

Terminology

Natural Opiates	Semi-Synthetic	Synthetic Opioids
Codeine	Buprenorphine	Fentanyl
Morphine	Heroin	Meperidine
	Hydrocodone	Methadone
	Hydromorphone	Sufentanil
	Oxycodone	Sufentanil
	Oxymorphone	
	Tramadol	

PATHOPHYSIOLOGY

Risk Factors: males, history of depression or anxiety, family history of alcohol or drug abuse, age ≤ 30, long-term opioid use
Involves the mesolimbic reward system

Standardized Assessment Tools

Score	Severity
5 to 12	Mild
13 to 24	Moderate
25 to 36	Moderate to Severe
> 36	Severe

COWS: Clinical Opiate Withdrawal Scale

- used clinically to monitor withdrawal
- often utilized to determine when PRNs are needed

NALOXONE

MOA	Opioid Antagonist
Warning-s/ADRs	Cardiac or respiratory effects associated with rapid reversal of opioids Aggression (<i>from immediate withdrawal</i>)
Administration	Call 911 FIRST Administer If no response after 3 minutes, administer 2nd dose

- It only works on opioid receptors!

- It will **NOT** affect someone (*positively or negatively*) if they do not have opioids in their system

Opioid Use Disorder | TREATMENT

FIRST LINE	SECOND LINE
APA:	
Buprenorphine	Naltrexone PO
Methadone	
BAP:	
Buprenorphine	Naltrexone PO
Methadone	
VA/DOD:	
Suboxone	Naltrexone
Buprenorphine	
Methadone	

Psychosocial treatment is also the first line in addition to pharmacotherapy

Buprenorphine Formulations

	Buprenorphine	Buprenorphine-Naloxone
Brand	Subutex	Suboxone, Zubsolv
MOA	Mu opiate receptor - partial agonist	Mu-partial agonist and opioid antagonists
Formulation	SL tablet	SL tablet, SL film; (4:1 ratio of bupren. and naloxone)
Dosing range	8 to 32 mg bupren./day	8 to 32 mg bupren/day
Warnings	initiation should not begin until pt is experiencing withdrawal	same
	respiratory depression	same
	risk of abuse or dependence	same
DDIs	CYP3A4 inhibitors/inducers	same
	CNS depressants	same



Buprenorphine Formulations (cont)

Monitoring	Tolerability, resp. depression, (LFTs), urine drug screening, PMP, urine buprenorphine	same
Clinical Pearls	Preferred in pregnancy; higher abuse potential	naloxone added as an abuse deterrent; preferred formulation in non-pregnant patients

partial agonist activity results in ceiling effect, higher binding affinity than other opioids, newer formulation include sub-dermal implant, and subcutaneous injection

Prescribing Restrictions:

- Schedule III
- DATA waiver
- Initial no. of pts is 30
- May apply 1 year to increase no. of patients to 100, then 275
- DEA number will begin with X

Signs and Sx of opioid WITHDRAWAL

Dysphoric mood	Fever
Lacrimation or Rhinorrhea	Muscle aches
Yawning	Diarrhea
N/V	Insomnia
Pupillary Dilatation	Piloerection (goosebumps)
Sweating	

WITHDRAWAL TIMELINE

Onset of withdrawal will depend upon the half-life of the opioid used (normally within 36 to 72 hours)

Completed within **7 days** for short acting opioids (heroin) and 14 days for long-acting opioids (buprenorphine, methadone)

Preferred treatment

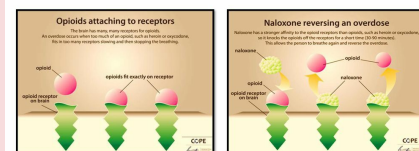
Methadone	buprenorphine
Chronic Pain	Prolonged QT interval
history or diversion or polysubstance use	not able to attend daily clinic
requires closer monitoring	requires less monitoring and no untreated psychiatric comorbidities
pregnant women	dependent on lower doses of opioids (ceiling effect)
requires wide dosing range	

Terms

Opioid Tolerance	Person using opioids begins to experience a reduced response to medication requiring more opioids to experience the same effect
Opioid Dependence	Occurs when the body adjusts its normal functioning around regular opioid use (unpleasant physical symptoms occurs when med is stopped)
Opioid Addiction	Occurs when attempts to cut down use are unsuccessful or when results insocial problems and a failure to fulfill obligations; often comes after person has developed opioid tolerance and dependence

Narcan MOA

NALOXONE MECHANISM OF ACTION



DSM-5 DIAGNOSTIC CRITERIA

A problematic pattern of substance use leading to clinically significant impairment or distress, manifested by \geq 2 of the following over a 12-month period

Substance is taken in larger amounts or over a longer period than intended

Persistent desire or unsuccessful efforts to reduce or control use

A great deal of time is spent in activities necessary to obtain, use, or recover from effects

Cravings or a strong desire to use

Recurrent use resulting in a failure to fulfill major obligations

Continued use despite having persistent social or interpersonal problems caused by the substance

Important social, occupational, or recreational activities are given up or reduced

Recurrent use in situations that are physically hazardous

Recurrent use despite knowledge of having a persistent or recurrent physical or psychological problem due to use

Tolerance

Withdrawal

FIRST - LINE TREATMENT

APA	British Association of Psychopharmacology
Buprenorphine	Alpha-2 agonist
Methadone	Buprenorphine
	Methadone

Targeted at individual symptoms of withdrawal

Common practice if an opioid treatment program (OTP) or bridging medication-assisted treatment (MAT)

Methadone

Brand METHADOSE

MOA opioid agonist

Formulation Liquid (opioid maintenance); tablets (pain only) | this is for pharmacies (methadone clinics do tabs)

Methadone (cont)

Maintenance dose 80 to 120 mg daily

Warnings QTc prolongation, respiratory depression, risk of abuse or dependence

DDI QTc prolongating meds, CYP3A4 inhibitors or inducers, Medications that induce hypokalemia, hypocalcemia, or hypomagnesemia; CNS depressants

Monitoring Tolerability, respiratory depression, HR/BP, EKG, electrolytes, UDS, urine methadone, PMP

Clinical Pearls prolonged or delayed withdrawal due to long half-life; overdose risk is highest during initial 2 weeks of treatment

Prescribing restrictions:

- schedule II; restricted to certified opioid treatment program (OTP)
- it is not appropriate to dispense methadone from a community pharmacy for the purposes of opioid detox, withdrawal, or maintenance
- pts must be currently addicted and have opioid use disorder \geq 1 year
- exceptions: pregnancy, recently released from correction, and previous treatment in OTP

know difference between prescribing of methadone and buprenorphine

Signs and Sx of INTOXICATION

Pupillary Constriction

Slurred Speech

Drowsiness

Impaired attention or memory

Signs and Sx of Opioid OVERDOSE

Pupillary constriction

Shallow or slow respirations

Stupor

Coma

Hypothermia

Bradycardia



Narcan Formulations

Naloxone	IM/IV/SQ
Naloxone	Intranasal
Evzio	IM auto-injector
Narcan	Intranasal

SYMPTOMATIC TREATMENT (PRN)

Medication	Class/MOA	Indication
Clonidine	Alpha-2 agonist reduced the noradrenergic hyperactivity associated with opioid withdrawal	Generalized Sx of opioid withdrawal
Loperamide	Anti-diarrheal	Diarrhea
Ondansetron	Antiemetic	N/V
Trazodone	Sedative antidepressant	Insomnia
Hydroxyzine	Antihistamine/anxiolytic	Anxiety
Ibuprofen	NSAID	muscle pain
Cyclobenzaprine	skeletal muscle relaxant	muscle cramps



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Published 23rd February, 2020.
Last updated 25th February, 2020.
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