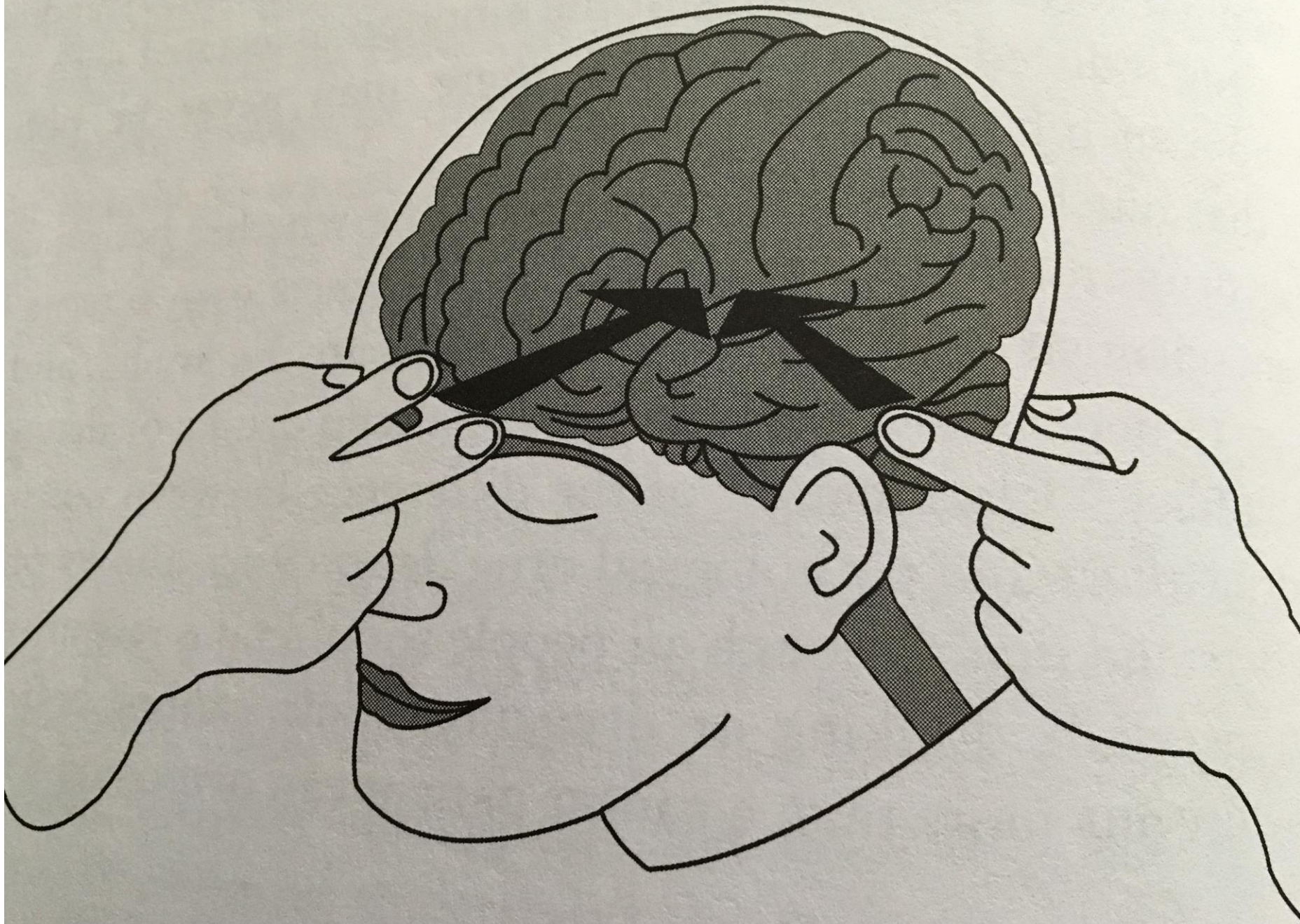
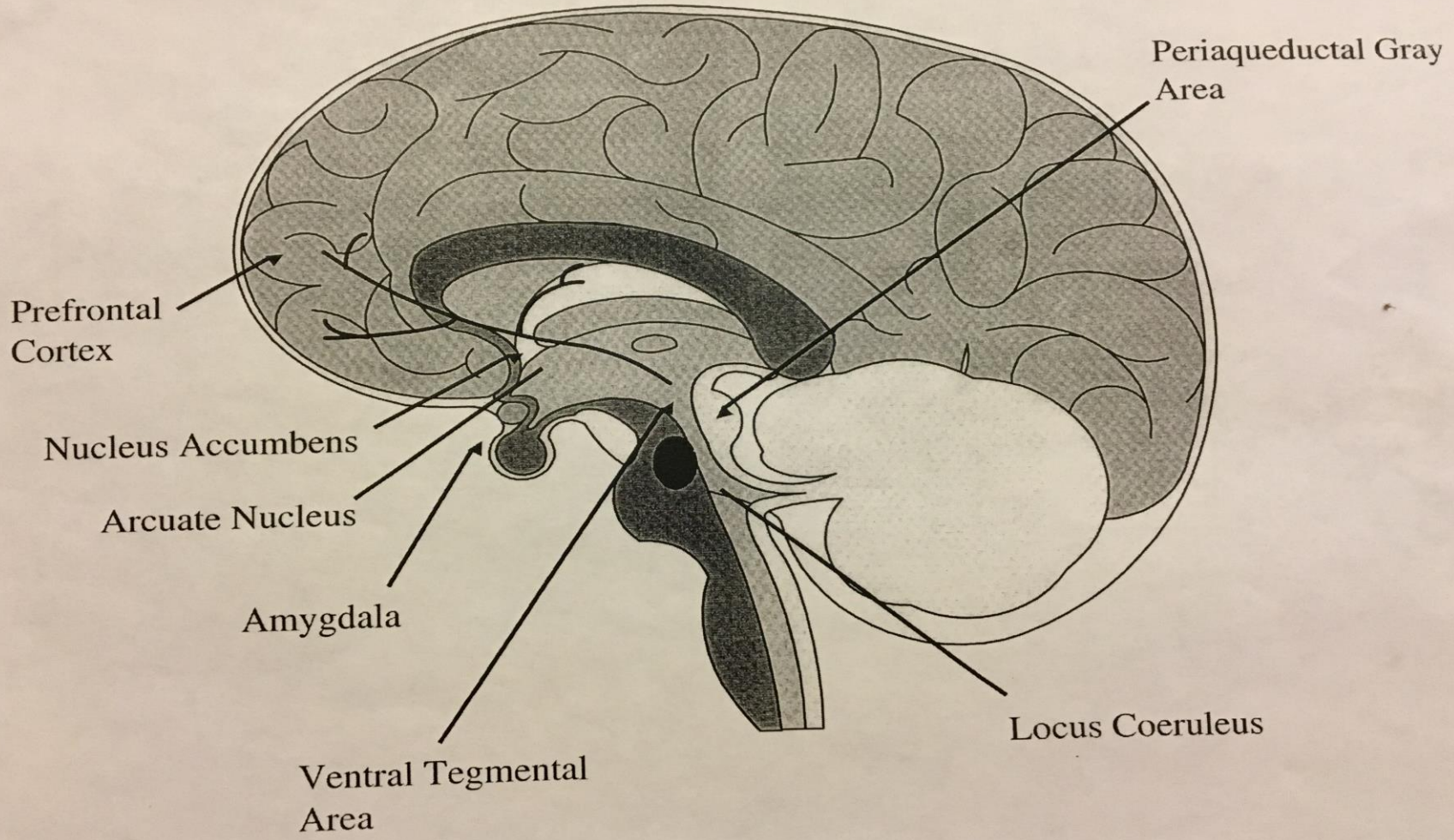


ADDICTION
OPIOIDS
THE ELDERLY
JOSEPH C MANCINI, MD

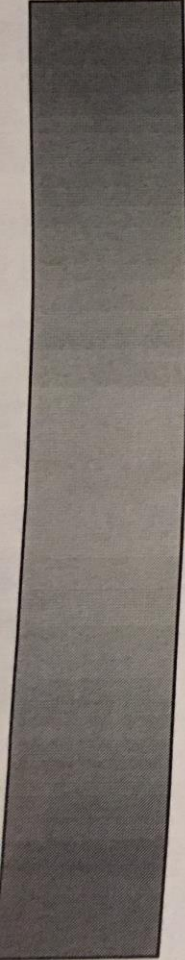
- THE SCIENCE OF ADDICTION
- OPIOIDS
- BUPRENORPHINE
- IMPLICATIONS FOR THE ELDERLY
- OPIOIDS
- ALCOHOL
- BENZODIAZEPINES

middle of the brain



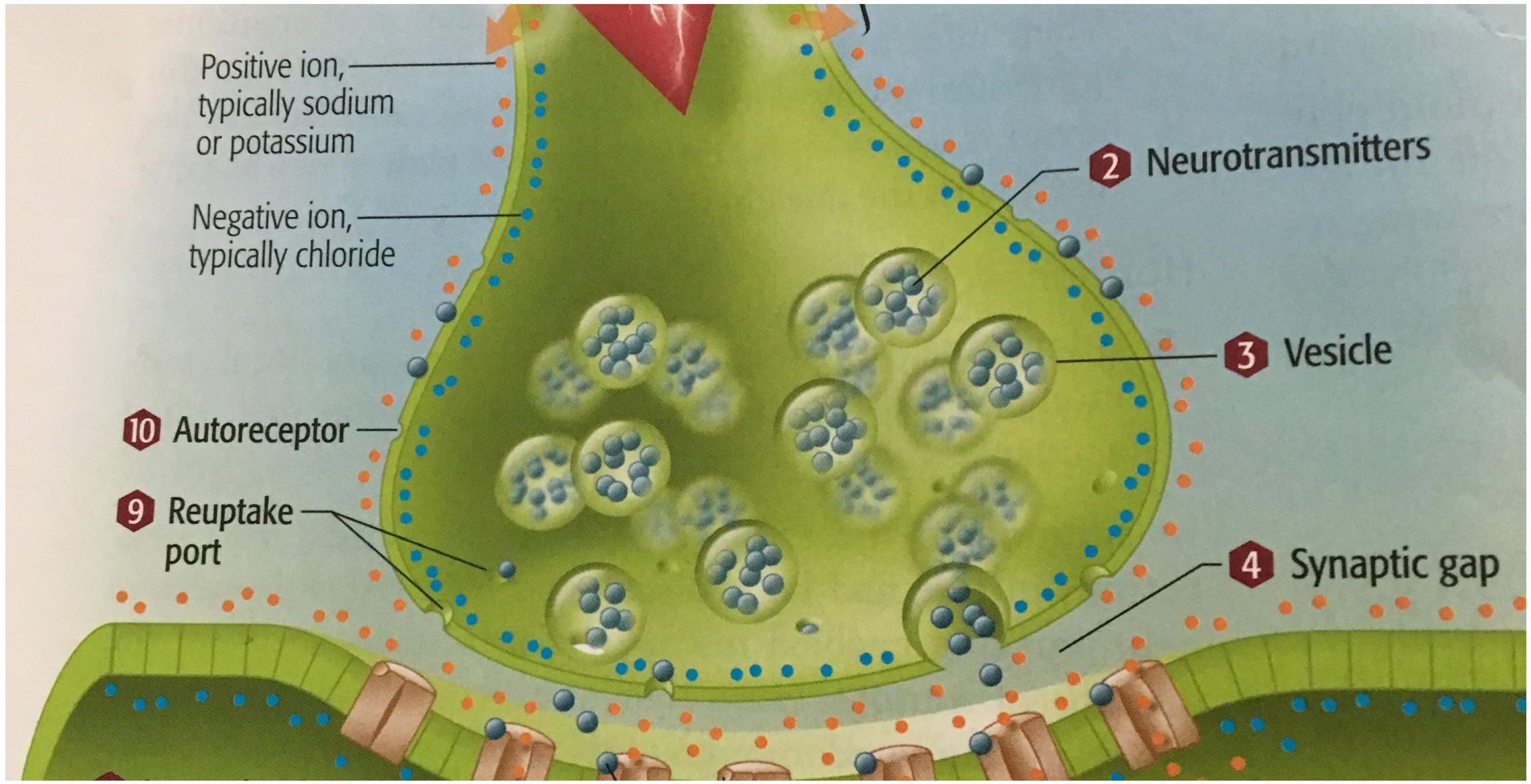


Medial Forebrain Bundle

- 
- Ventral tegmental area (VTA)
 - Nucleus accumbens (ACC)
 - Lateral hypothalamus (LH)
 - Frontal cortex (FC)
 - Amygdala (AMYG)

DEFINITIONS

- RECEPTORS
- NEUROTRANSMITTERS
- TOLERANCE
- WITHDRAWAL
- THE 3 C'S ~ CONTROL, COMPULSION,
CONSEQUENCES
- AGONISTS
- ANTAGONISTS



Positive ion,
typically sodium
or potassium

Negative ion,
typically chloride

2 Neurotransmitters

3 Vesicle

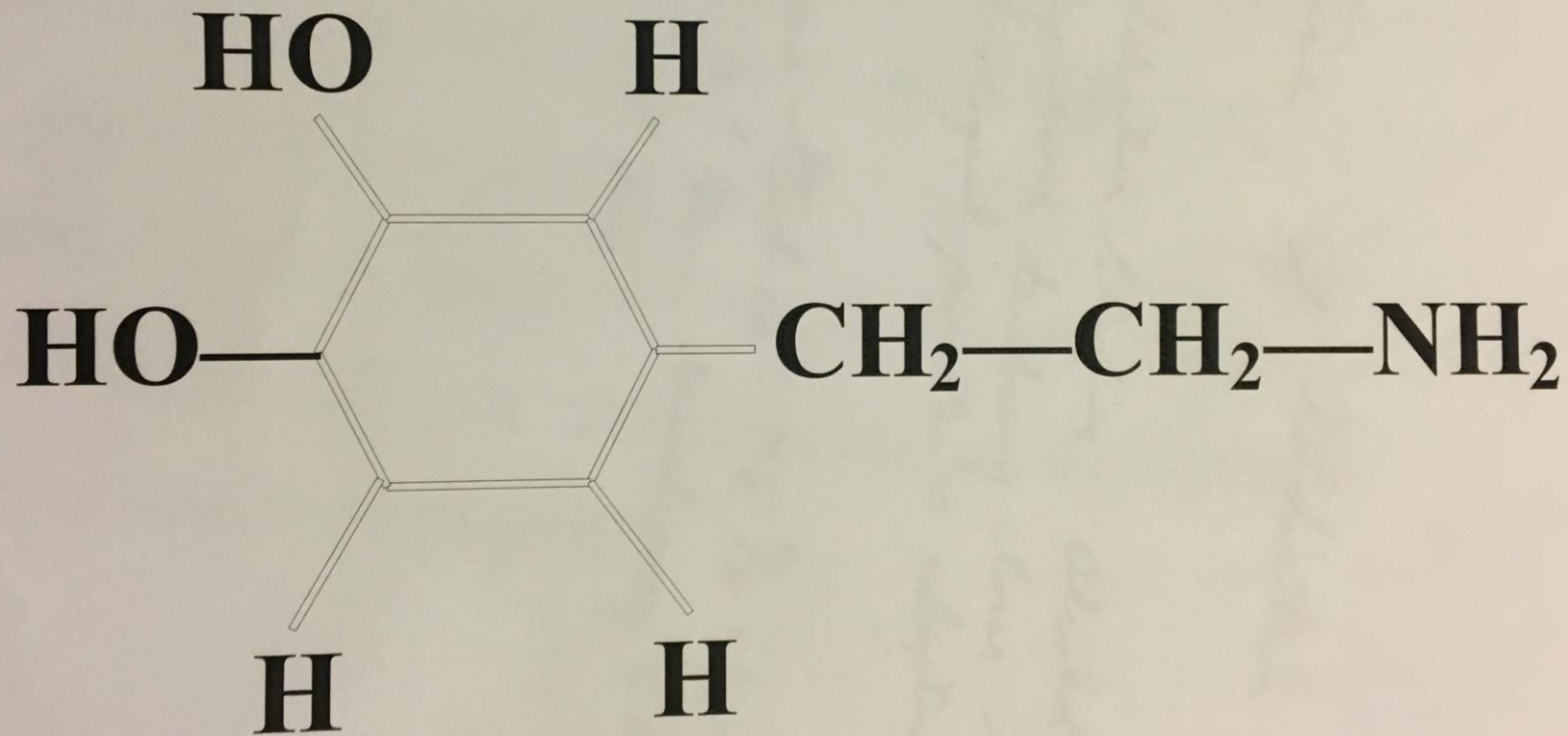
10 Autoreceptor

9 Reuptake
port

4 Synaptic gap

Neurotransmitters of “Addiction”

- ★ ■ Dopamine (DA)
- Serotonin (SER)
- ★ ■ Endorphins (END)
- ★ ■ Gamma-aminobutyric acid (GABA)



OPIOIDS

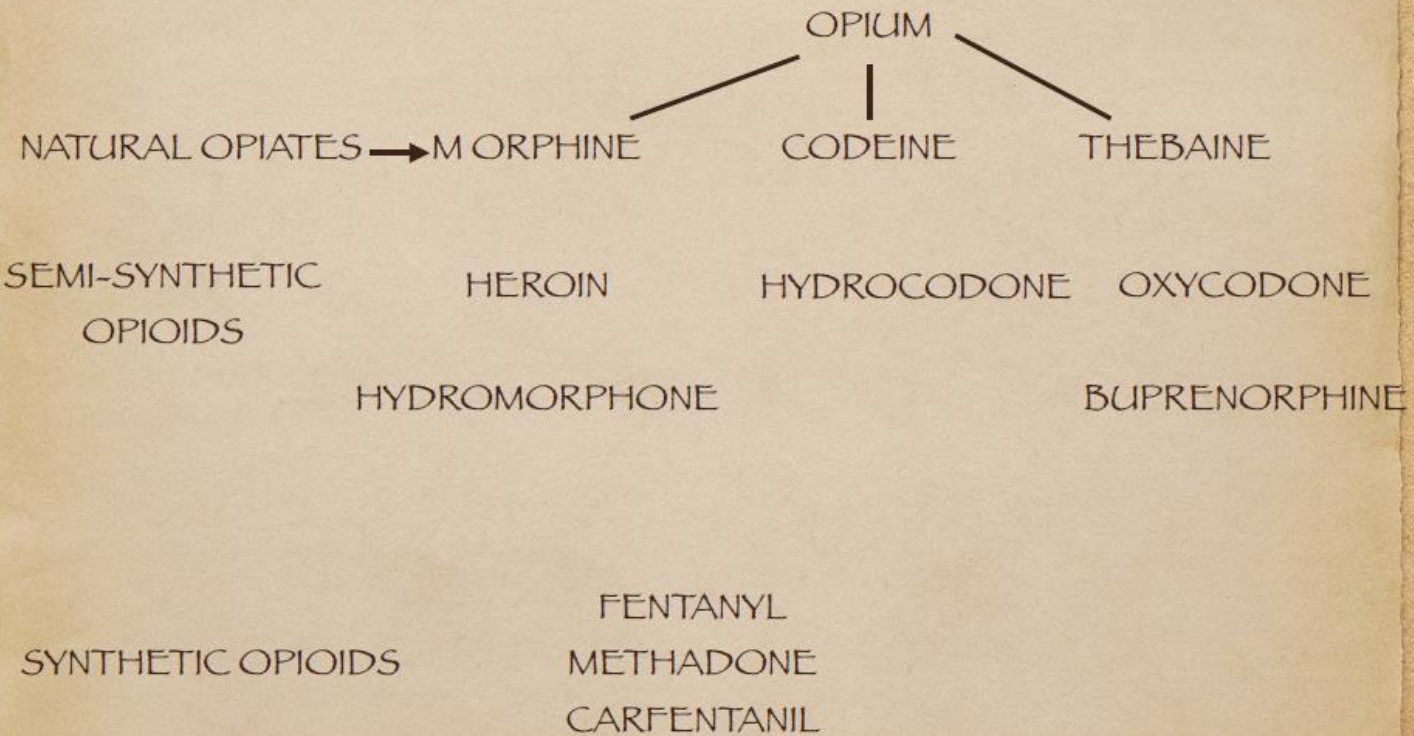
OPIOIDS MORE ADDICTIVE! WHY?

- PAIN RELIEF
- EUPHORIA
- SEVERE WITHDRAWAL SYMPTOMS

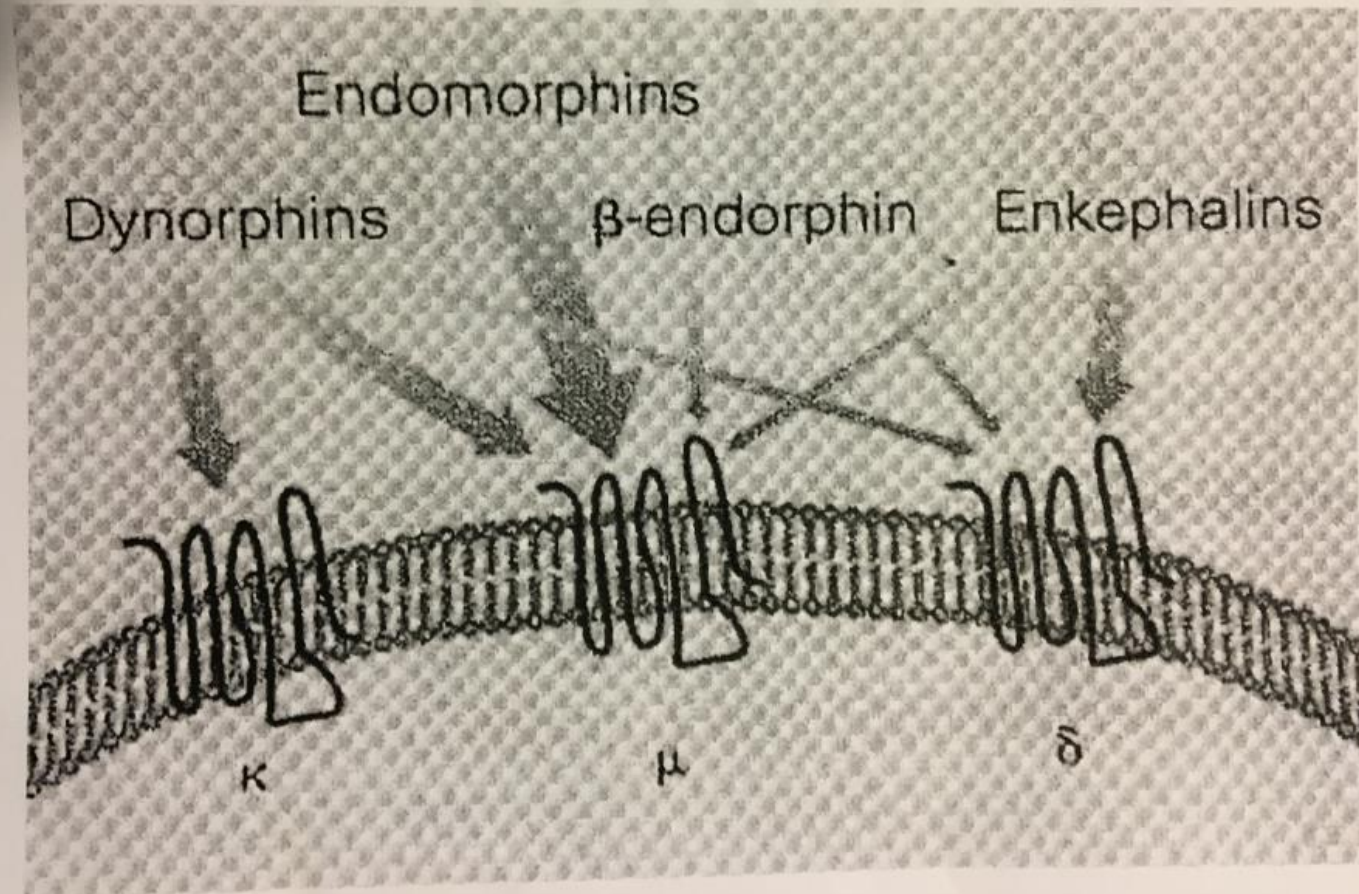
OPIOID CRISIS, WHY NOW?

- 91 DEATHS/DAY IN U.S.
- (GREATER THAN GUN DEATHS?)
- UNDER TREATMENT OF CHRONIC PAIN
- PURDUE PHARMA ~ OXYCONTIN 1996
- XALISIO ~ MEXICO
- FENTANYL ~ PRIMARILY FROM CHINA

NATURAL OPIATES TO SYNTHETIC OPIOIDS



Types of Opioid Receptors



COMMON OPIOIDS

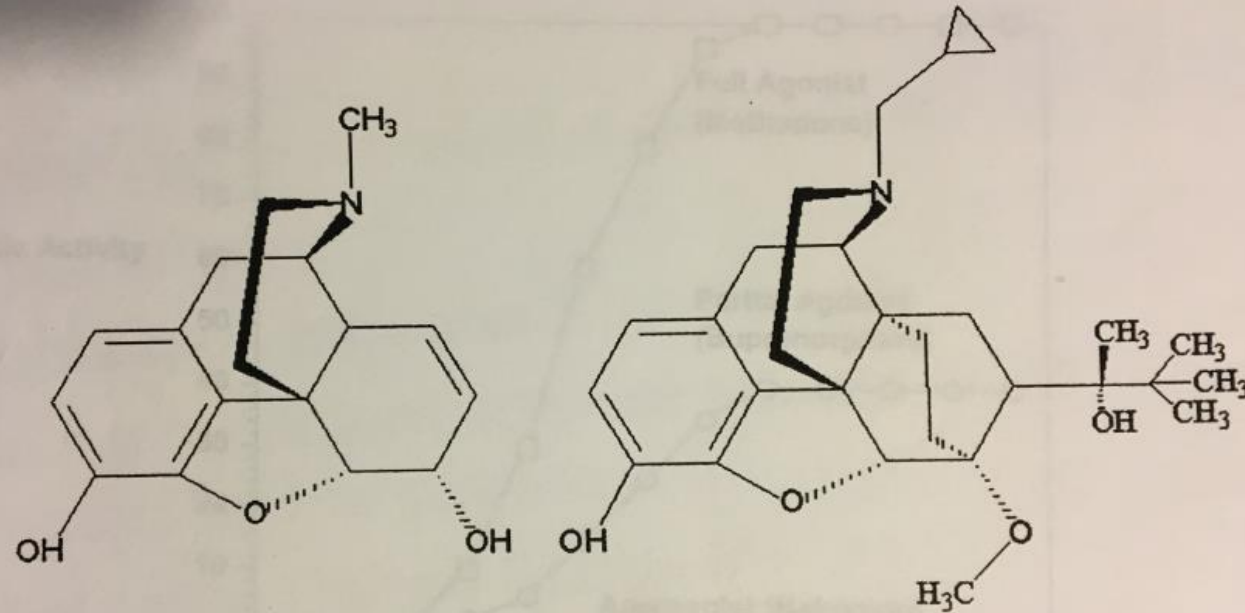
- MORPHINE ~ 30 MG
- CODEINE ~ 20 MG
- HYDROCODONE ~ 30 MG
- OXYCODONE ~ 20 MG
- HYDROMORPHONE ~ 7 MG
- METHADONE ~ 20 MG
- FENTANYL ~ 0.3 MG
- NALOXONE ~ BLOCKER
- NALTREXONE ~ BLOCKER
- BUPRENORPHINE ~ PARTIAL BLOCKER

STOPPING THE CRISIS

- RESCUE
- RECOVERY (M.A.T.)
- PREVENTION

BUPRENORPHINE

Buprenorphine

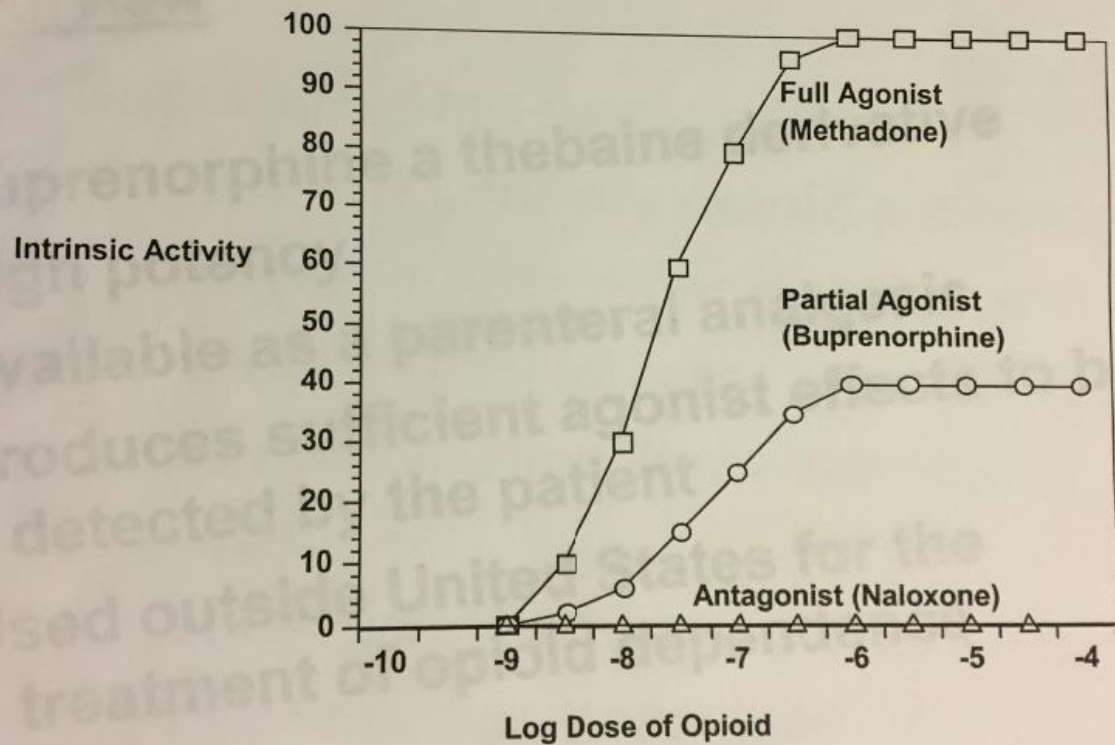


Morphine

(-)Buprenorphine

Fig. 1. Chemical structure of buprenorphine as compared with morphine.

Intrinsic Activity: Full Agonist (Methadone), Partial Agonist (Buprenorphine), Antagonist (Naloxone)



Overview

Buprenorphine a thebaine derivative

High potency

Available as a parenteral analgesic

Produces sufficient agonist effects to be detected by the patient

Used outside United States for the treatment of opioid dependence

AFFINITY

BUPRENORPHINE HAS

- High affinity for mu opioid receptor
- Competes with other opioids and blocks their effects
- Slow dissociation from mu opioid receptor
- Prolonged therapeutic effect for opioid dependence treatment

DATA

Drug Addiction Treatment Act Public Law 106-310

- **Amends the Controlled Substances Act**
 - **Waiving the requirement for separate NTP registration**
- **Qualified practitioners will be assigned a Unique Identification Number (UIN) by DEA**
 - **First alpha letter is replaced with an “X”**
 - **New DEA certificate will be issued**

THE ELDERLY

Y-amniobutyric acid (GABA)

- ALCOHOL
- BENZODIAZEPINES
- BARBITURATES

AT-RISK DRINKERS

- ADULT MALE: 15 OR MORE DRINKS/
WEEK OR 5 OR MORE DRINKS/
OCCASION
- ADULT FEMALE: 8 OR MORE DRINKS/
WEEK OR 4 OR MORE DRINKS/
OCCASION

RISK FACTORS

- A family history of addiction
- Co-morbid psychiatric conditions
- The patient who suspects that he or she has an Addiction
- Increasing the dose of medications without the authority of the provider
- Substance abuse under the age of 19

THE ADDICTED PATIENT

- Out of control with medications
- Medications decrease the quality of life
- Want medications to continue or increase despite side-effects
- In denial about medical problems
- Does not follow the treatment plan
- Does not have medications left over, loses prescriptions, always has a “story”

BENZODIAZAPINES

- Alprazolam (Xanax)
- Clonazepam (Klonopin)
- Diazepam (Valium)
- Flunitrazepam (Rohypnol “Roofies”)
- Lorazepam (Ativan)
- Midazolam (Versed)
- Oxazepam (Serax)
- Chlordiazepoxide (Librium)
- Temazepam (Restoril)
- Triazolam (Halcion)

AAPR BULLETIN

JUNE 2017

THE OPIOID MENACE

- 1/3 OF MEDICARE PATIENTS (12 MILLION) WERE PRESCRIBED OPIOIDS IN 2015
- 2.7 MILLION (>50 years old) ABUSED PAIN KILLERS IN 2015
HOSPITALIZATIONS DUE TO OPIOID ABUSE HAS QUADRUPLED FOR THOSE >65 YEARS OLD IN PAST 2 DECADES
- INCREASING NUMBERS OF ELDERLY ARE SELLING THEIR PILLS TO MAKE ENDS MEET

MYTH #1

EVERYONE WHO USES COCAINE OR
HEROIN IS ADDICTED

MYTH #2

STRESS CAUSES DRUG ADDICTION

MYTH #3

USE OF ILLEGAL DRUGS MAKES
YOU DESTINED TO BE
ADDICTED