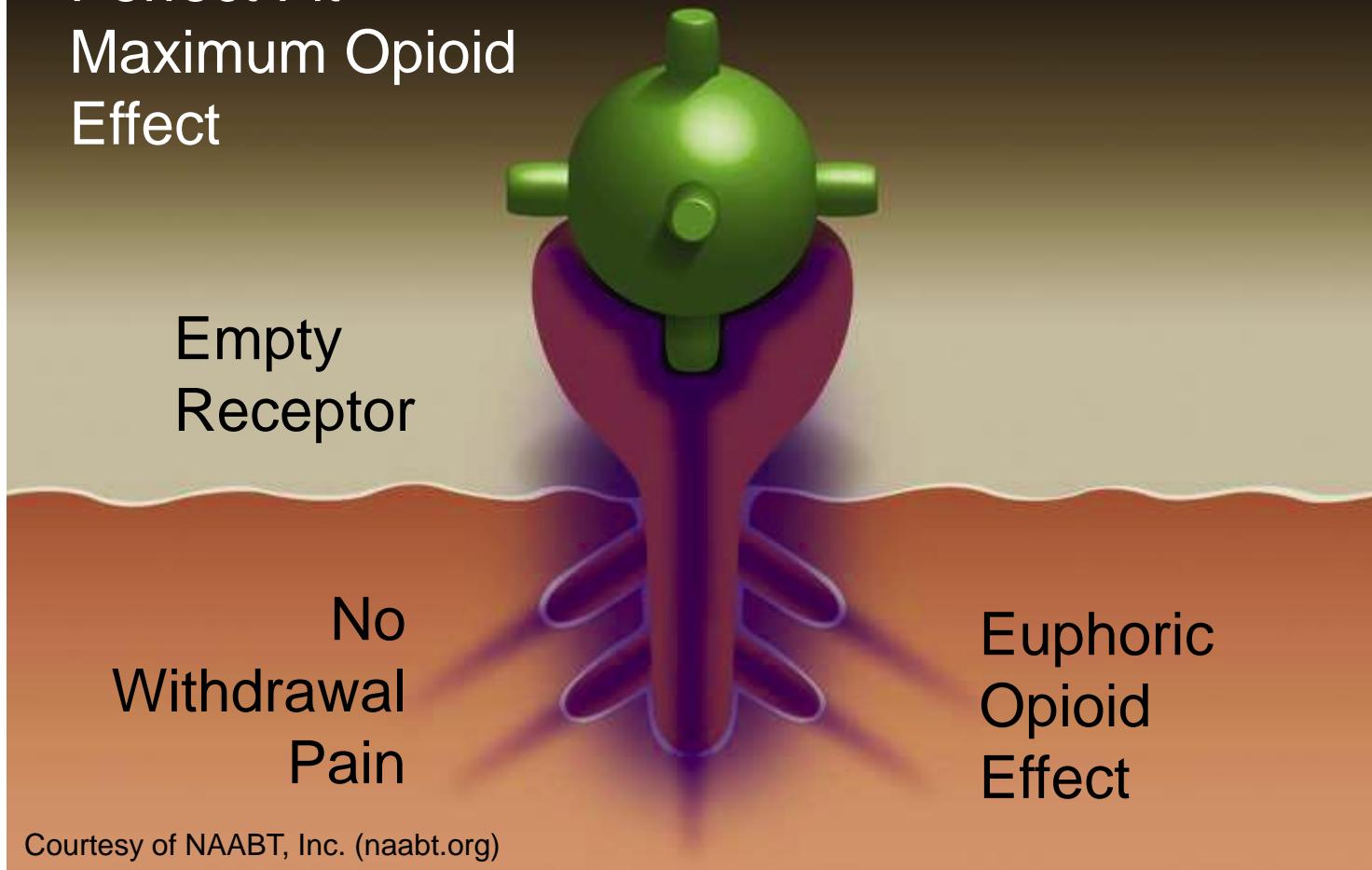
Adapted from: Kosten, O'Connor NEJM 2003

Buprenorphine



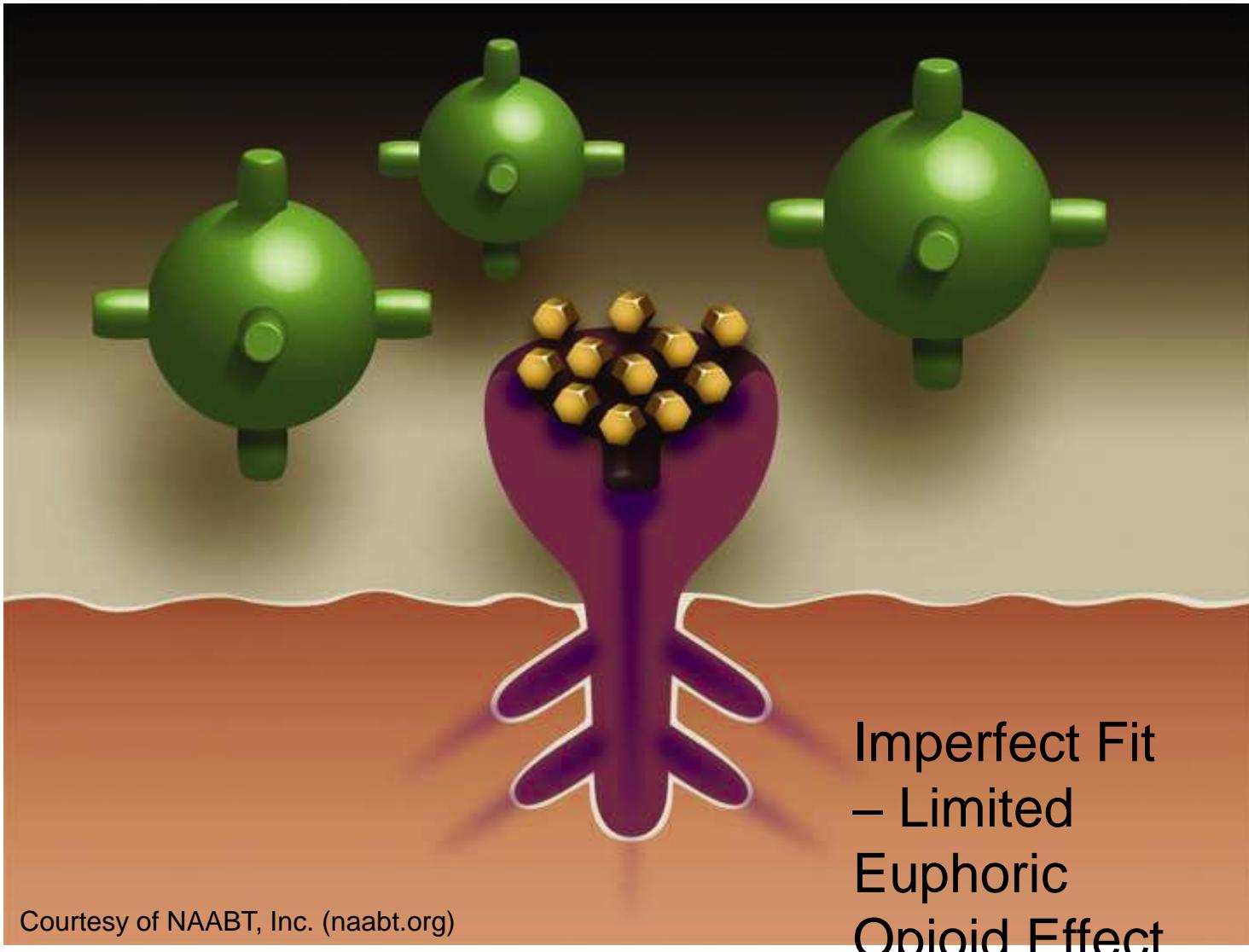
Neuro receptor in withdrawal and craving opioids. Once dependent the body cannot produce enough natural opioids to satisfy the many new receptors that were produced while taking large doses of opioids over time. The unsatisfied receptor sends pain signals to the brain. This is withdrawal.

Perfect Fit - Maximum Opioid Effect



Courtesy of NAABT, Inc. (naabt.org)

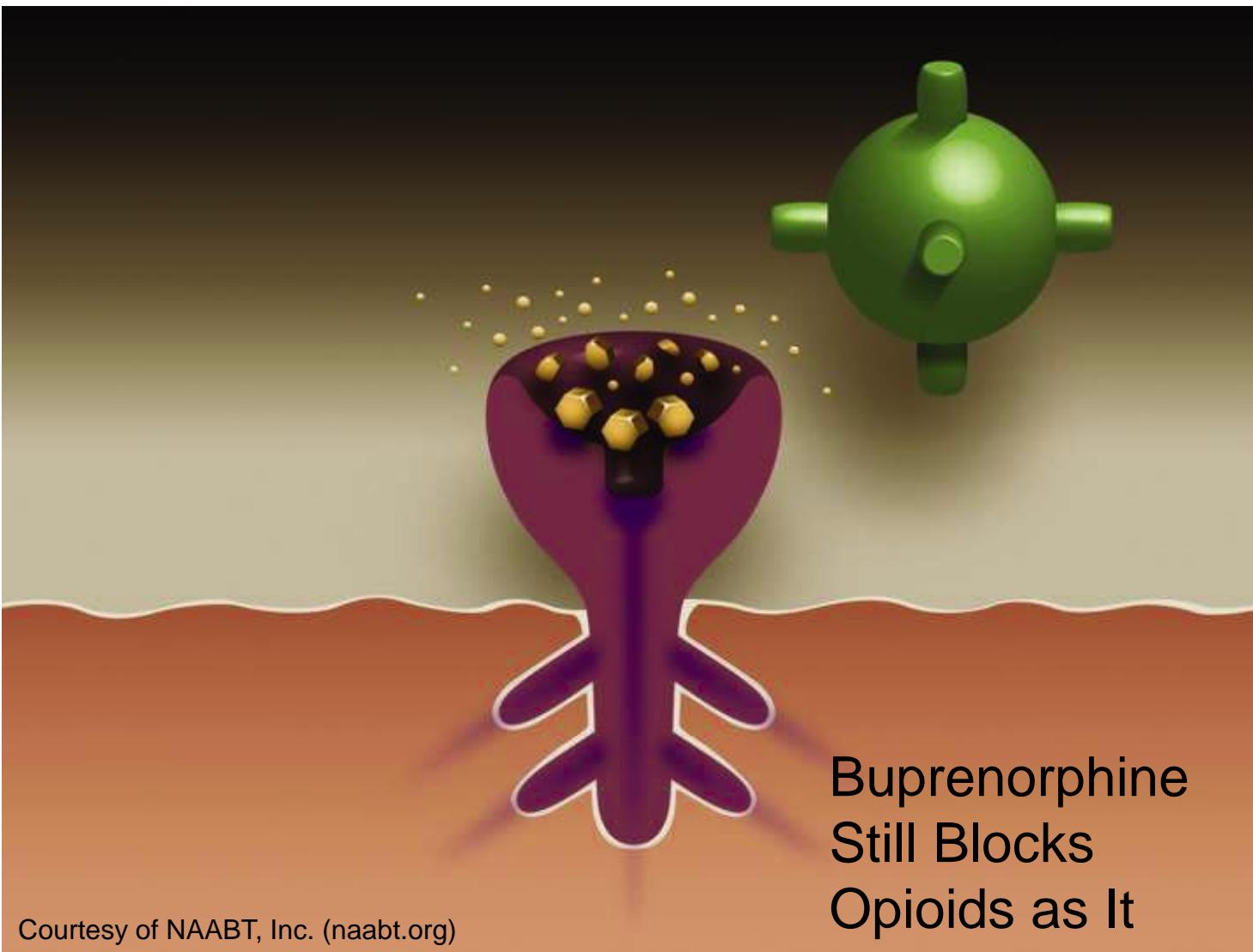
Neuro receptor satisfied with an opioid. The strong opioid effect from painkillers, or heroin, stops the withdrawal symptoms for a short time. (4-24 hours) The person is high. After prolonged use, the patient is no longer getting high so much as just preventing the withdrawal symptoms.



Courtesy of NAABT, Inc. (naabt.org)

Imperfect Fit – Limited Euphoric Opioid Effect

Opioids replaced and blocked by Buprenorphine. Opioids cannot get to the neuro receptor while occupied by Buprenorphine. The person no longer feels sick (in withdrawal) and is unable to get high even if he/she uses other opioids. Buprenorphine produces a limited opioid effect, and cravings are reduced or eliminated.



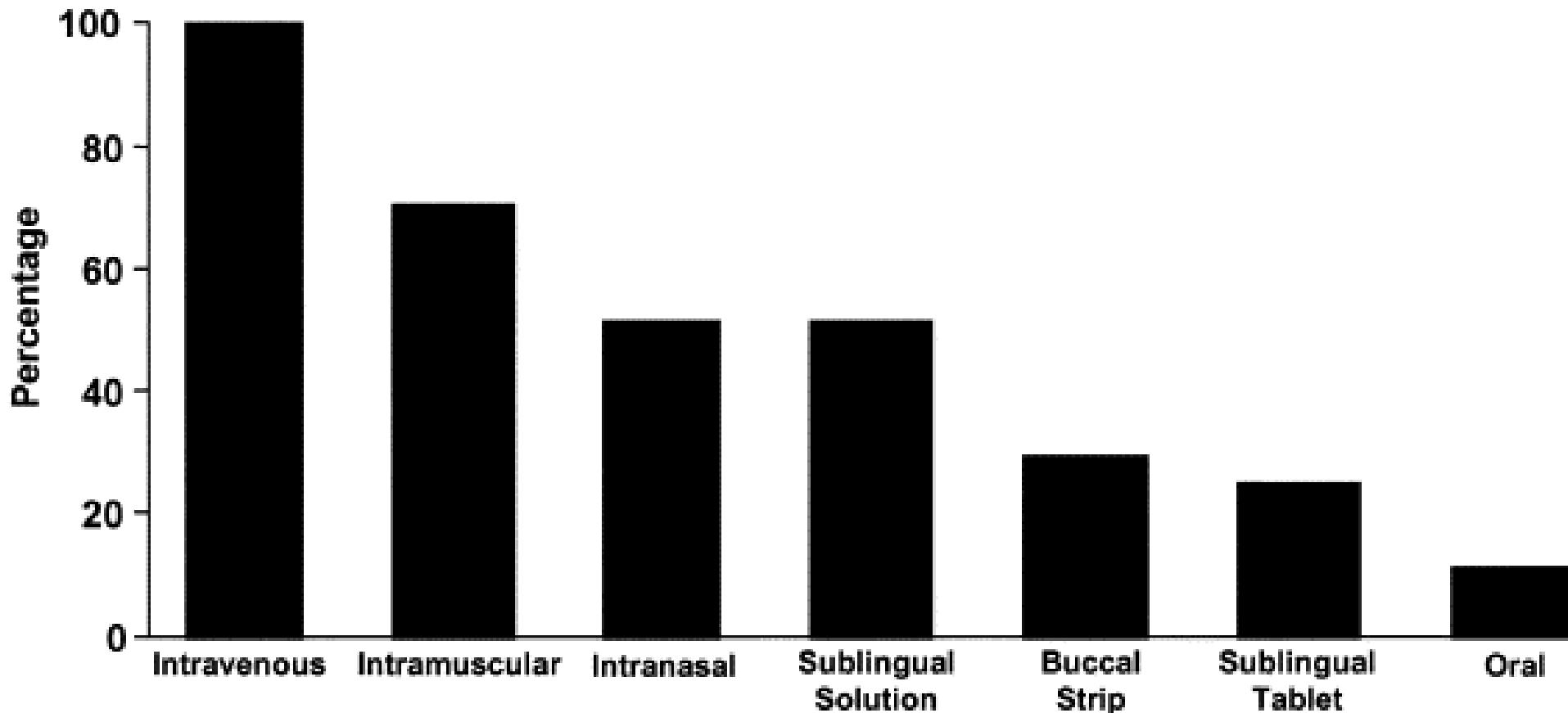
Courtesy of NAABT, Inc. (naabt.org)

Buprenorphine Still Blocks Opioids as It Dissipates

Over time (24-72 hours) Buprenorphine dissipates, but still creates a small opioid effect (enough to prevent withdrawal) and still block opioids from attaching to the receptors. This means if someone were to take an opioid, they still would not get high.

Buprenorphine in pregnancy

~Bioavailability of Buprenorphine by route of administration



Reprinted from Methadone Treatment
for Opioid Dependence [Figure 13.2 (c)]. [Strain, Eric C., M.D.](#),
and Maxine L. Stitzer, Ph.D., eds.
The Johns Hopkins University Press. Baltimore, Maryland:
The Johns Hopkins University Press, 1999: 300. Reprinted
with permission from The Johns Hopkins University Press.

NDC 0054-0177-13

30 Tablets

**BUPRENORPHINE CIII
HCl Sublingual Tablets**

8 mg*

PHARMACIST: Please
dispense with attached Patient
Information.

Rx only



Boehringer Ingelheim
Roxane Laboratories



52 00540 17713



To open: Hold along dotted line and tear down
tear or cut with scissors along the arrow.

The sublingual film in this package
does not contain any active
pharmaceutical ingredients. It is
blended solely for the purpose of
demonstrating the method of
administration of the dosage form
in a physician's office.
Contains artificial sweetener.

Reckitt
Benckiser

Pharmaceuticals Inc.

Manufactured by
Reckitt Benckiser
Pharmaceuticals Inc.,
Baltimore, MD 21233
by Novartis Rx LLC,
Warren, NJ 07059

LOT H09GE101
EXP 05/2011



1599999999



10401





ZUBSOLV VS SUBOXONE



ZUBSOLV

5.7 mg/1.4 mg

Suboxone tablet

8 mg/2 mg

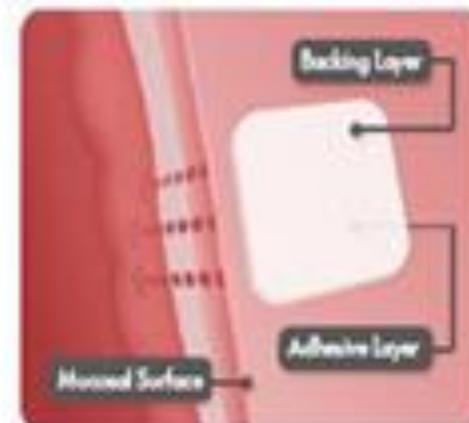
Suboxone film

8 mg/2 mg

ADHERES

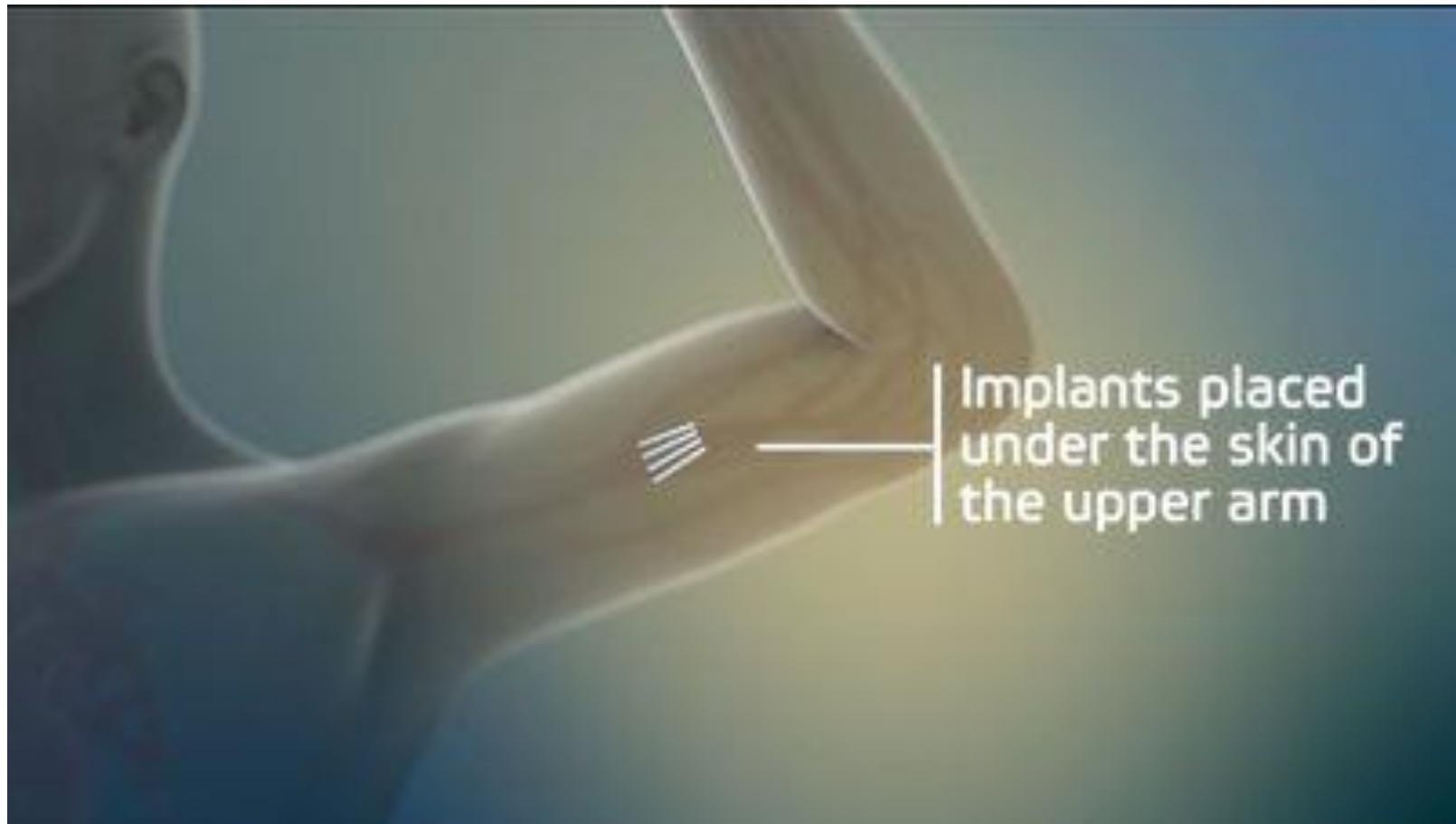
DISSOLVES

DELIVERS



- Bi-layered film technology
 - Active drug in the muco-adhesive layer
 - Backing layer facilitates unidirectional flow of drug
 - Adheres to oral mucosa in 5 seconds
 - Completely dissolves within 15-30 minutes
 - Minimal taste issues
- Rapid drug absorption
 - Designed to optimize delivery across the mucosa

Bunavail



Implants placed
under the skin of
the upper arm

