



Opioids: The Good, The Bad, and The Ugly

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Learning Objectives

1. Define narcotics and opioids
2. Describe common side effects of opioids
3. Explain the difference between tolerance, physical dependence, addiction, and pseudo-addiction
4. Identify symptoms of an opioid overdose and what to do in the event of one
5. Identify symptoms of opioid withdrawal
6. Be able to recognize the generic and brand name of opioids
7. Understand how “Scheduled” or “Controlled” medications are regulated
8. Understand the opioid epidemic and the dangers opioids possess
9. Be able to recognize red flags of abuse or addiction
10. Evaluate alternative non-opioid pain options
11. Analyze a prescription label

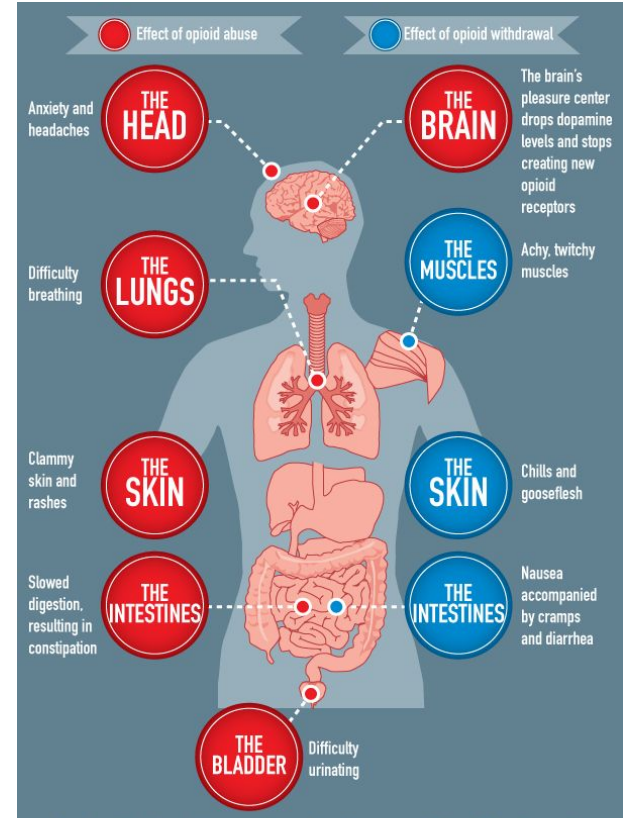
What are opioids?

- **Narcotic:** a drug that in moderate doses dulls the senses, relieves pain, and induces profound sleep, but in excessive doses causes near-unconsciousness, coma, or convulsions
- **Opioid:** a type of narcotic medication that binds to opioid receptors



What are side effects of opioids?

Common Side Effects	Less Common Side Effects
<ul style="list-style-type: none">● Drowsiness● Dizziness● Constipation● Nausea● Vomiting	<ul style="list-style-type: none">● Itching● Respiratory depression



What is tolerance, physical dependence, addiction, and pseudo-addiction?



Dependence: When a person physically needs a drug to function.



Tolerance: When you need to take more of a drug for the same effect.



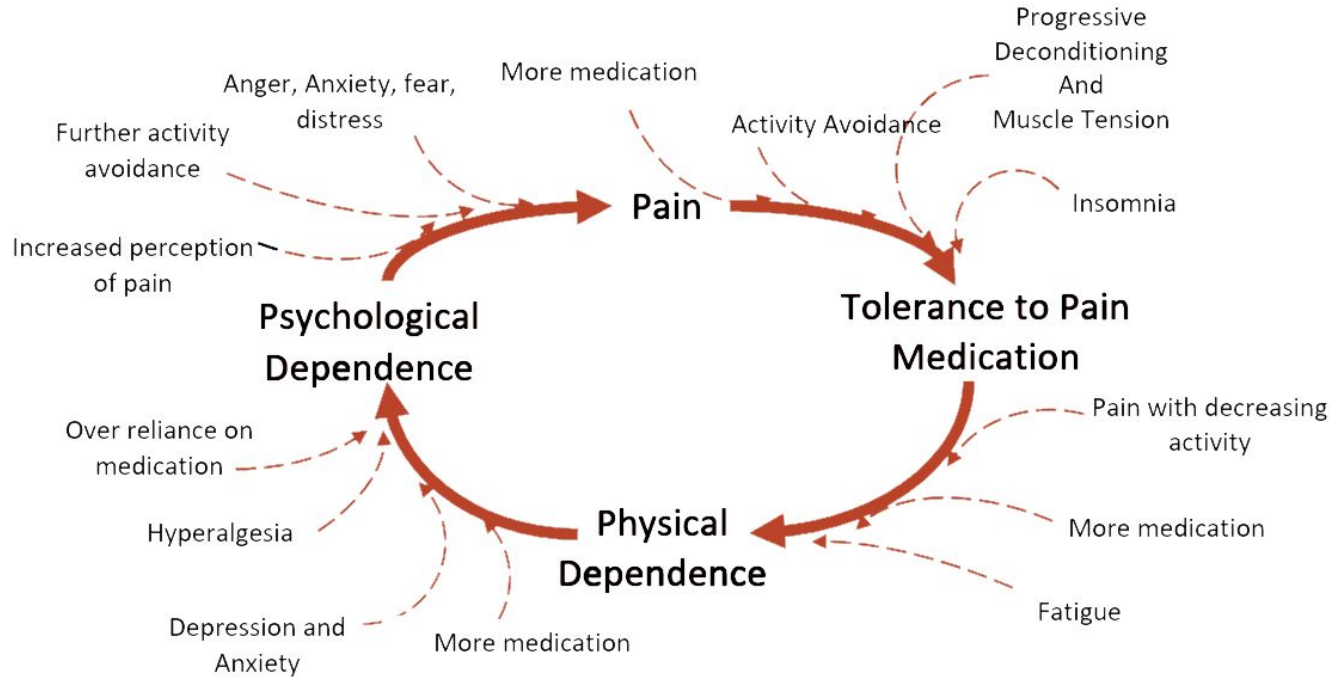
Withdrawal: Symptoms experienced when a dependent person doesn't have the drug.



Addiction: When a person compulsively seeks out a drug despite negative consequences.

Pseudo-addiction: addiction-like behaviors exhibited by patients who are under-treated on their pain regimen

What is tolerance, physical dependence, addiction, and pseudo-addiction?



What does an opioid overdose look like?

SIGNS OF OVERDOSE



PERSON IS NOT MOVING



BREATHING WILL BE SLOW OR ABSENT



PERSON MAY BE CHOKING



YOU CAN HEAR GURGLING OR SNORING SOUNDS



SKIN FEELS COLD AND CLAMMY



PUPILS ARE TINY

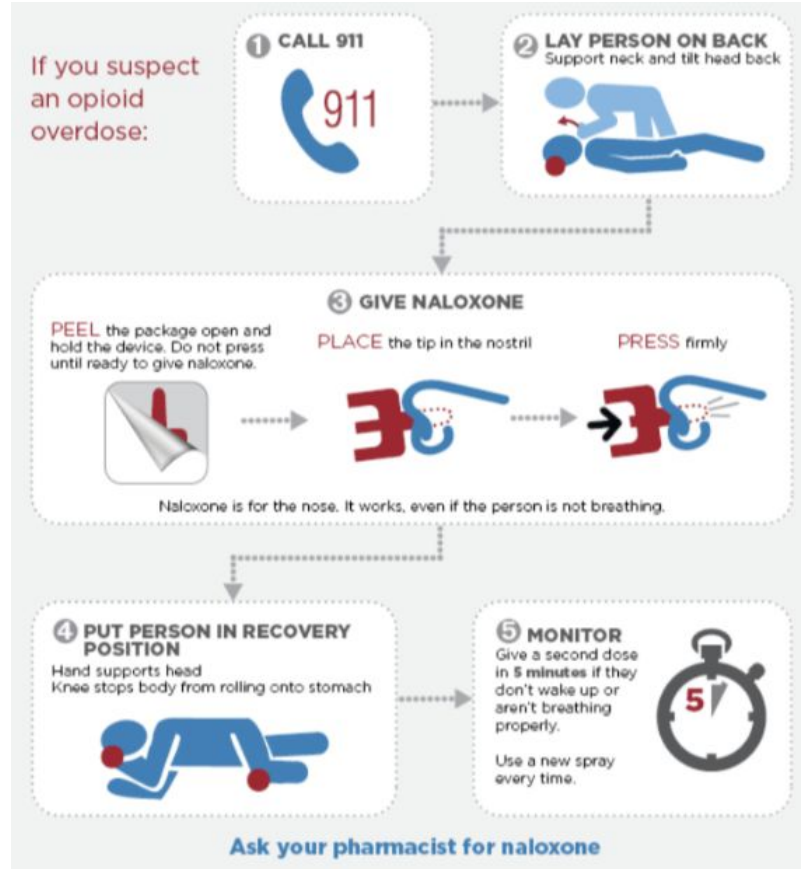


LIPS AND NAILS ARE BLUE

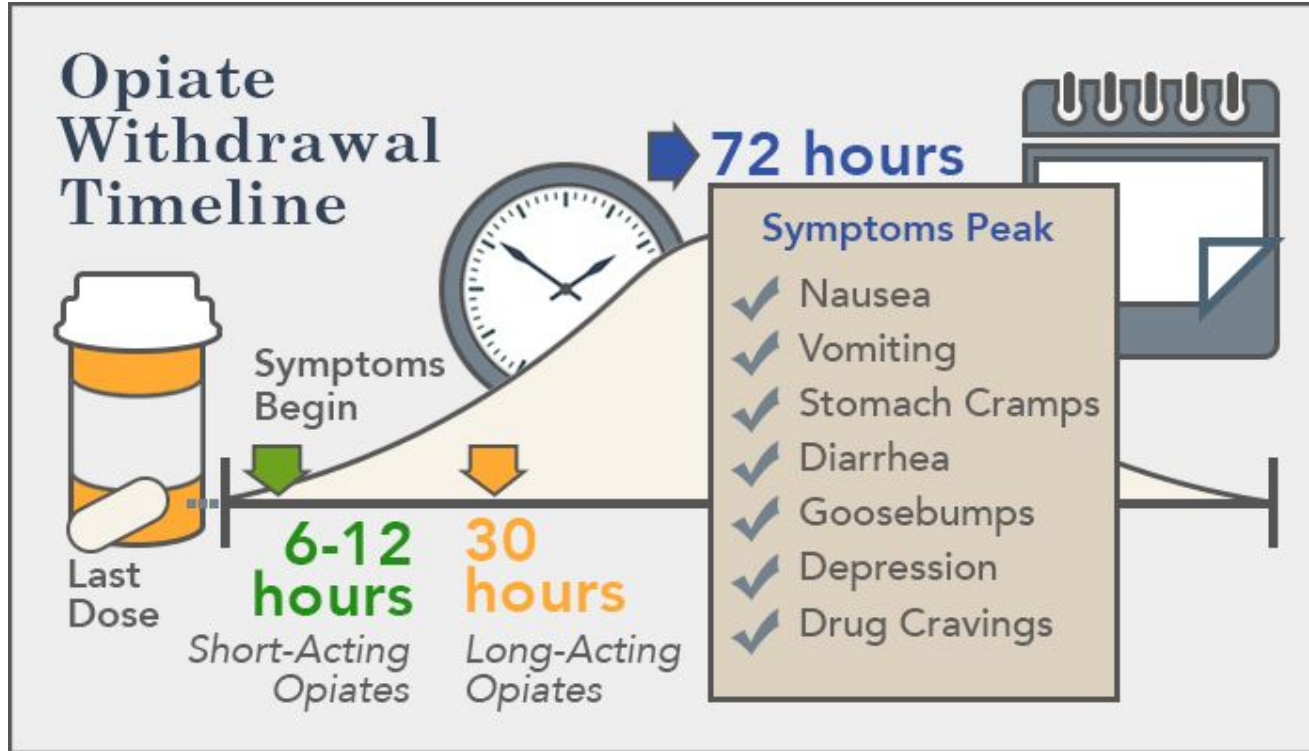


PERSON CAN'T BE WOKEN UP

What to do in case of an overdose?



What are symptoms of opioid withdrawal?



- Muscle aches
- Restlessness
- Anxiety
- Runny nose
- Teary eyes
- Excessive sweating
- Inability to sleep
- Yawning often

All opioids are “scheduled” or “controlled” by the DEA - What does this mean?

THE DRUG SCHEDULE CLASSIFICATIONS PYRAMID

SCHEDULE 1

Substances that have no currently accepted medical use in the United States, a lack of accepted safety for use under medical supervision, and a high potential for abuse.

SCHEDULE 2

Substances in this schedule have a high potential for abuse which may lead to severe psychological or physical dependence.

SCHEDULE 3

Substances in this schedule have a potential for abuse less than substances in Schedules I or II and abuse may lead to moderate or low physical dependence or high psychological dependence.

SCHEDULE 4

Substances in this schedule have a low potential for abuse relative to substances in Schedule III.

SCHEDULE 5

Substances in this schedule have a low potential for abuse relative to substances listed in Schedule IV and consist primarily of preparations containing limited quantities of certain narcotics.

Examples of Scheduled/Controlled Medications

- **Schedule 1**: heroin, LSD, marijuana
- **Schedule 2**: morphine (MS Contin), hydromorphone (Dilaudid), fentanyl (Duragesic), oxycodone (OxyContin), oxycodone with acetaminophen (Percocet), hydrocodone with acetaminophen (Norco, Vicodin), methadone (Dolophine), tapentadol (Nucynta)
- **Schedule 3**: codeine with acetaminophen (Tylenol #2, 3, 4), buprenorphine (Suboxone)
- **Schedule 4**: tramadol (Ultram)
- **Schedule 5**: promethazine with codeine (Phenergan with codeine, Robitussin AC), pregabalin (Lyrica)

How are opioids regulated?

- Laws and regulations:
 - Prescription expires **6 months** from the date written
 - Maximum of 90-day supply may be filled
 - Schedule **2** medications
 - **Cannot be refilled**
 - Must be filled in the state the prescription was written
 - Schedule **3-5** medications
 - May only be refilled 5 times with a maximum of 120 days worth of medication refills
 - First fill must be at the pharmacy it was originally dropped off or sent to

How are opioids regulated?

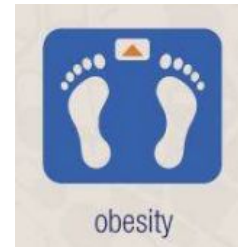
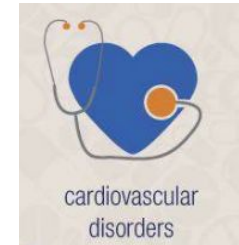
- Prescribing and filling
 - Prescribers
 - Controlled prescription pads
 - **Controlled Substance Utilization Review and Evaluation System (CURES)**
 - Pharmacists
 - Regulate how early the prescription may be filled (in general, pharmacies will fill 2 to 3 days early with the exception of travel)
 - CURES

Why do we still prescribe opioids?

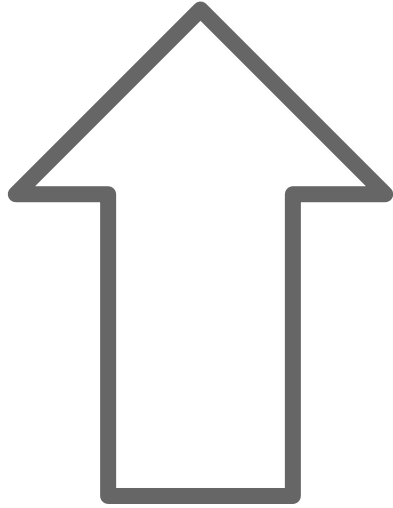
CHRONIC PAIN is a growing
PUBLIC HEALTH PROBLEM:



Diseases that result in
INCREASING prevalence
of **PERSISTENT PAIN** :



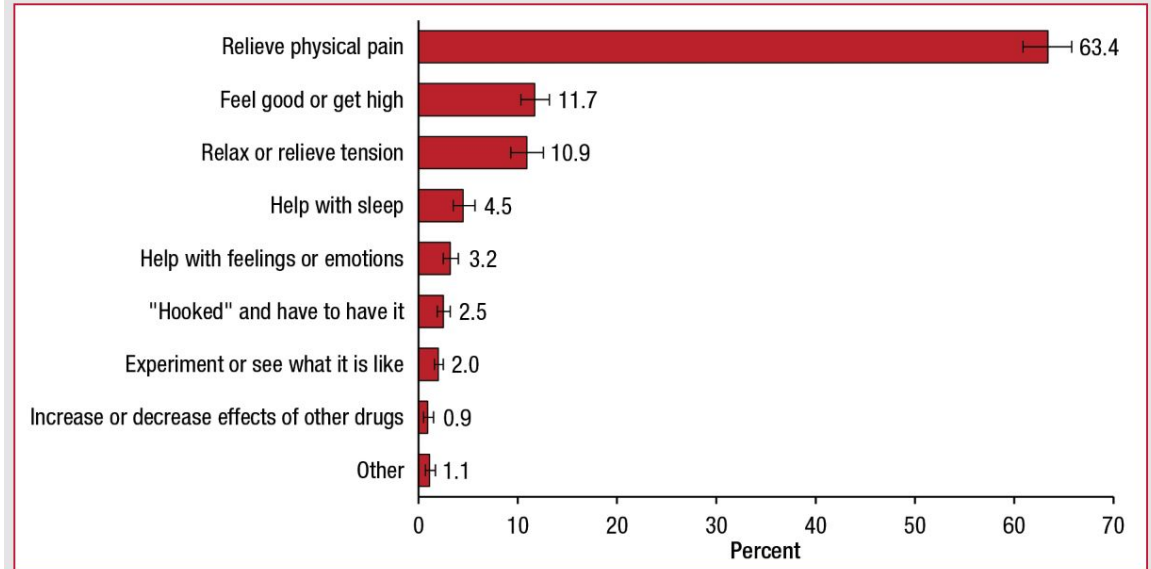
Why do we still prescribe opioids?



300% INCREASE

in prescribing of opioids
by clinicians in the past 20
years

Figure 2. Main reasons for last episode of prescription pain reliever misuse among past year misusers aged 18 or older: 2015



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2015.

What is the opioid epidemic?

Data from the U.S. National Institute on Drug Abuse indicates:*



Roughly
21-29%
of patients prescribed opioids
for chronic pain misuse them



Between
8-12%
develop an opioid use
disorder



An estimated
4-6%
who misuse prescription
opioids transition to heroin



Approximately
80%
of people who use heroin first
misused prescription opioids

* National Institute on Drug Abuse. (2017). Opioid Crisis. Retrieved May, 2017, from <http://www.drugabuse.gov/drugs-abuse/opioids/opioid-crisis>

- Every day, more than 115 people in the U.S. die after overdosing on opioids.
- Opioid overdoses accounted for more than 42,000 deaths in 2016, more than any previous year on record.

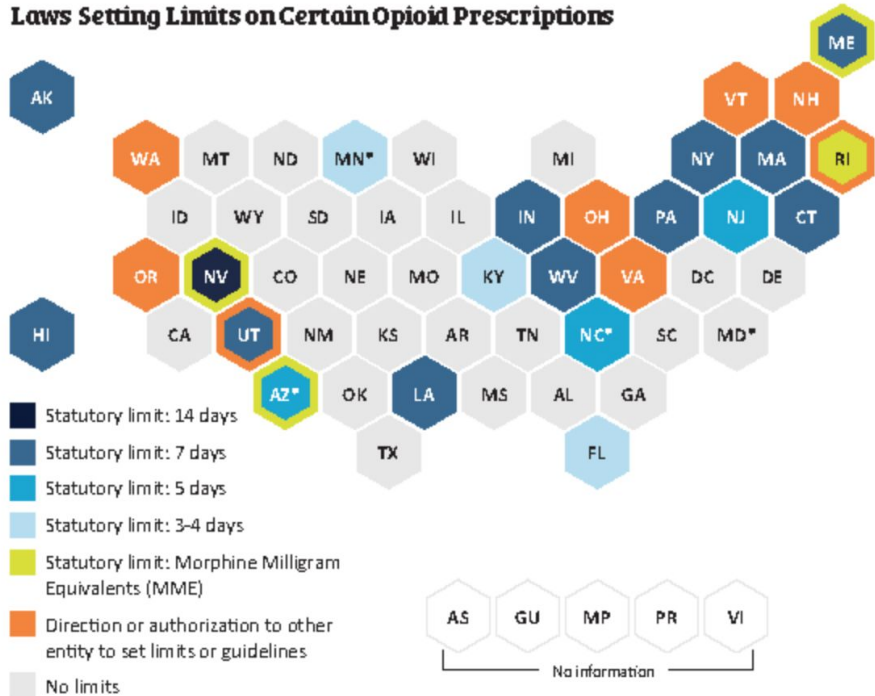
What's being done to combat this epidemic?

U.S. Department of Health and Human Services (HHS) is focusing its efforts on **five major priorities**:

1. improving access to treatment and **recovery** services
2. promoting use of overdose-reversing drugs (**naloxone**)
3. strengthening our understanding of the epidemic through better public health **surveillance**
4. providing support for cutting-edge **research** on pain and addiction
5. advancing **better practices** for pain management

What's being done to combat this epidemic?

Laws Setting Limits on Certain Opioid Prescriptions



What are some red flags of drug abuse?



Early Refills

Asking to refill controlled medication earlier than scheduled



Doctor Shopping

Patient has seen many doctors in a short period of time



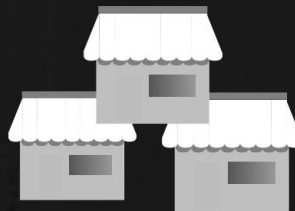
Treatment Options

Patient isn't willing to consider any other treatments



Sharing Prescriptions

Using opioid prescriptions that are not prescribed for them



Multiple Pharmacies

Patient uses multiple pharmacies

What are available resources?

- Substance Abuse and Mental Health Services Administration (SAMHSA) National Helpline is a free, confidential, 24/7, 365-day-a-year treatment referral and information service (in English and Spanish)
 - **1-800-662-HELP (4357)**



Activity Time!

Reading prescription labels

What should you ask yourself while evaluating patients' prescriptions?

1. Does the medication belong to the patient?
2. When was it last filled?
3. Is the patient taking it as prescribed?
4. Is it expired?
5. Do they need refills?
6. Can they read the label?
7. Can they open the bottle?
8. Are they filling the prescription at more than one pharmacy?
9. Is the right medication in the correct bottle?



How do I read a prescription label?

The diagram shows a prescription label with the following text and callouts:

- Pharmacy name and address:** Local Pharmacy, 123 MAIN STREET, ANYTOWN, USA 11111
- Drugstore phone number:** (800) 555-5555
- Doctor's name:** DR. C. JONES
- Prescription fill date:** DATE 06/23/09
- Number used by the drugstore to identify this drug for your refills:** NO 0060023-08291
- Person who gets this drug:** JANE SMITH, 456 MAIN STREET ANYTOWN, US 11111
- Instructions about how often and when to take this drug:** TAKE ONE CAPSULE BY MOUTH THREE TIMES DAILY FOR 10 DAYS UNTIL ALL TAKEN
- Name of drug and strength of drug:** AMOXICILLIN 500MG CAPSULES
- Number of refills before certain date:** QTY NO REFILLS - DR. AUTHORIZATION REQUIRED, MRG USE BEFORE 06/23/12, SLF/SLF
- Don't use this drug past this date:** USE BEFORE 06/23/12

Additional callouts include: "Pharmacy name and address" pointing to the pharmacy name and address; "Number used by the drugstore to identify this drug for your refills" pointing to the NO number; "Person who gets this drug" pointing to the patient name and address; "Instructions about how often and when to take this drug" pointing to the dosage instructions; "Name of drug and strength of drug" pointing to the drug name; "Number of refills before certain date" pointing to the QTY and MRG information; and "Don't use this drug past this date" pointing to the use-by date.

How do I read a prescription label?

**Clear refill details
make re-ordering
a snap**

**Simplified dosage
schedule for clearer
directions**

CVS pharmacy
123 Main Street, #0000
Anytown, USA 00000 CVS.COM
Store Corporate Name

TEL 555-555-5555
RX 105004
QTY: 60
REFILLS: 2 by MM/DD/YYYY
PRSCBR: J. Doe
DATE FILLED: MM/DD/YYYY
DISCARD AFTER: MM/DD/YYYY
RPH: J. Smith
MFR: ABC Manufacturer

This is a WHITE, OVAL-SHAPED
tablet imprinted with 93 on the front
and 48 on the back.

PATIENT
METFORMIN HCL
500 MG

Patient Name
300 East Street, Anytown, USA 00000

MORNING 1 TABLET
MIDDAY
EVENING 1 TABLET
BEDTIME

Important Information

- Talk to your Dr. about the safe use of alcohol while taking this drug.
- Severe vomiting or diarrhea may cause dehydration if these occur call MD.
- Drug may cause lactic acidosis. If symptoms develop, seek medical help.

Generic equivalent of: Glucophage
**Take 1 tablet orally
2 times a day**

CAUTION Federal law prohibits the transfer of this drug to any person other than the patient for whom it was prescribed.

SCAN TO REFILL

▲ PHARMACY ADVICE

**Easy-to-find
prescription
information**

**Color-coded
icons for
times of day**

**Larger text
for increased
readability**

Let's practice!

OVAL WHITE TABLET
Side 1: IP 466

May Cause Drowsiness Or Dizziness

Take This Medicine With A Snack
Or Small Meal If Stomach Upset
Occurs

Read The Medication Guide That
Comes With This Medicine

Increase Alcohol Use While Taking
This Drug. Daily Use Of Alcohol
May increase The Risk Of Stomach
Bleeding

MILEY CYRUS

606 CHICAGO LAKE, BEVERLY HILLS 90210

DATE 02/23/14

VALTREX

MFG AMNEAL

**TAKE 1 TABLET BY MOUTH
EVERY 8 HOURS AS NEEDED
FOR HERPE OUTBREAK CONTROL**

Patent Pending

RX **1836546-06293**

EXPIRATION DATE 02/23/16

QTY **28**

NO REFILLS - DR. AUTH REQUIRED

DR ANDRE YOUNG

Walgreens

5150 HUTCHACE BLVD, BEVERLY HILLS 90210

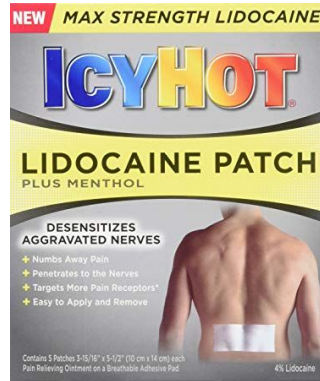
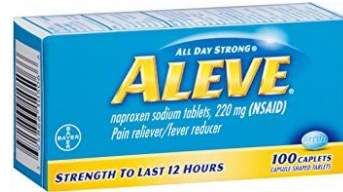
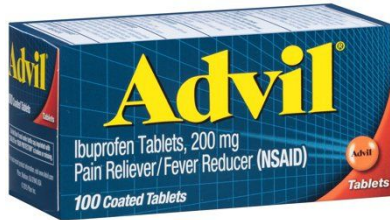
(666) 265 - 0499

LAT/JLLIARM /

Rx ONLY

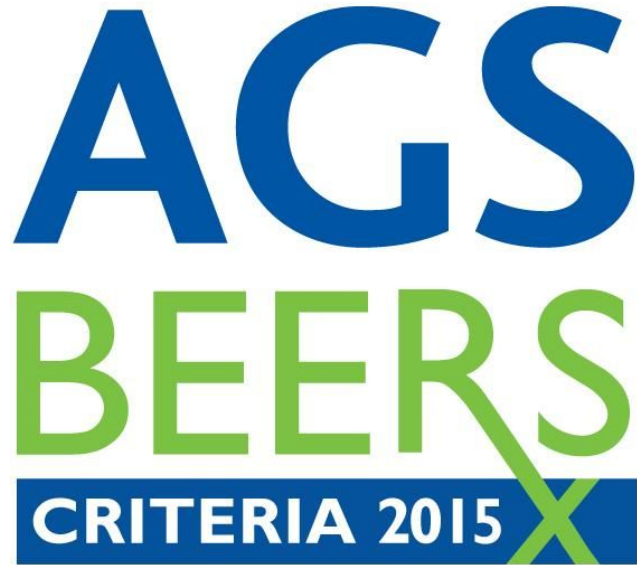


What else can be used for pain besides opioids?



What is the approach to pain management in the elderly?

Guidelines often used:



What pain medications can be potentially inappropriate in elderly patients?

According to the AGS BEERs criteria:

Medication	Examples	Reason	Recommendation
NSAIDs	Ibuprofen Naproxen	May ↑ risk of stomach bleed or ulcer, especially in pts > 75yrs. May lead to ↑ BP with long-term use	Avoid long-term use, if possible
Aspirin > 325mg/day	-----	May ↑ risk of stomach bleed or ulcer, especially in pts > 75yrs.	Avoid long-term use, if possible
Indomethacin	-----	NSAID with most side effects. NSAID with most neurologic SEs	AVOID

What pain medications can be potentially inappropriate in elderly patients?

According to the AGS BEERs criteria:

Medication	Examples	Reason	Recommendation
Skeletal Muscle Relaxants	Carisoprodol Chlorzoxazone Cyclobenzaprine Metaxalone Methocarbamol Orphenadrine	Poorly tolerated in the elderly <ul style="list-style-type: none">- Cause sedation- ↑ risk of falls & fractures	AVOID

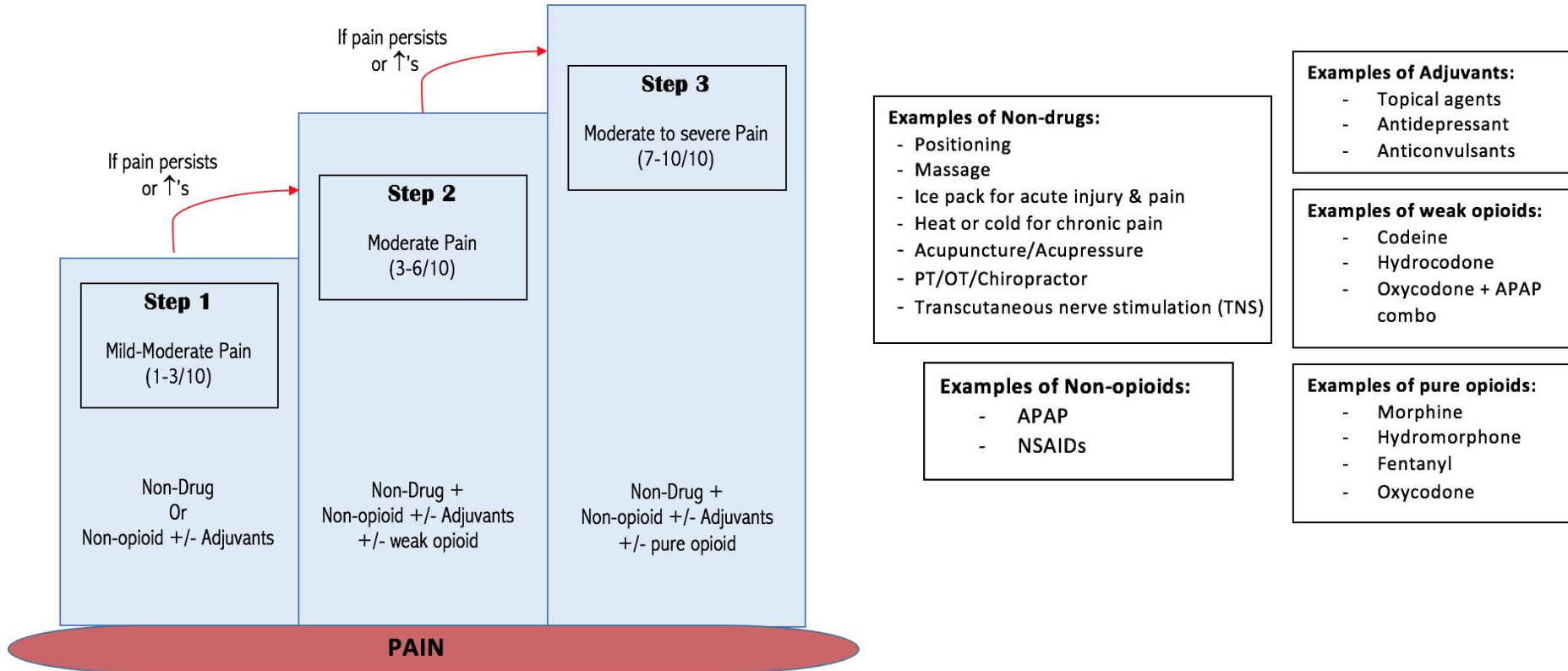
What about opioids?

AGS's concerns with opioids in the elderly:

- Their potential adverse effects
 - Especially **constipation** since this is an issue a lot of older patients already struggle with it doesn't improve over time
- The risk of overdose and respiratory depression
- Drug-drug interactions (benzodiazepines, alcohol)
- The risk of drug accumulation
- The risk of addiction

What is the approach to pain management in the elderly?

WHO three-step "Analgesic Ladder"



What is the role of cannabis?

Pros:

- Adjunct pain relief
- Help with nausea → increase appetite
- Help with mental health disorders
- Help with sleep
- Different forms available

Cons:

- Federally Schedule 1
- Lack of extensive research
- Risk of tolerance
- Possible drug interactions
- Social stigma / cultural resistance



Summary:

1. Define narcotics and opioids
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Thank you!
Any questions?

References

1. American Society of Addiction Medicine. Definitions Related to the Use of Opioids for the Treatment of Pain: Consensus Statement of the American Academy of Pain Medicine, the American Pain Society, and the American Society of Addiction Medicine. <https://www.asam.org/docs/default-source/public-policy-statements/1opioid-definitions-consensus-2-011.pdf>. Accessed September 5, 2018.
2. Dictionary: Narcotic. Merriam-Webster. <https://www.merriam-webster.com/dictionary/narcotic>. Accessed September 5, 2018.
3. Drug Enforcement Agency. Definition of controlled substance schedules. <https://www.deadiversion.usdoj.gov/schedules/>. Accessed September 5, 2018.
4. Drug Enforcement Agency. Valid prescription requirements. Section IX. https://www.deadiversion.usdoj.gov/pubs/manuals/pharm2/pharm_content.htm. Accessed September 5, 2018.
5. Drug pyramid. Wolf Law Colorado. <https://wolflawcolorado.com/wp-content/uploads/2015/05/Drug-Pyramid-620.jpg>. Accessed September 5, 2018.
6. Examining the Federal Response to the Opioid Crisis, Part 1. The Doctor Weighs In. <https://thedoctorweighsin.com/examining-the-federal-response-to-the-opioid-crisis/>. Published September 15, 2017. Accessed September 5, 2018.
7. Guidelines for Prescribing Opioids for Chronic Pain. CDC. https://www.cdc.gov/drugoverdose/pdf/Guidelines_Factsheet-a.pdf. Accessed September 5, 2018.
8. How to Use Naloxone Nasal Spray in a Few Simple Steps. Canadian Pharmacists Association. <https://www.pharmacists.ca/news-events/news/how-to-use-naloxone-nasal-spray-in-a-few-simple-steps-new-video-and-infographic/>. Accessed September 5, 2018.
9. Hydrocodone Bitartrate. Micromedex. Accessed September 5, 2018.
10. Interior Chemical Dependency Agency. Is it pain or is it addiction? <http://chemicaldependency.ca/pain-or-addiction/>. Accessed September 5, 2018.
11. Kaye AD, Baluch A, Scott JT. Pain management in the elderly population: A review. *Ochsner J*. 2010;10(3):179-187.
12. New Prescribing Law for Treatment of Acute and Chronic Pain. New Jersey Academy of Family Physicians. <https://www.njafp.org/content/new-prescribing-law-treatment-acute-and-chronic-pain>. Accessed September 5, 2018.
13. Opiate Withdrawal Timelines, Symptoms, and Treatment. American Addiction Centers. <https://americanaddictioncenters.org/withdrawal-timelines-treatments/opiate/>. Accessed September 5, 2018.
14. Opioid Overdose Crisis. National Institute on Drug Abuse. <https://www.drugabuse.gov/drugs-abuse/opioids/opioid-overdose-crisis>. Updated March 2018. Accessed September 5, 2018.
15. Opioids and Chronic Pain - A Gap in Our Knowledge. National Institute on Drug Abuse. <https://www.drugabuse.gov/about-nida/noras-blog/2014/09/opioids-chronic-pain-gap-in-our-knowledge>. Published September 25, 2014. Accessed September 5, 2018.
16. Prescribing Policies: States Confront Opioid Overdose Epidemic. National Conference of State Legislatures. <http://www.ncsl.org/research/health/prescribing-policies-states-confront-opioid-overdose-epidemic.aspx>. Published April 5, 2018. Accessed September 5, 2018.
17. Prescription drug epidemic: 20 red flags physicians should watch for. The DO. <https://thedo.osteopathic.org/2015/06/prescription-drug-epidemic-20-red-flags-physicians-should-watch-for/>. Published June 11, 2015. Accessed September 5, 2018.
18. Recognize the Red Flags: Learn to Spot Opioid Misuse. <https://allianceforaction.org/individuals/recognize-the-red-flags-2-2/>. Accessed September 5, 2018.
19. Red Flag Signs of Prescription Drug Abuse. State Medical Board of Ohio. <http://www.med.ohio.gov/Portals/0/DNN/PDF-FOLDERS/Center-Panel/News-Folder/RED-FLAG-Document.pdf>. Published September 9, 2015. Accessed September 5, 2018.
20. Sifferlin A. Can medical marijuana help end the opioid epidemic? *Times Magazine*. <http://time.com/4419003/can-medical-marijuana-help-end-the-opioid-epidemic/>. Published July 28, 2016. Accessed September 5, 2018.
21. Signs of Overdose. Provincial Health Services Authority. <https://twitter.com/phsaofbc/status/770654983238844418>. Accessed September 5, 2018.
22. The complete guide to medical marijuana for seniors. National Council for Aging Care. <http://www.aging.com/the-complete-guide-to-medical-marijuana-for-seniors/>. Accessed September 5, 2018.
23. Why do adults misuse prescription drugs?. SAMHSA. https://www.samhsa.gov/data/sites/default/files/report_3210/ShortReport-3210.html. Published July 27, 2017. Accessed September 5, 2018.
24. American Geriatrics Society 2015 Beers Criteria Update Expert Panel. American Geriatrics Society 2015 Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. *J Am Geriatr Soc*. 2015 Nov;63(11):2227-46.
25. American Geriatrics Society Panel on the Pharmacological Management of Persistent Pain in Older Persons. Pharmacological management of persistent pain in older persons. *Pain Med*. 2009 Sep;10(6):1062-83.