

UCLA Brain Institute Outreach

Prescription Opiates

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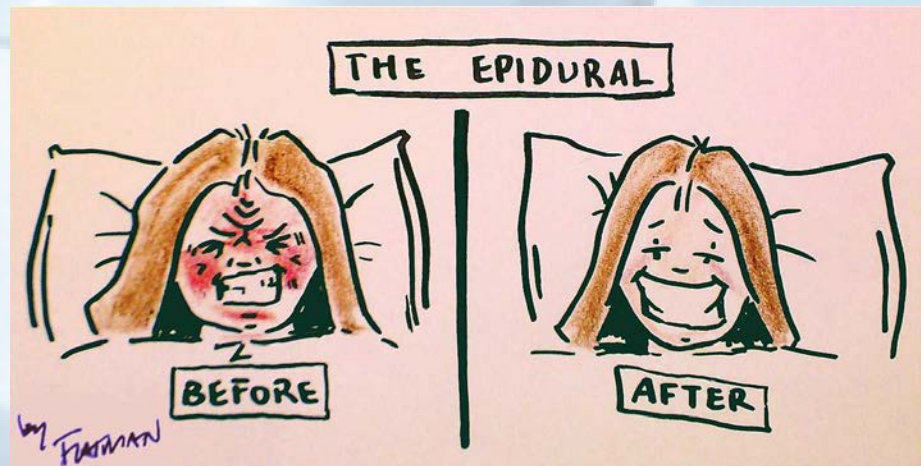
Background on Opiates

- Opiates
 - derived from poppy
- Some types of Opiates
 - Heroin
 - Morphine
 - Codeine
- Uses
 - Some are medically prescribed as a long-term pain killer
 - Some are non-medically used as a drug to get high



Background on Prescribed Opiates

- Prescribed opiates bind receptors → reduced pain signaling to brain → pain relief
- Faster relief than over-the-counter
- Some uses
 - Labor
 - Post-operation
 - Traumatic injury



Background on Oxycodone

- Discovered in 1916 in Germany
- Some drugs with Oxycodone you may have heard of
 - OxyContin
 - Percocet



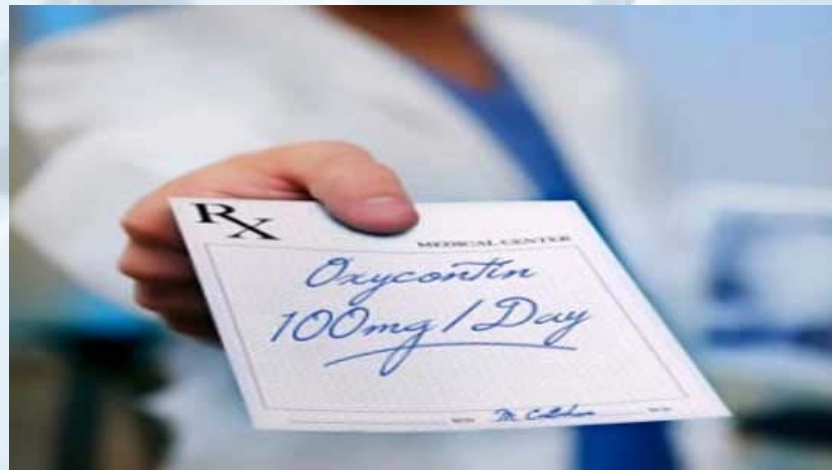
Legality



- Oxycodone is currently legal in the U.S.
- However it is intended to be controlled
 - Schedule II
- So what's the problem?
 - Prescription drug use epidemic
 - Easy access relative to other drugs
 - Doctor's ability to overprescribe until 2010

Misuse and Abuse

- The majority of oxycodone abusers get their drug from relatives or friends
- Doctors would sell and overprescribe drugs
- In 2010, enactment of the Prescription Drug Monitoring Program
 - Led Florida oxycodone purchases to decline 97%



So what if you're prescribed oxy?

- If you're prescribed oxycodone after surgery, are you at risk of becoming addicted?
 - Possibly.
 - Tolerance → increasing doses
 - Abrupt cessation → withdrawal symptoms
 - Hypersensitivity to pain → relapse
- So it's important to gradually lessen the dose as the pain lessens

Acute Effects

■ Therapeutic/ Direct Effect

- Euphoria
- Analgesia
- Full body relaxation

■ Side Effects

- Constipation
- Respiratory Depression
- Confusion
- Fast or slow heart beat



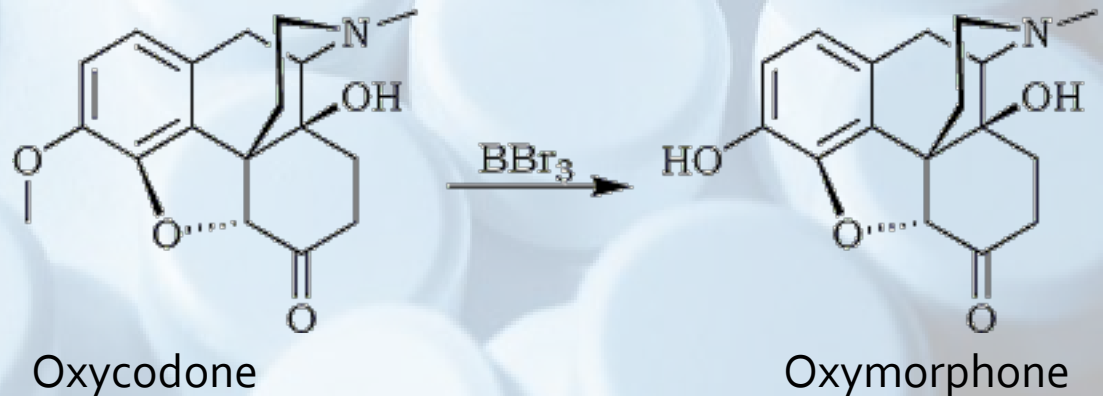
Pharmacokinetics

■ Administration

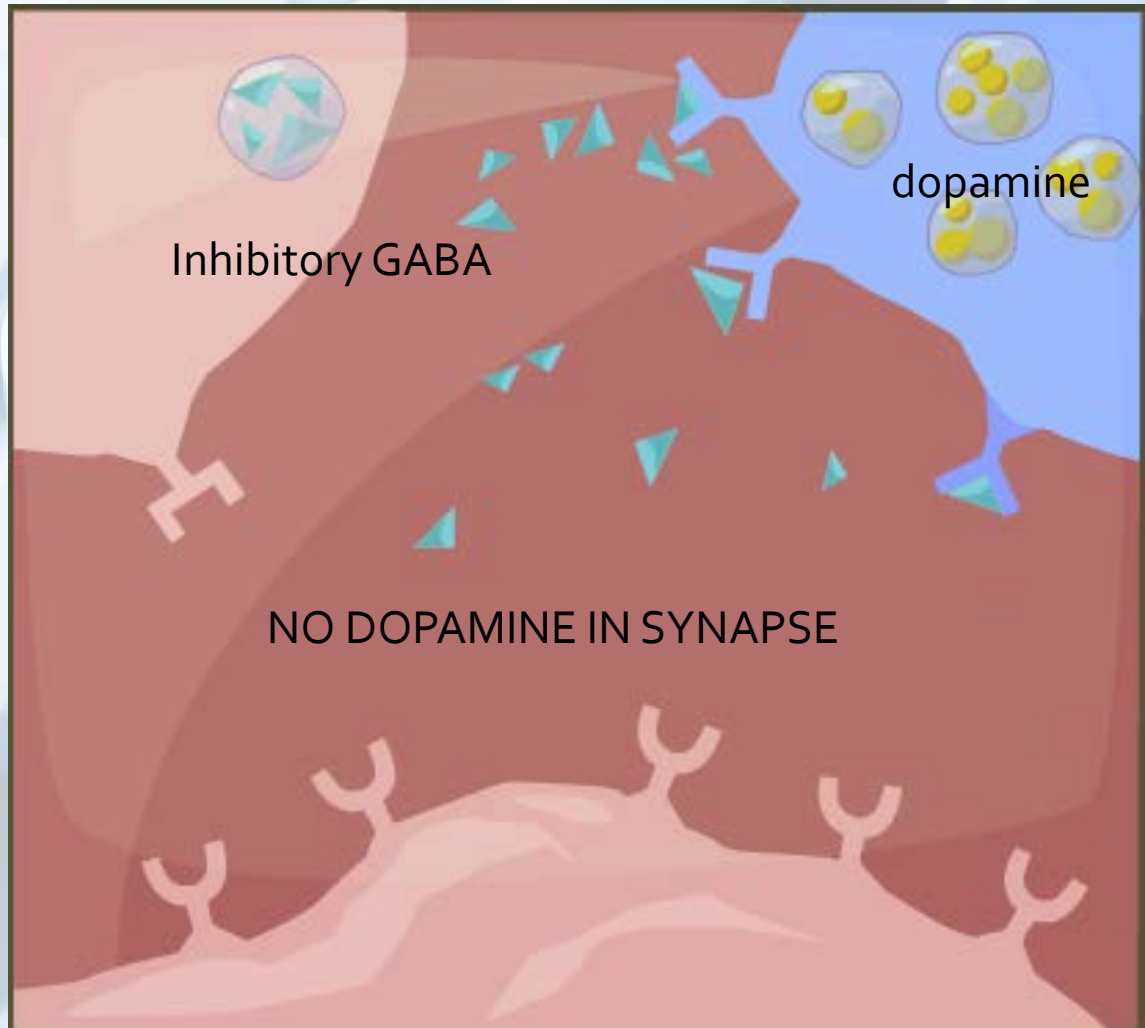
- Orally (pill)
 - Regular
 - Extended release
- Nasally (snorting)
- Intravenously (injecting)
- Rectally (uhh?)

■ Metabolism

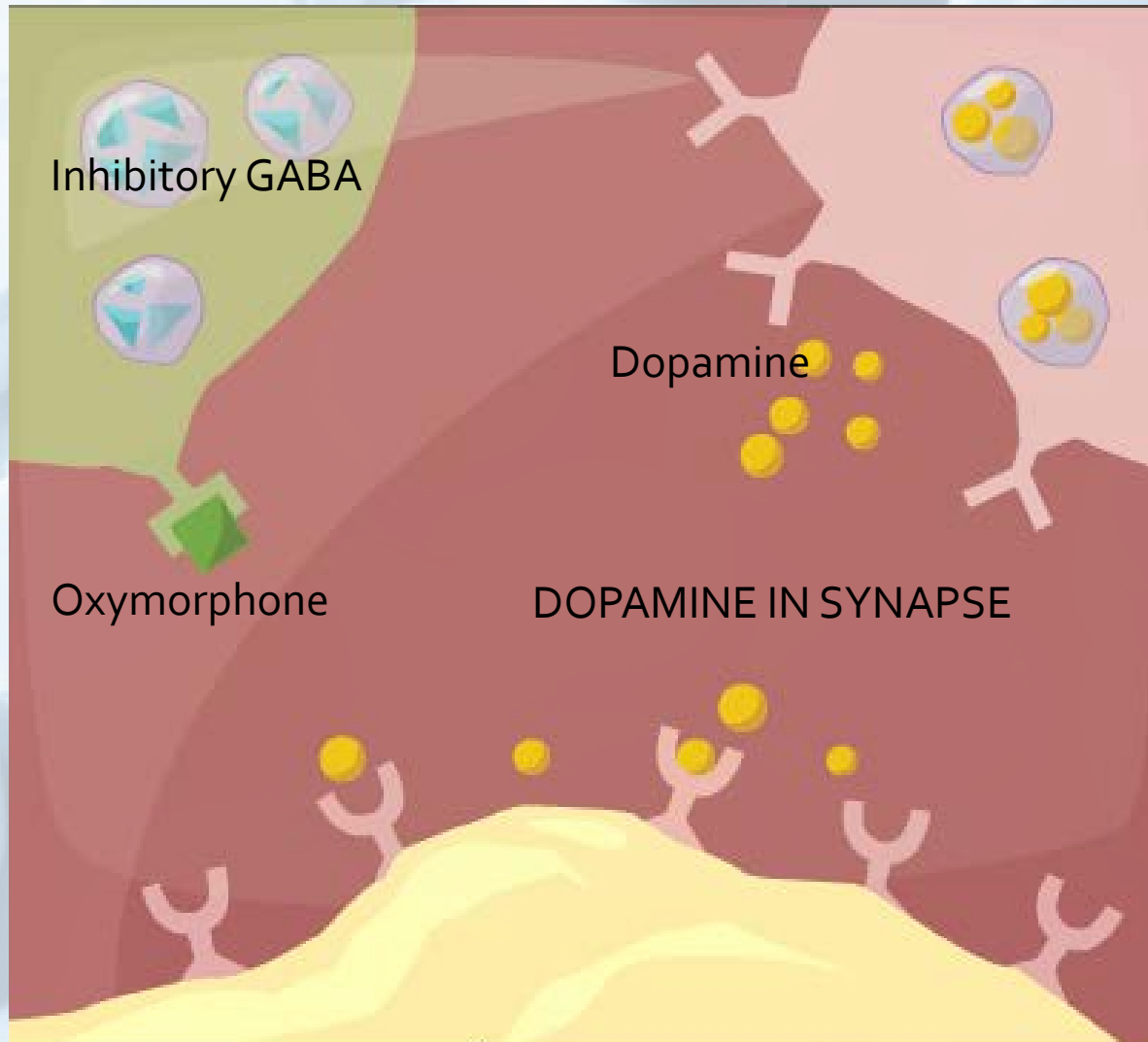
- Liver converts oxycodone to oxymorphone



Mechanism of Action

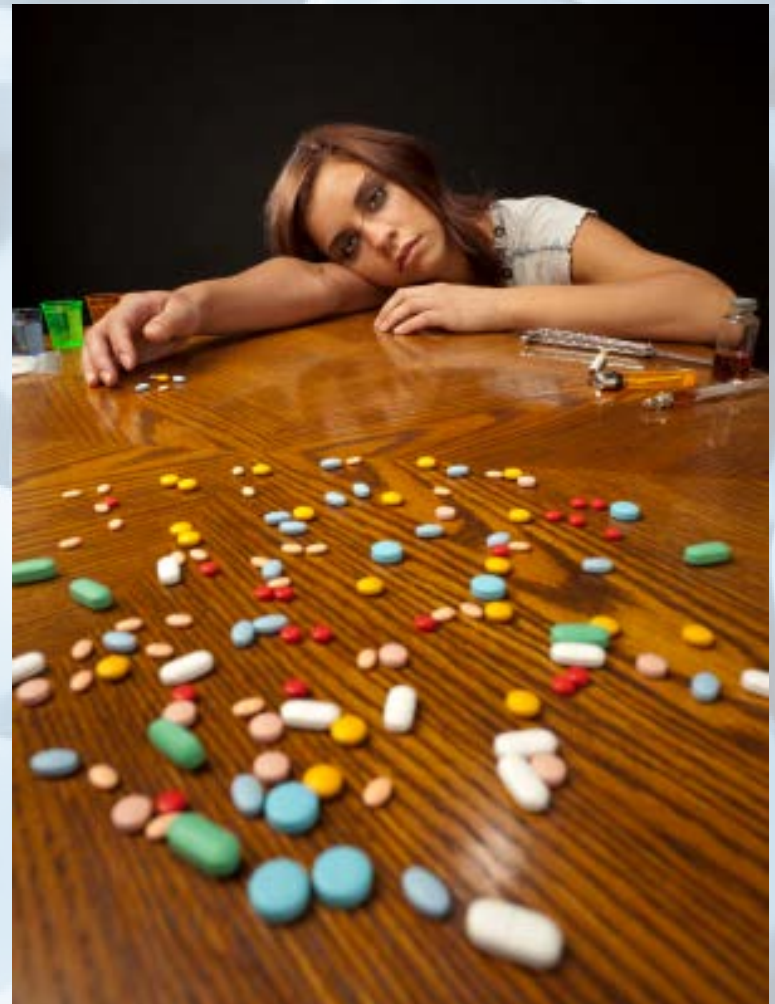


Mechanism of Action



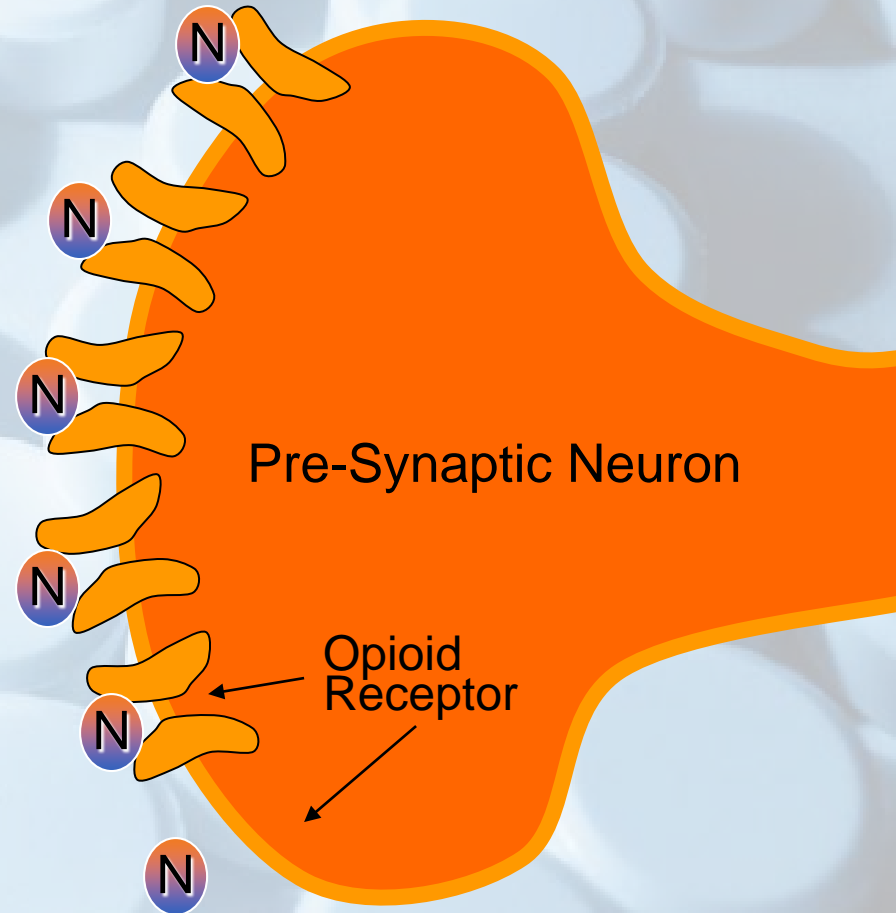
Effects of withdrawal

- Withdrawal is extremely painful though not fatal.
 - Feeling horrible physical and psychological pain
 - Anxiety
 - Increased sensitivity to pain
 - Diarrhea
 - Runny nose



Treatment

- Antagonist Therapy
 - Overdoses are treated with a drug called **Naloxone** which blocks the receptor to which oxymorphone binds
 - Later, patients are maintained with **Naltrexone**



Treatment

- Substitution Therapy
 - Given a medication that binds to the same receptor but induces a milder effect
 - Methadone
 - Buprenorphine
 - So it's less harmful and reduces horrible withdrawal

