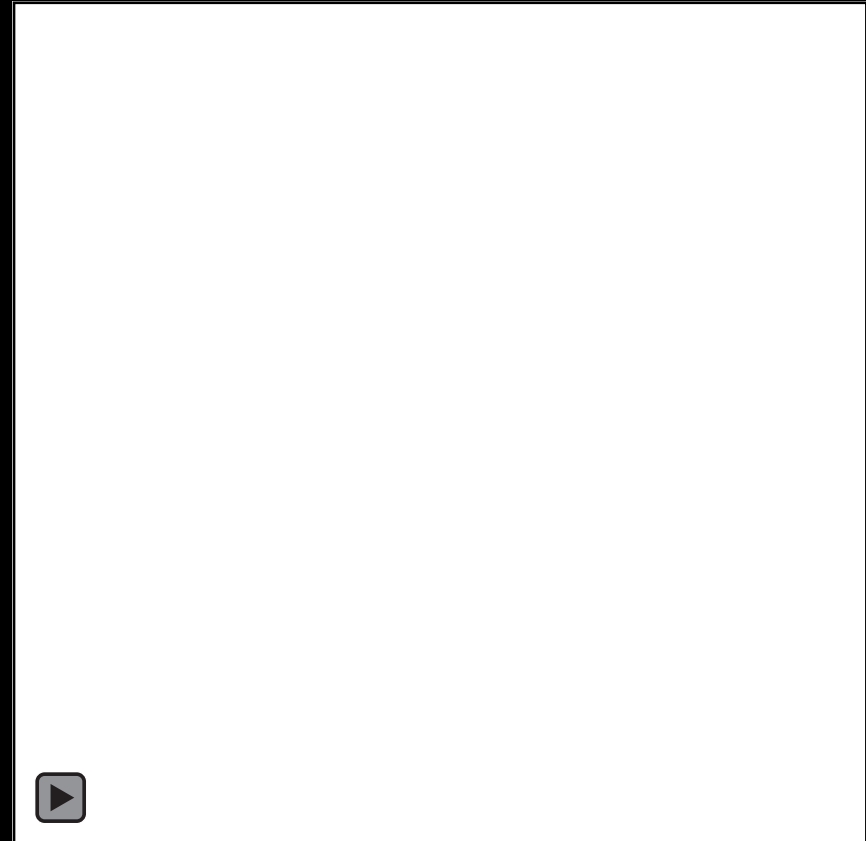


PainWeek[®]

Asteroids, Bears, & Births: 7mm from Hell Coping with a Kidney Stone

Mark Garofoli, PharmD, MBA, BCGP, CPE

Faculty



Faculty



PainWeek



Disclosures

- Expert Witness: Cardinal Health
- Consulting Fees/Advisory Board: HealthXL, Speranza

This presentation was not a part of the presenter's official duties at the WVU and does not represent the opinion of WVU

Opinions...

I have personal and professional opinions on pain management. However, some things are better left NSAID.

Learning Objectives

- Describe appropriate pain assessment techniques including various pain scales
- Describe the main components of the 2016 CDC chronic pain opioid guidelines including morphine milligram equivalent (MME) factors, medication storage, and naloxone education
- Recall important patient counseling concepts for patients with nephrolithiasis including anticipated pharmacological needs and side effects, physiological changes, and low oxalate dietary considerations

Only in Vegas!



PRACTICAL MEDICAL MANAGEMENT OF NEPHROLITHIASIS - A GUIDELINES AND CASE-BASED APPROACH



Friday, September 10, 2021



2:00 PM – 4:00 PM



Bears



Pizza



Welcome to the ER

Would You Like a Mask?

thedenverchannel.com

THE DENVER CHANNEL VISIT SITE

Surgeon general urges Americans to 'stop buying masks' for coronavirus



By: Kyle Hicks
Posted at 12:50 PM, Mar 02, 2020
and last updated 2020-03-02 14:50:09-05

WASHINGTON, D.C. – The U.S. Surgeon General is urging Americans to “stop buying masks!”

Fully vaccinated? You can ditch the mask, CDC says

“We have all longed for this moment,” said the CDC’s director, Dr. Rochelle Walensky.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

NBC NEWS SPECIAL REPORT LIVE

NBC NEWS: CDC TO ANNOUNCE FULLY VACCINATED PEOPLE NO LONGER NEED TO WEAR MASKS INDOORS

00:01 / 03:05

SHOPPING


Target, CVS end mask requirements for fully vaccinated customers, joining Walmart, Starbucks and more

Kelly Tyko USA TODAY

Published 8:43 a.m. ET May 17, 2021 | Updated 1:02 p.m. ET May 17, 2021

Morbidity and Mortality Weekly Report
March 18, 2016

CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016



Continuing Education Examination available at <http://www.cdc.gov/mmwr>'s eLearning tool.

Primary Care ONLY
But.....

Welcome to the ER

- Vitals

- BP 148/98 (typically 118/68)

- Pain Scale ???



Pain Diagnosis

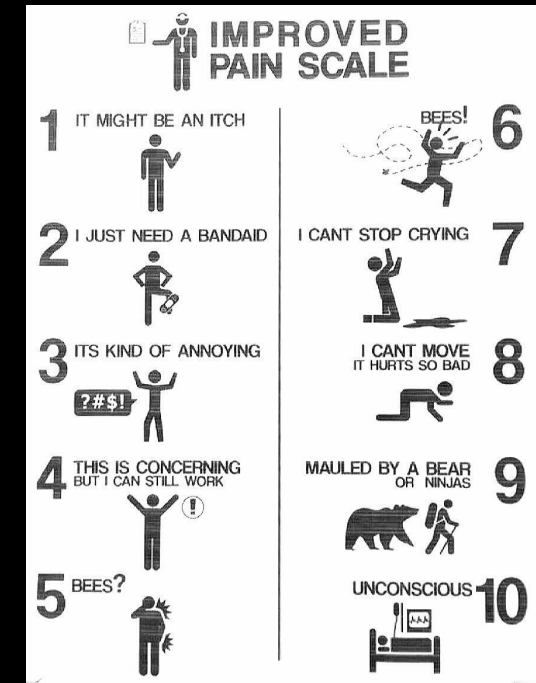
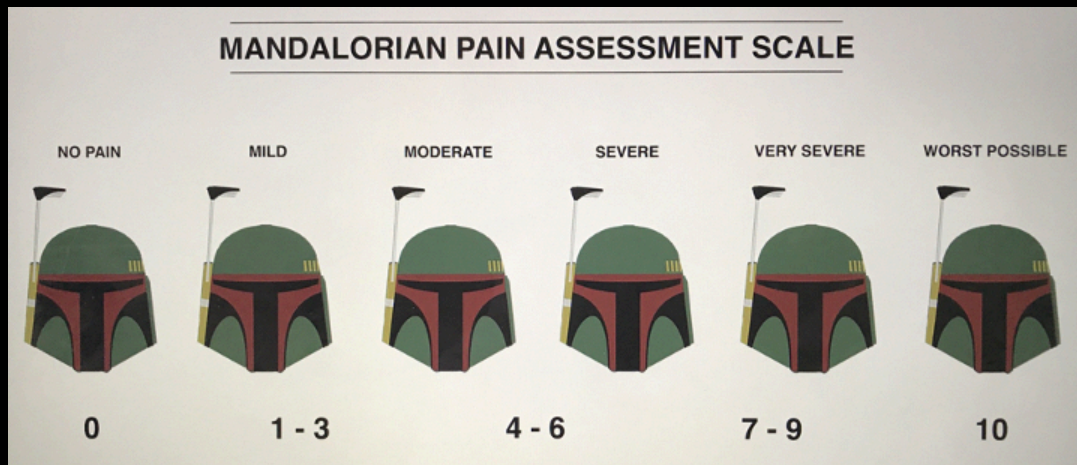
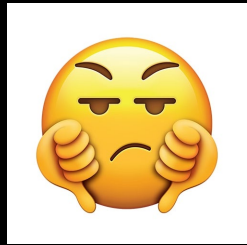
Subjective

1. Subjective Pain Scales
 - Faces, 1-10, 0-10, etc.
2. Functional Pain Assessments
 - ADLs (Activities of Daily Living)
 - Can you walk up the stairs to do the laundry?
 - Can you complete employment tasks?
 - Can you walk outside to get the mail?
 - PQRST
 - Precipitating & Palliating
 - Quality
 - Region & Radiation
 - Severity
 - Temporal

Objective

3. Physical Exam Findings
 - Range of Motion, Neurological tests, etc.
4. Laboratory Findings
 - Inflammation markers, Vitamin Levels, etc.
5. Radiological Findings
 - MRI, X-Ray, or CT Scans

Pain(ful) Scale Utilization



Hospital Emergency Room
(Comedy)



Favorite 1 to 10 Pain Scale Responses

20

Yes

13

2

8.5

3.14

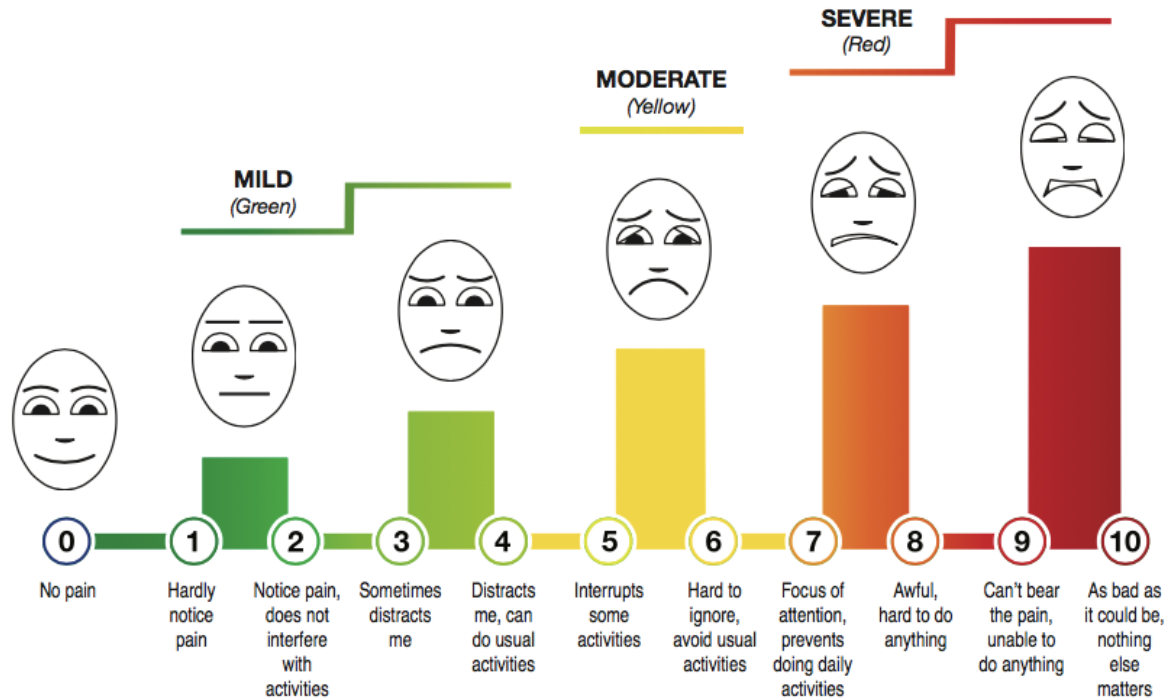


Pain Scales

DVPRS



Defense and Veterans Pain Rating Scale



For clinicians to evaluate the biopsychosocial impact of pain



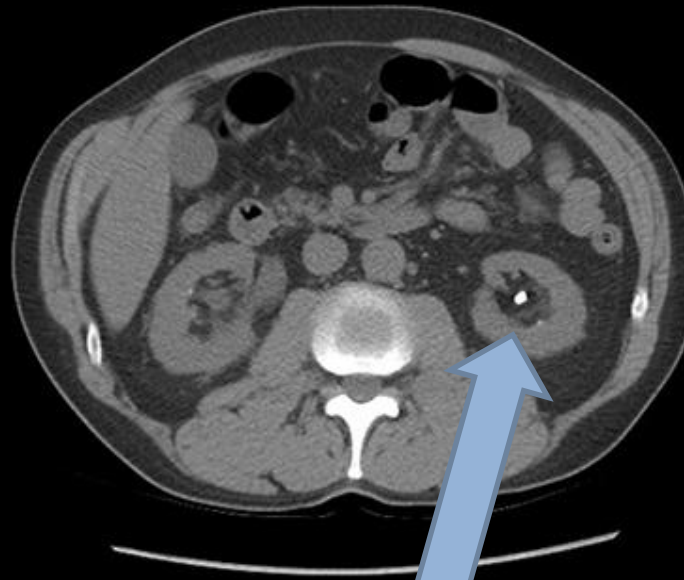
Enter the number that describes how, during the past 24 hours, pain has contributed to your **STRESS**:

Back to My COVID Kidney Stone Story...

Nephrolithiasis



CT Scan



7mm (0.275")
Kidney Stone



7mm from HELL



Nephrolithiasis

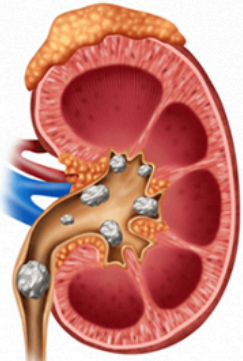
Kidney Stones

They call them "kidney stones". Imagine trying to swallow and digest a running chainsaw... everyday... for a couple of weeks. someecards user card




Mark Garofoli


Facts About Kidney Stones




Kidney stones have affected mankind since **4000 BC**




It occurs mostly in men within the age group **20-49**




It was first recorded in the pelvis of an ancient **Egyptian mummy**




Kidney stones can reach an exceptional size of **2 kg**



Kidney stones also affected famous leaders like **Napoleon I, Napoleon III and Isaac Newton**



The largest number of kidney stones removed through surgery was **728** in the year **2014**.



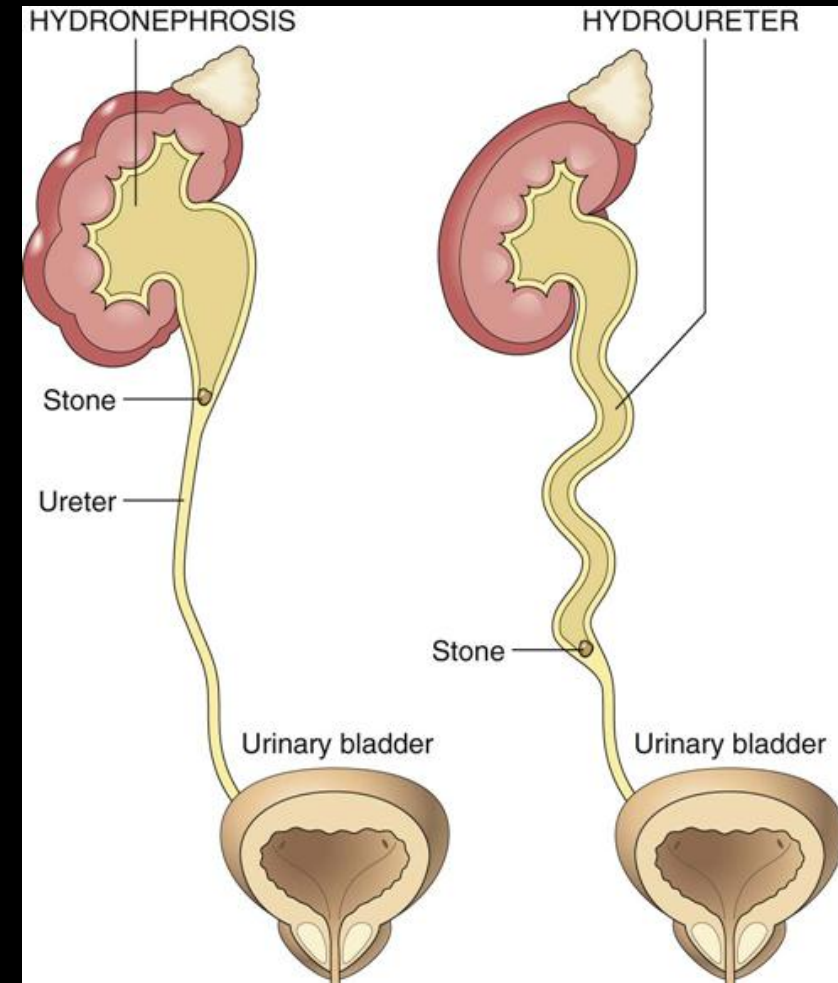
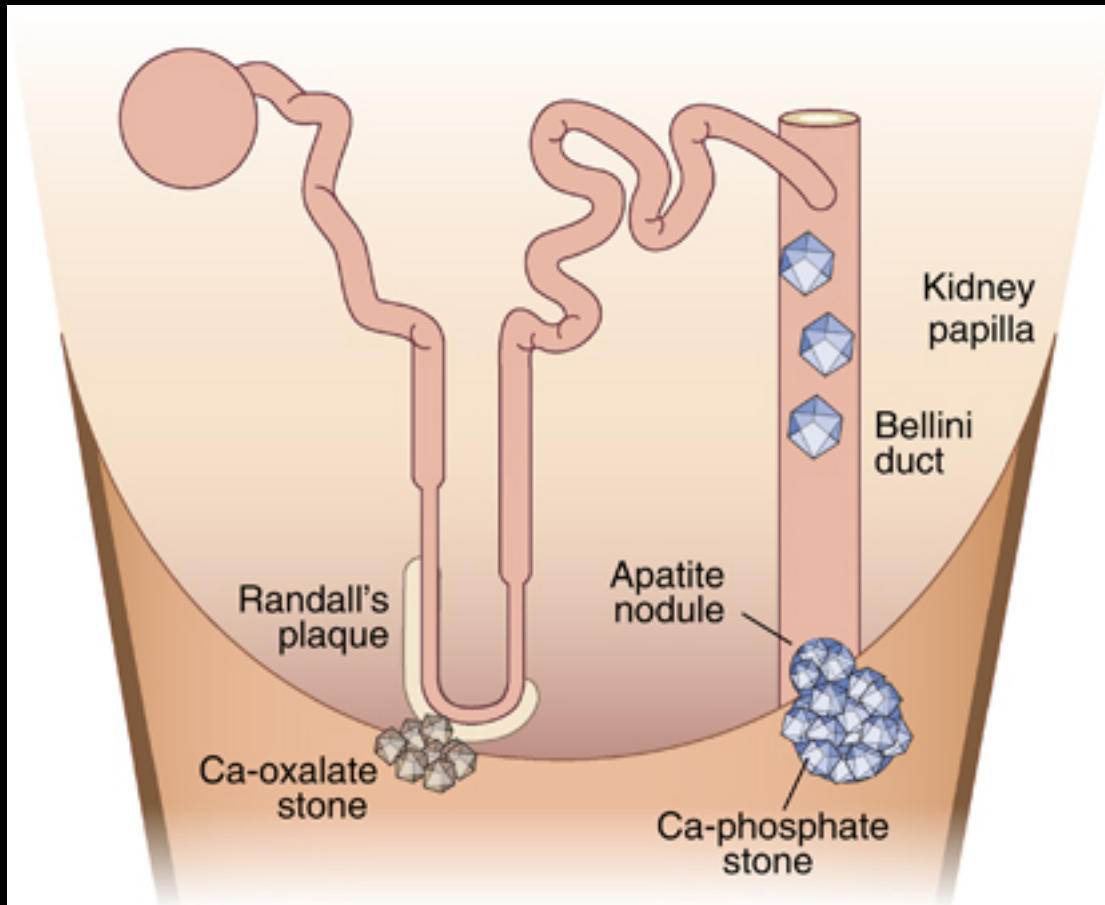
You should start naming your kidney stones like the weather people do hurricanes.



your someecards.com

Nephrolithiasis

Kidney Stones



Pain Management Goals

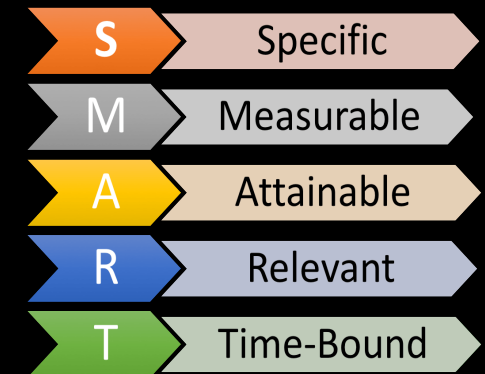
Pain Reduction & Function Improvement

Pain = 5th Vital Sign ???

Analgesic ???

The goal is NOT necessarily to eliminate pain

➤ The goal is to Improve Function & Reduce Pain



Psychological Evaluation

PHQ-2 & PHQ-9

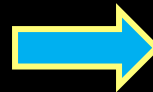
The Patient Health Questionnaire-2 (PHQ-2)

Patient Name _____ Date of Visit _____

Over the past 2 weeks, how often have you been bothered by any of the following problems?

	Not At all	Several Days	More Than Half the Days	Nearly Every Day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed or hopeless	0	1	2	3

PHQ-2 Score $\geq 3 \rightarrow$ Take PHQ-9



The Patient Health Questionnaire (PHQ-9)

Patient Name _____ Date of Visit _____

Over the past 2 weeks, how often have you been bothered by any of the following problems?

	Not At all	Several Days	More Than Half the Days	Nearly Every Day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed or hopeless	0	1	2	3
3. Trouble falling asleep, staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself - or that you're a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or, the opposite - being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

Column Totals _____ + _____ + _____

Add Totals Together _____

PHQ-9 Score $\geq 15 \rightarrow$ Psychotherapy +/- Antidepressant

“Beating heroin is child’s play
compared to beating your childhood.”

-Stephen King

Opioid Risk Screenings

Opioid Naïve

Self Reported

- Drug Abuse Screening Test (DAST)
- Screener & Opioid Assessment for Patients with Pain (SOAPP)

Provider Reported

- Opioid Risk Tool (ORT)
- Opioid Risk Tool – Substance-Use Disorder (ORT-SUD)
- Diagnosis, Intractability, Risk, & Efficacy Score (DIRE)

Opioid Experienced

Self Reported

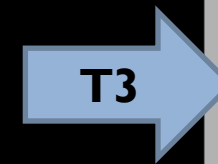
- Current Opioid Misuse Measure (COMM)
- Pain Medication Questionnaire (PMQ)
- Prescription Drug Use Questionnaire, Patient (PDUQp)

Provider Reported

- Prescription Drug Use Questionnaire (PDUQ)

And the Winning Rx is...

- ER Discharge Medications
 - 12 Acetaminophen/Codeine 30mg/300mg Tablets
 - 14 Medium Tamsulosin Capsules
 - 21 Tiny Ondansetron Tablets
- All in 40 DRAM Vials???
 - 8 Dram Vials Suffice
- “Please Sign Here”
- Acute Setting
 - Yet Chronic Pain Guidelines & Street Trends Factor In



2016 CDC Chronic Pain *Opioid* Guidelines

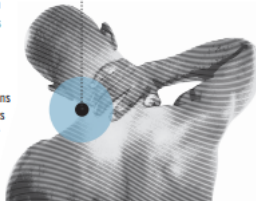
GUIDELINE FOR PRESCRIBING OPIOIDS FOR CHRONIC PAIN

IMPROVING PRACTICE THROUGH RECOMMENDATIONS

CDC's *Guideline for Prescribing Opioids for Chronic Pain* is intended to improve communication between providers and patients about the risks and benefits of opioid therapy for chronic pain, improve the safety and effectiveness of pain treatment, and reduce the risks associated with long-term opioid therapy, including opioid use disorder and overdose. The Guideline is not intended for patients who are in active cancer treatment, palliative care, or end-of-life care.

DETERMINING WHEN TO INITIATE OR CONTINUE OPIOIDS FOR CHRONIC PAIN

- 1 Nonpharmacologic therapy and nonopioid pharmacologic therapy are preferred for chronic pain. Clinicians should consider opioid therapy only if expected benefits for both pain and function are anticipated to outweigh risks to the patient. If opioids are used, they should be combined with nonpharmacologic therapy and nonopioid pharmacologic therapy, as appropriate.
- 2 Before starting opioid therapy for chronic pain, clinicians should establish treatment goals with all patients, including realistic goals for pain and function, and should consider how opioid therapy will be discontinued if benefits do not outweigh risks. Clinicians should continue opioid therapy only if there is clinically meaningful improvement in pain and function that outweighs risks to patient safety.
- 3 Before starting and periodically during opioid therapy, clinicians should discuss with patients known risks and realistic benefits of opioid therapy and patient and clinician responsibilities for managing therapy.



CLINICAL REMINDERS

- Opioids are not first-line or routine therapy for chronic pain
- Establish and measure goals for pain and function
- Discuss benefits and risks and availability of nonopioid therapies with patient



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

LEARN MORE | www.cdc.gov/drugoverdose/prescribing/guideline.html

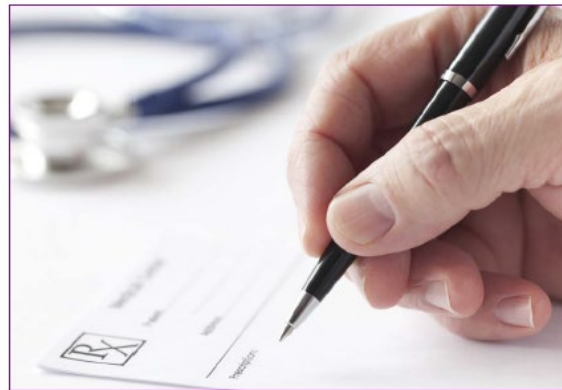
Centers for Disease Control and Prevention
MMWR

Morbidity and Mortality Weekly Report

Early Release / Vol. 65

March 15, 2016

CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016



OPIOID SELECTION, DOSAGE, DURATION, FOLLOW-UP, AND DISCONTINUATION

CLINICAL REMINDERS

- Use immediate-release opioids when starting
- Start low and go slow
- When opioids are needed for acute pain, prescribe no more than needed
- Do not prescribe ER/LA opioids for acute pain
- Follow-up and re-evaluate risk of harm; reduce dose or taper and discontinue if needed

- 4 When starting opioid therapy for chronic pain, clinicians should prescribe immediate-release opioids instead of extended-release/long-acting (ER/LA) opioids.
- 5 When opioids are started, clinicians should prescribe the lowest effective dosage. Clinicians should use caution when prescribing opioids at any dosage, should carefully assess evidence of individual benefits and risks when considering increasing dosage to ≥ 50 morphine milligram equivalents (MME)/day, and should avoid increasing dosage to ≥ 90 MME/day or carefully justify a decision to titrate dosage to ≥ 90 MME/day.
- 6 Long-term opioid use often begins with treatment of acute pain. When opioids are used for acute pain, clinicians should prescribe the lowest effective dose of immediate-release opioids and should prescribe no greater quantity than needed for the expected duration of pain severe enough to require opioids. Three days or less will often be sufficient; more than seven days will rarely be needed.
- 7 Clinicians should evaluate benefits and harms with patients within 1 to 4 weeks of starting opioid therapy for chronic pain or of dose escalation. Clinicians should evaluate benefits and harms of continued therapy with patients every 3 months or more frequently. If benefits do not outweigh harms of continued opioid therapy, clinicians should optimize other therapies and work with patients to taper opioids to lower dosages or to taper and discontinue opioids.

ASSESSING RISK AND ADDRESSING HARMS OF OPIOID USE

- 8 Before starting and periodically during continuation of opioid therapy, clinicians should evaluate risk factors for opioid-related harms. Clinicians should incorporate into the management plan strategies to mitigate risk, including considering offering naloxone when factors that increase risk for opioid overdose, such as history of overdose, history of substance use disorder, higher opioid dosages (≥ 50 MME/day), or concurrent benzodiazepine use, are present.
- 9 Clinicians should review the patient's history of controlled substance prescriptions using state prescription drug monitoring program (PDMP) data to determine whether the patient is receiving opioid dosages or dangerous combinations that put him or her at high risk for overdose. Clinicians should review PDMP data when starting opioid therapy for chronic pain and periodically during opioid therapy for chronic pain, ranging from every prescription to every 3 months.
- 10 When prescribing opioids for chronic pain, clinicians should use urine drug testing before starting opioid therapy and consider urine drug testing at least annually to assess for prescribed medications as well as other controlled prescription drugs and illicit drugs.
- 11 Clinicians should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible.
- 12 Clinicians should offer or arrange evidence-based treatment (usually medication-assisted treatment with buprenorphine or methadone in combination with behavioral therapies) for patients with opioid use disorder.

CLINICAL REMINDERS

- Evaluate risk factors for opioid-related harms
- Check PDMP for high dosages and prescriptions from other providers
- Use urine drug testing to identify prescribed substances and undisclosed use
- Avoid concurrent benzodiazepine and opioid prescribing
- Arrange treatment for opioid use disorder if needed

LEARN MORE | www.cdc.gov/drugoverdose/prescribing/guideline.html

2016 CDC Chronic Pain *Opioid* Guidelines

Opioid Use Decision

1. Non-Pharm, Non-Opioid, then Opioid
2. Treatment Goals
3. Risk Assessments & Side Effects



Type/Amount/Time of Opioid

4. IR not ER
5. MME ≥ 50 /day: Use caution
MME ≥ 90 avoid unless justified
6. Acute pain: Short duration
7. Re-evaluate 1 month, then every 3 months.



Risk/Harms of Opioid Use

8. Higher risk \rightarrow naloxone
9. PDMP initially + every 1-3 months
10. UDT initially + annually
11. Avoid combining opioids & benzos
12. Opioid Use Disorder: Offer MAT

Morphine Milligram Equivalents (MMEs)



Opioid	MME Factor
Tramadol	0.1
Codeine	0.15
Morphine	1
Hydrocodone	1
Oxycodone	1.5
Methadone	4 (1-20mg) 8 (21-40mg) 10 (41-60mg) 12 (>60mg)
Transdermal fentanyl	7.2 (Divided by Days)
Transdermal buprenorphine	12.6 (Divided by Days)

MME Practice Case

COVID Kidney Stone

Mark is a clinical pain management pharmacist dropped off at the local ER on Friday the 13th during a pandemic for sharp, stabbing, unexplainable, 13-out-of-10, lower right quadrant abdominal and back pain. After a CT scan confirmed a 7mm kidney stone, he was prescribed:

- acetaminophen/codeine 300mg/30mg

*Shouldn't he at least have been provided a morphine, hydrocodone, or oxycodone , if not Vitamin D (hydromorphone) prescription?

MME Practice Case

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- acetaminophen/codeine 300mg/30mg

*Shouldn't he at least have been provided a morphine, hydrocodone, or oxycodone , if not Vitamin D (hydromorphone) prescription?

Codeine 30mg x 0.15 (MME Factor) = 4.5 MMEs

Hydrocodone 5mg x 1 (MME Factor) = 5 MMEs

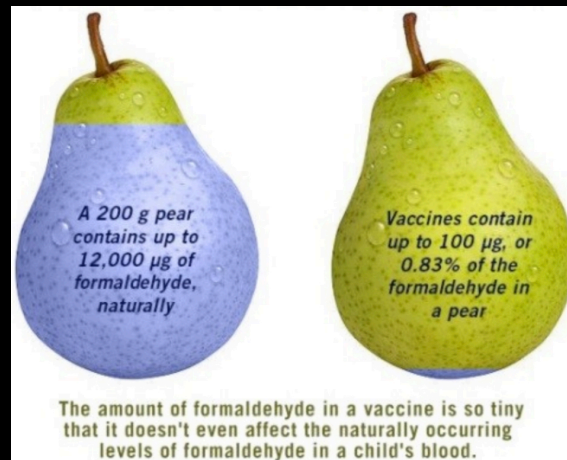
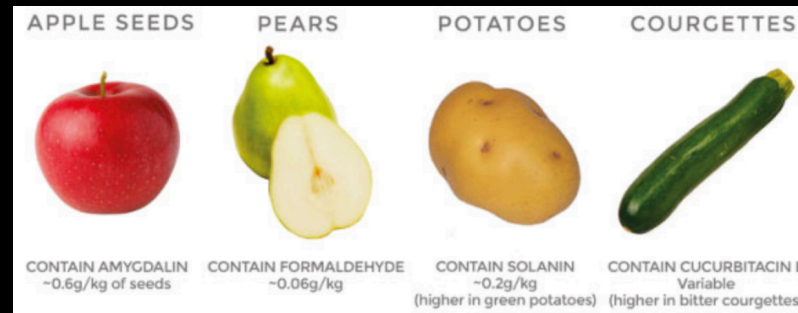
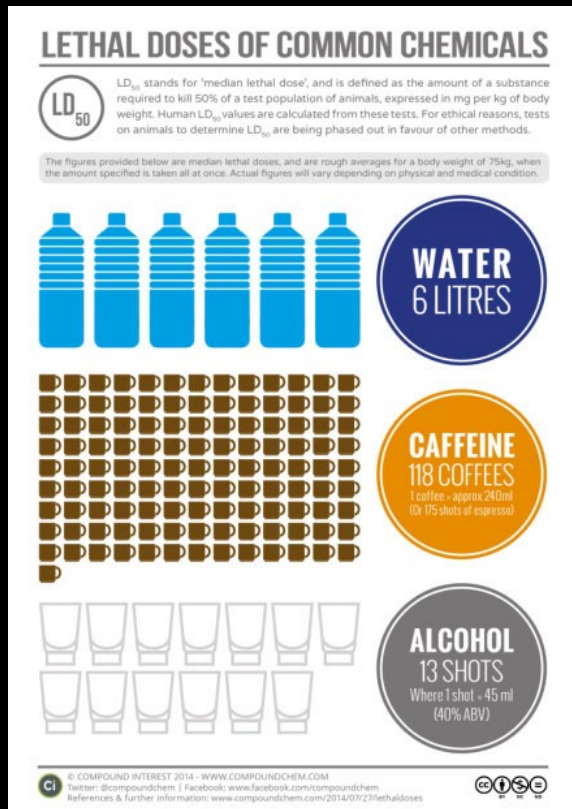
Relatively similar expected pain relief, but unsimilar street value?

Morphine Milligram Equivalents

Morphine Milligram Equity

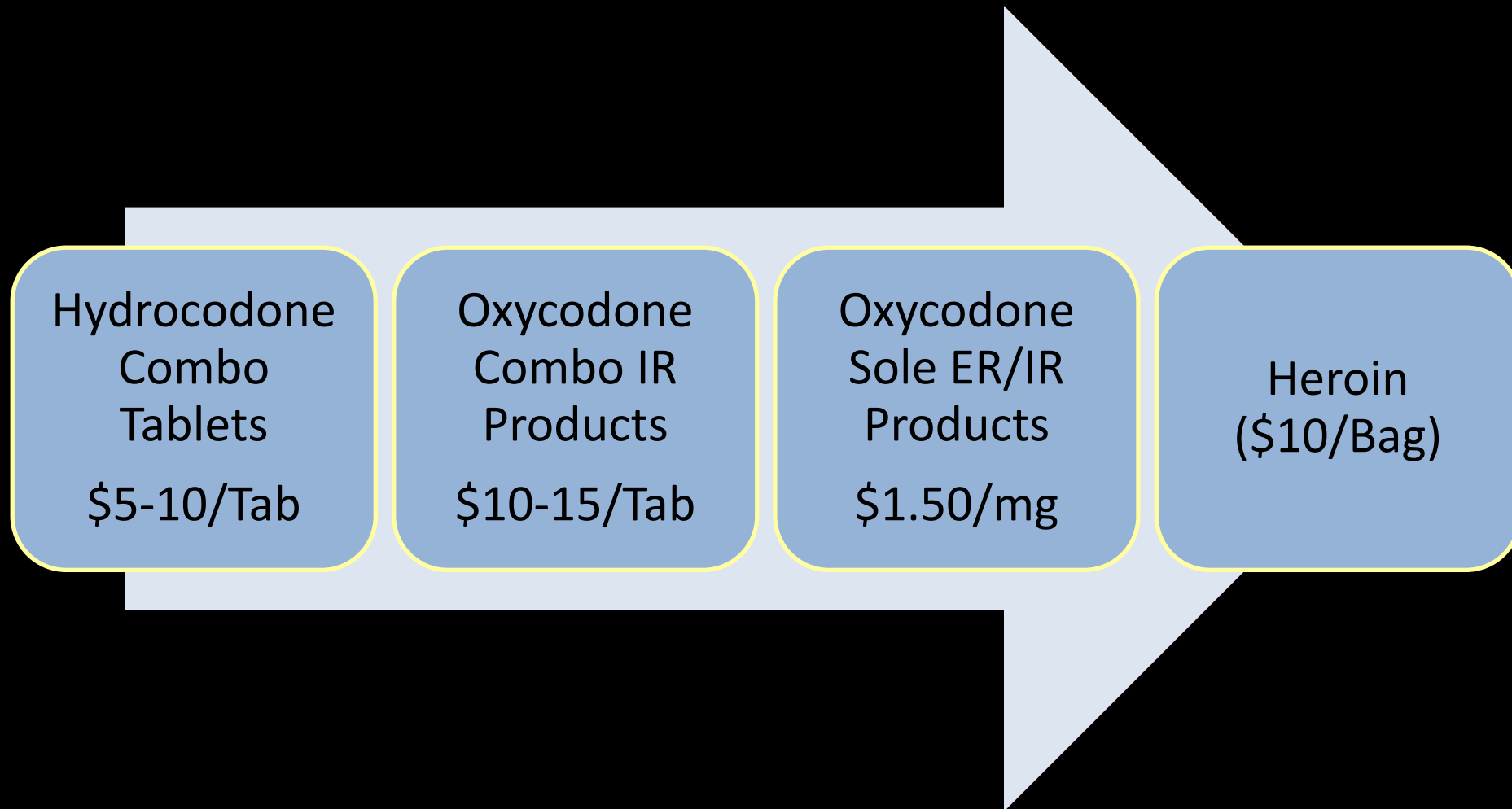
Oxycodone ER 40mg BID & Oxycodone IR 10mg Q6 PRN (Oxycodone 120mg/day)	
MME	Street Price
120mg x 1.5 MME Factor	120mg x \$1.50/mg
180 MME/day	\$180/day
	Monthly: \$5,400
	Annual: \$65,000

It's All About the Dosage Baby!



Paracelsus
 "All things are poison and nothing is without poison; only the dose makes a thing not a poison."

Opioid Abuse Transition



The Study Misheard Around the World

Research

Original Investigation

The Changing Face of Heroin Use in the United States A Retrospective Analysis of the Past 50 Years

Theodore J. Cicero, PhD; Matthew S. Ellis, MPE; Hilary L. Surratt, PhD; Steven P. Kurtz, PhD



75% of Heroin Users
Started with
Prescription Opioids

The Study Misheard Around the World

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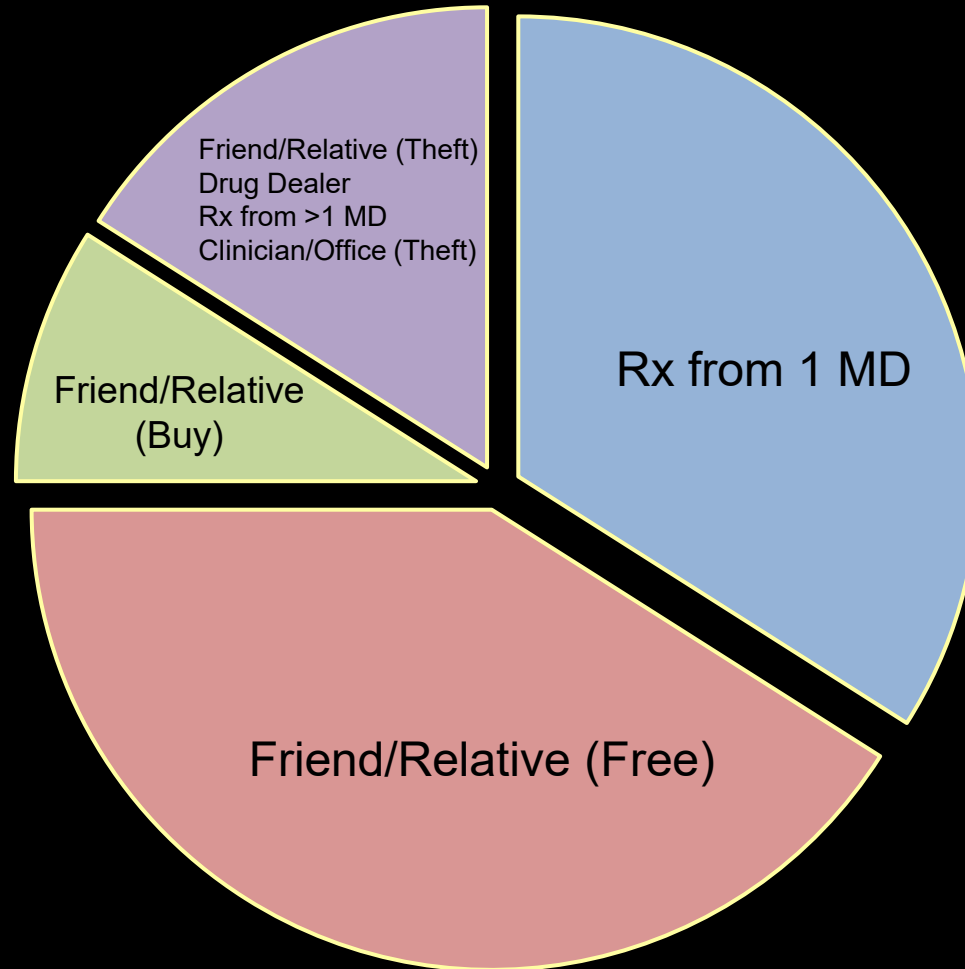


Family, Friends, Theft ???



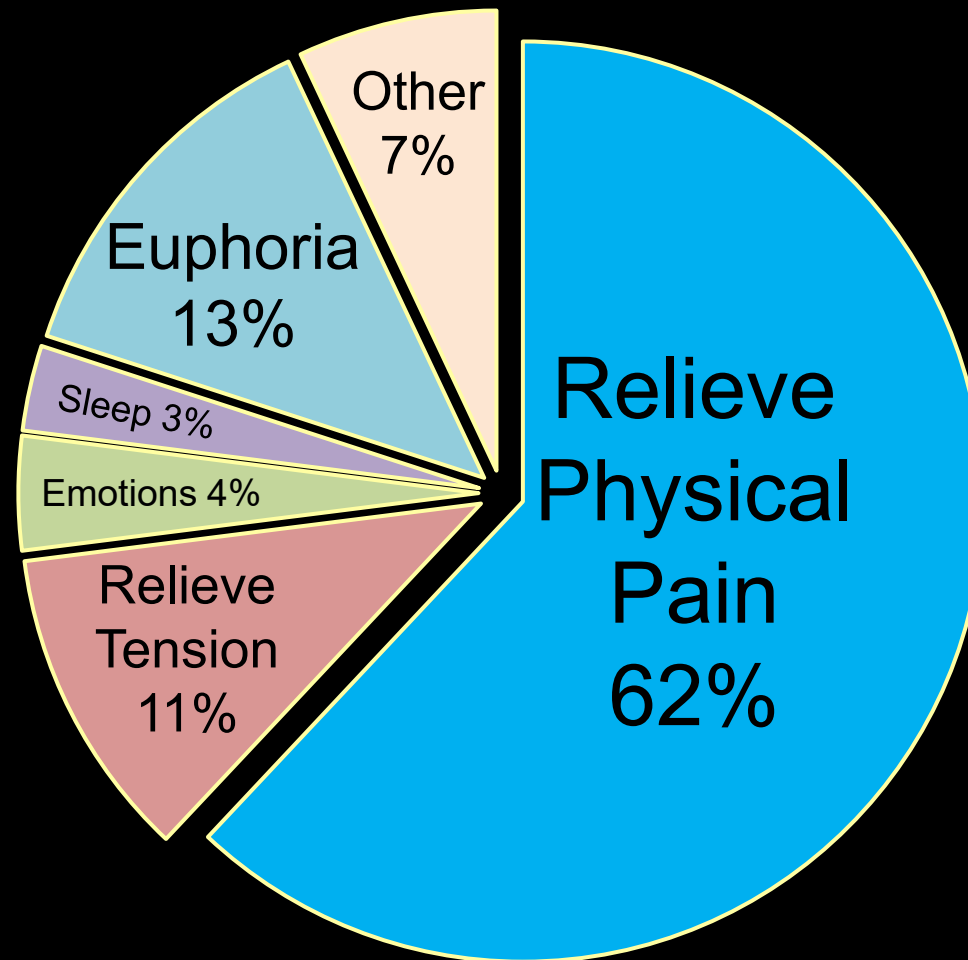
Healthcare Professional(s)

Where Are These Opioids Coming From?



HEALTHCARE
PROFESSIONAL
~1/3rd

80% of Prescription Drug Misuse Due to Poor/Missing Original Treatment?



Proper Medication Storage

Bathroom Medicine Cabinets → NO

- Humidity
- Unsecure
- Typically accessed at “groggy” times of day (AM/PM)



Lockable Safe Boxes → YES

- Away from children and pets
- Secure
- Still must incorporate into daily routine



Proper Medication Disposal

EPA

1. DEA Drug Take Back Days
2. Remove Identifiers and Mix with Undesirable Substance

DO NOT FLUSH

FDA

1. DEA Drug Take Back Days
2. Remove Identifiers and Mix with Undesirable Substance
3. Flush ~4 Dozen C2s
– <https://www.fda.gov/media/109643/download>

FLUSH

Hamlet Hand Washing



“ To Flush , or not
To Flush , that is
the Question ”

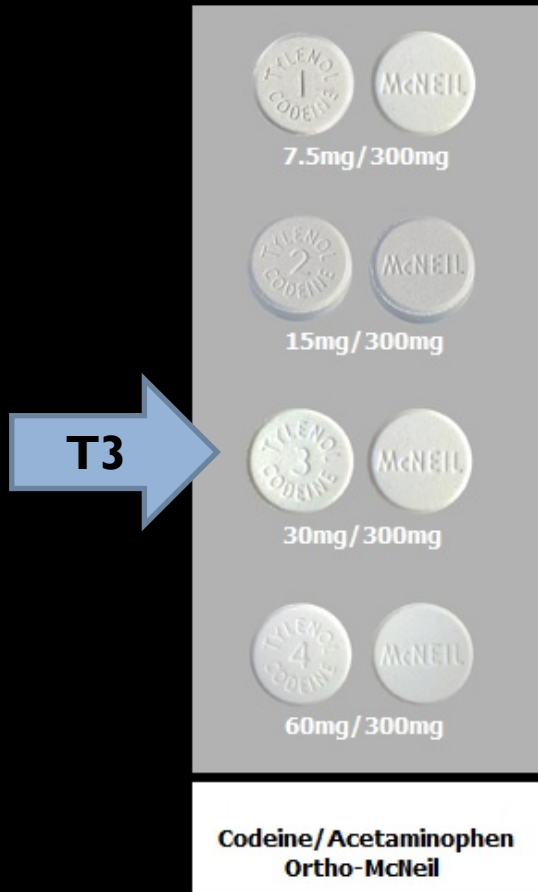
William Shakespeare (Hamlet)



Wash Your Hands

Within 12 Hours of Pharmacy Visit....

Pharmacy Benefits Managers (PBMs)



preference for future Rx's. Your insurance allows you to fill some Rx's as a convenient 90 Day supply with CVS Pharmacy

STOP

CVS Pharmacy: All texts will stop. Reply UNDO to undo. For texts only when order is ready text READY. To stop automated calls reply NOCALLS or call [800-SHOP-CVS](tel:800-SHOP-CVS)

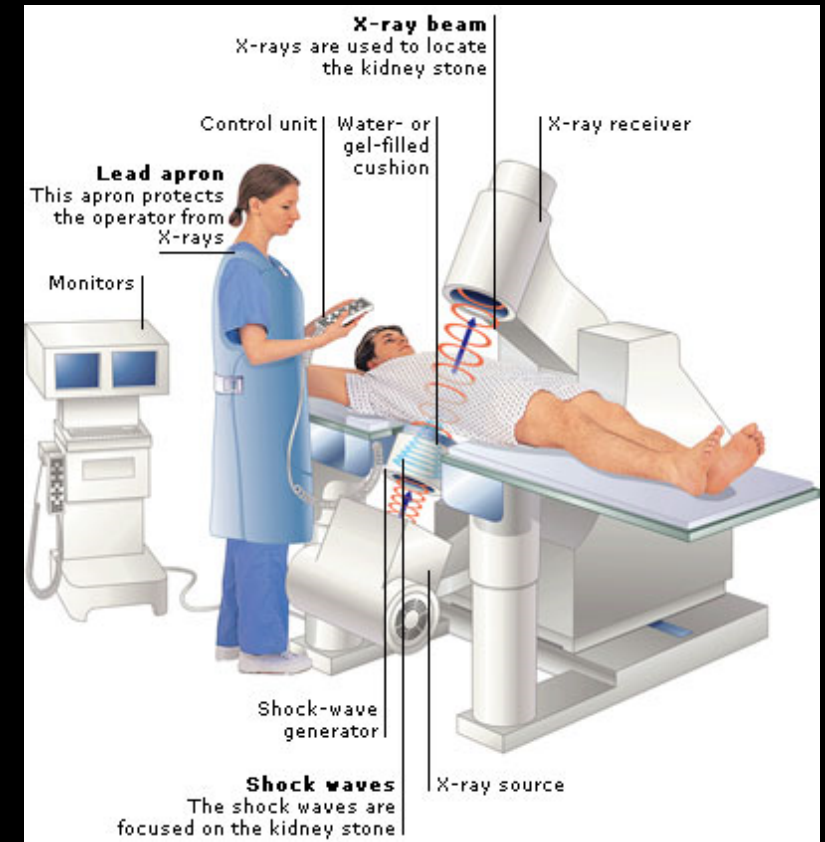
NOCALLS

CVS Pharmacy: All automated calls will stop. Reply UNDO to undo. Visit m.cvs.com/rxi, your local pharmacy or call [800-SHOP-CVS](tel:800-SHOP-CVS) for more options.

6 Days Later...

Extracorporeal Shockwave Lithotripsy

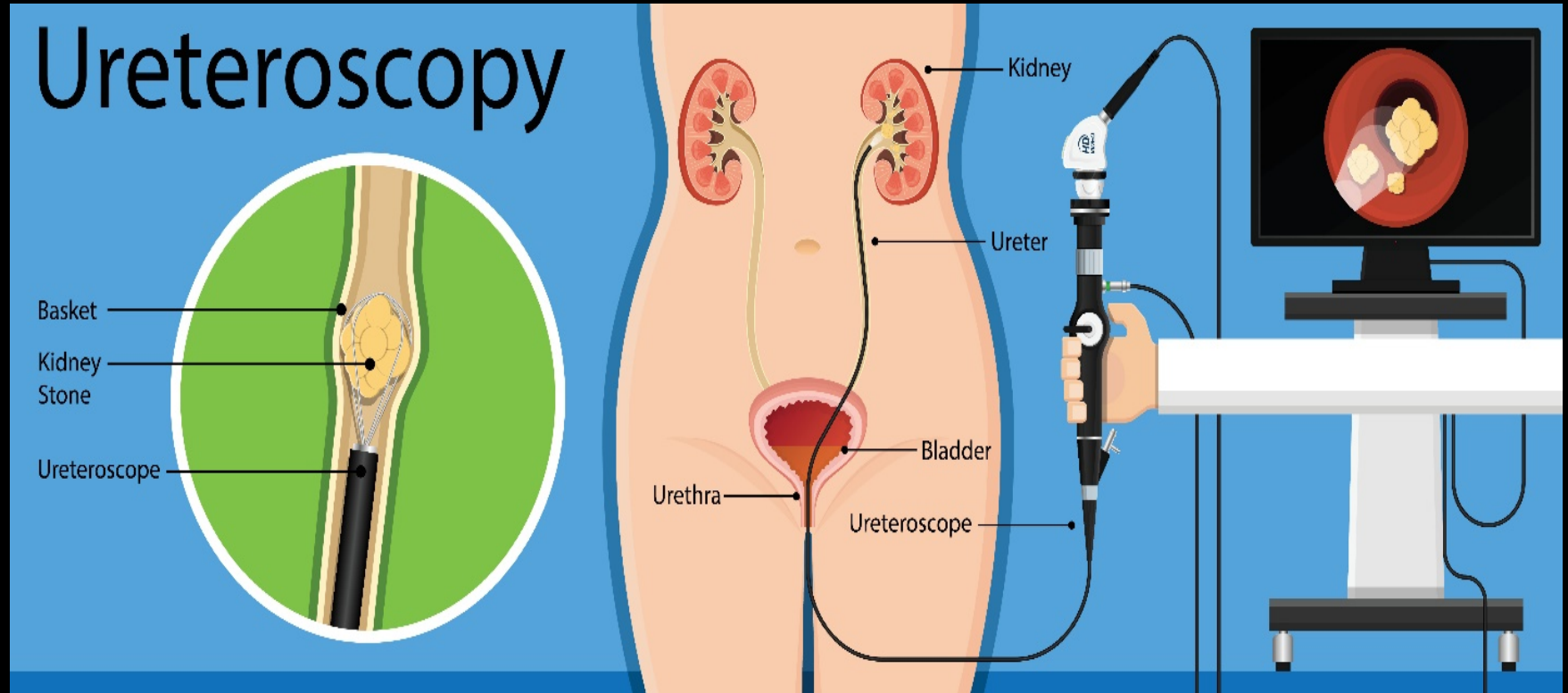
NAW.....



6 Days Later...

PA: This →

Mark: Just to clarify, you have to go in my urethra?



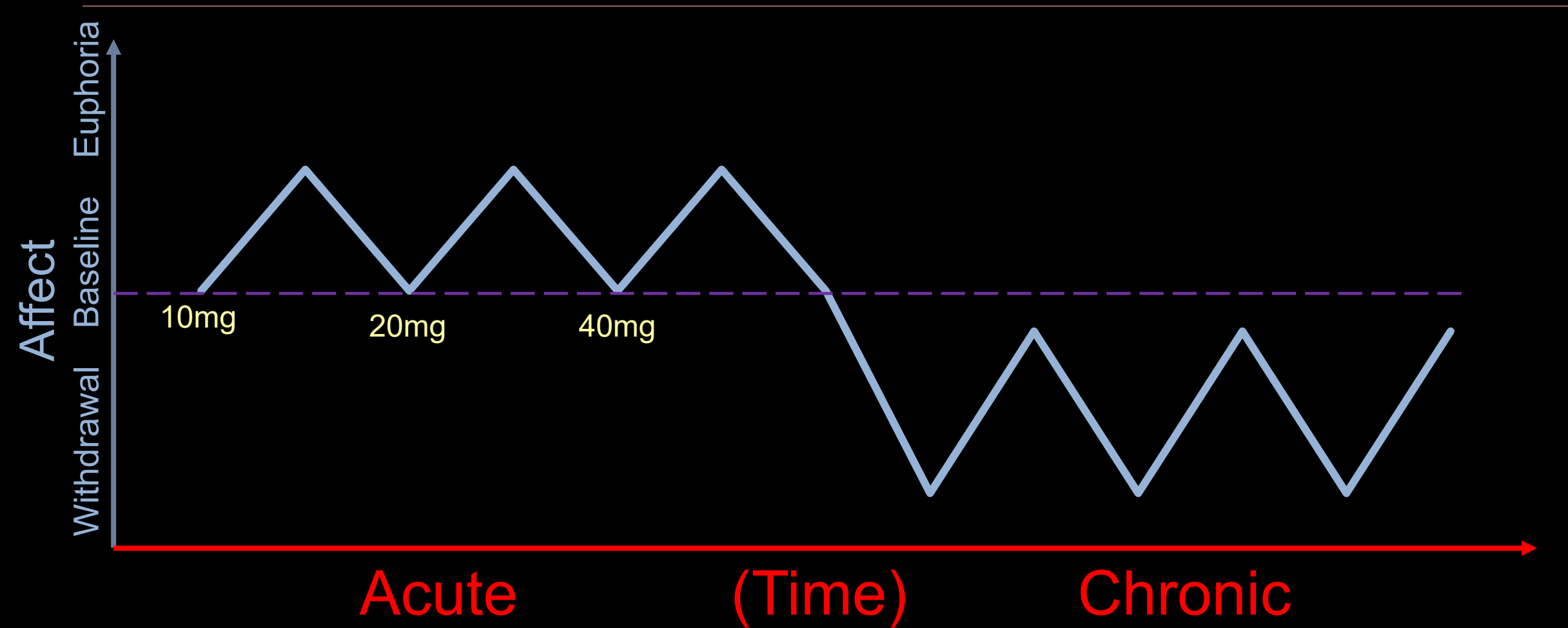
3 More Days Later.....A COVID Cancellation

- Non-emergency non-elective surgery cancelled
- “If experiencing incredible pain, simply go to the ER for emergency surgery.”
- Majority of WV hospital beds in the entire state remained unoccupied for the entire duration of surgery cancellations

A Long 11 Weeks

- 3 incredible breakthrough pain episodes
 - Generally resolved with the T3 utilized PRN as prescribed
- 45 PowerPoint Slides → “The Show must go on”
- Empty stomach + One T3 = Euphoric experience (15 minutes post dosage)





Abuse → Tolerance → Dependence → Addiction



Abuse, Dependence, Tolerance, and/or Addiction



Naloxone Products

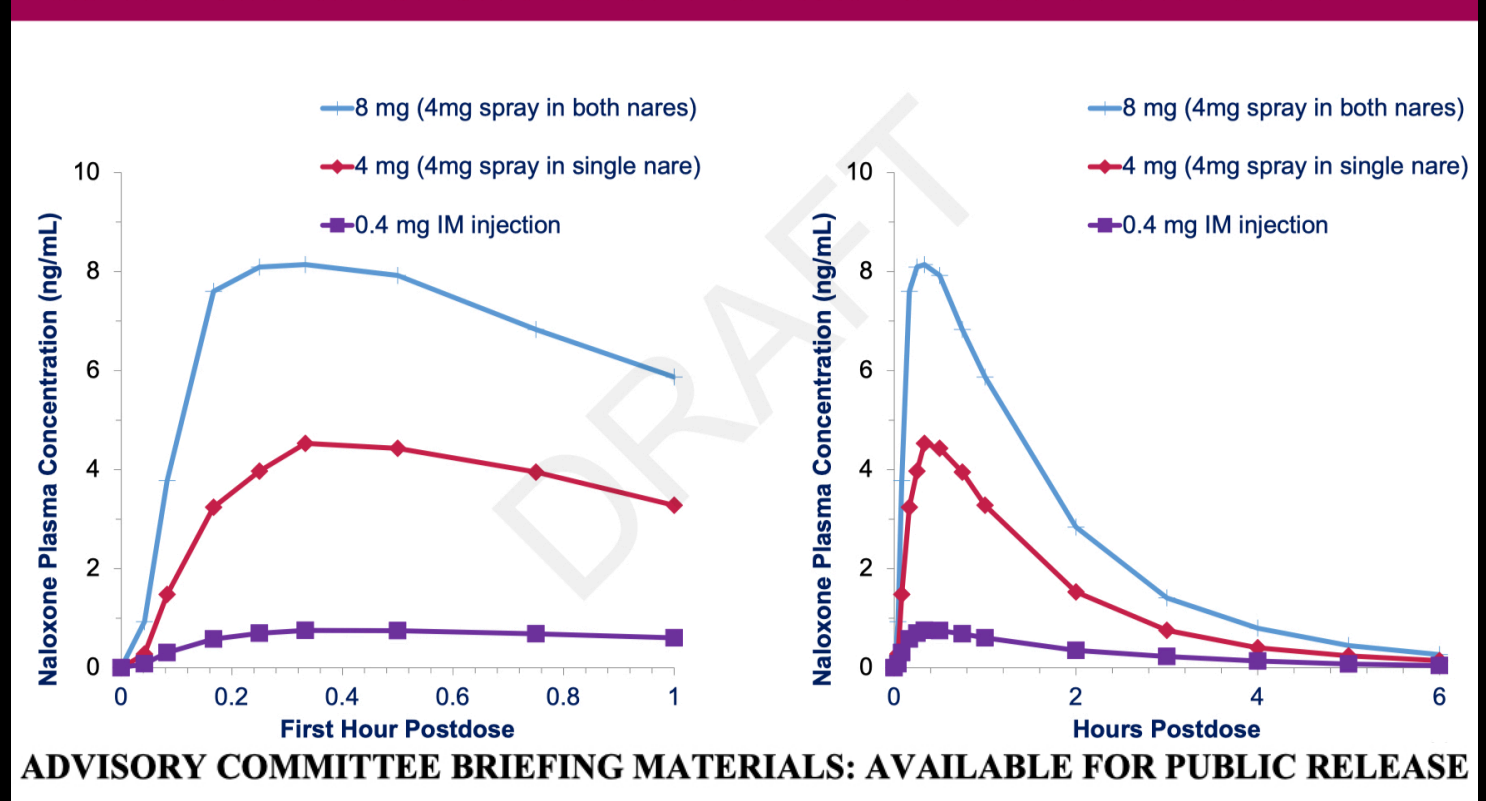
Product	Generic Injectable	Generic Intranasal	Nasal Spray + Generic	Nasal Spray
Dose	0.4mg IM	1mg in each nostril	4mg in one nostril	8mg in one nostril
Dosing	Inject 1mL in shoulder/thigh, may repeat in 2-3min Use 3mL 23G syringe & 1" needle	Spray 1mL (half of syringe) in each nostril with atomizer, may repeat in 2 to 3 min	Spray 0.1mL into one nostril ; may repeat in 2 to 3 min with 2 nd device in alternate nostril	Spray into one nostril ; may repeat in 2 to 3 min with 2 nd device in alternate nostril
Availability	0.4mg/mL 4mg/10mL	2mL prefilled Luer-Jet syringe	4mg One-Time Use 0.1mL Nasal Spray	8mg One-Time Use 0.1mL Nasal Spray
Manufacturer	Pfizer, West-Ward, & Mylan	IMS/Amphastar	Emergent BioSolutions	Hikma
Cost	\$	\$\$*	\$\$\$	\$\$\$
NDC	00409-1215-01 00409-1219-01 67457-0292-01 00641-6132-25	76329-3369-01 + Atomizer (Item # MAD-301)	69547-0353-02	59467-0679-01
Picture				

Evzio Auto-Injector: Discontinued October 2020

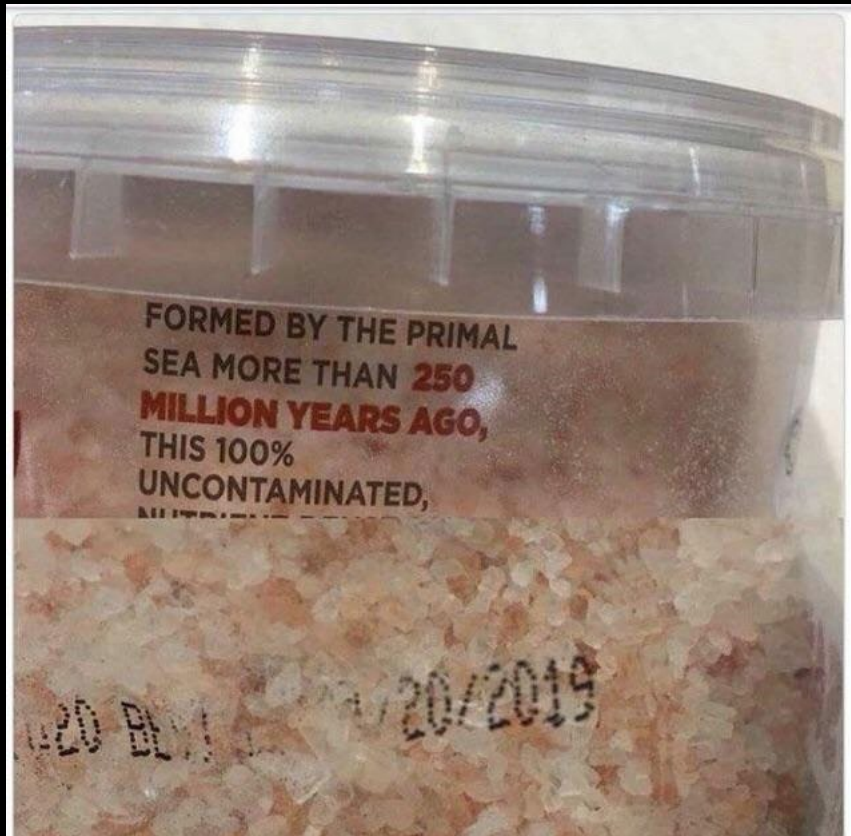
Naloxone Dosing Pearls

- Opioid Dose ?
- 1 or 2 Doses ?
- Buprenorphine ?
- Poly Substances ?
- Setting ?
- Narcan Party Myth ?

NARCAN NASAL RAPIDLY ACHIEVES HIGH NALOXONE EXPOSURE



Naloxone Pearl Expiration Dates



CNN health Life, But Better Fitness Food Sleep Mindfulness Relationships

HAPPENING NOW

[President Biden and Russian President Vladimir Putin's high-stakes summit is underway. Watch CNN.](#)

Naloxone still stable months after expiration date, research says

By Naomi Thomas, CNN

Published 12:45 PM EST, Tue November 6, 2018

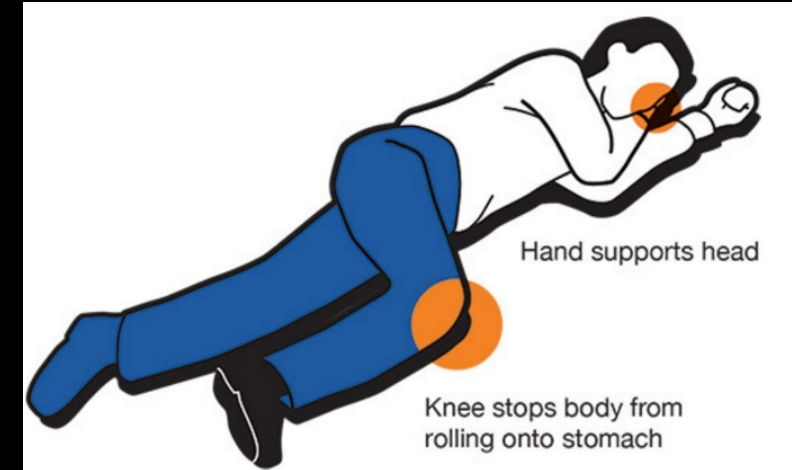


Naloxone Administration

SAMHSA Guidelines

1. Check for signs of opioid overdose
2. **Call EMS** to access immediate medical attention*
3. Administer naloxone (rescue position)*
4. Rescue breathe if patient not breathing*
5. Stay with the person and monitor their response until emergency medical assistance arrives. After 2-5 minutes, repeat the naloxone dose if person is not awakening or breathing well enough (10 or more breaths per minute)

*Order depending on the source of guidance



Location, Location, Location



Is There an Opioid Overdose on Board?



The Opioid Epidemic Hasn't Gone Away With COVID-19. It's Just Harder To Address

By KAREN BROWN • APR 5, 2020

[Share](#) [Tweet](#) [Email](#)



In this file photo, Northampton police officer Justin Hooten shows a box of Narcan installed at the station, free to the public. He's involved with the DART program, which has scaled back its services.

KAREN BROWN / NEW ENGLAND PUBLIC RADIO

1, 2, 3, 10, 15 Times?



NEWS PRODUCTS VIDEOS TOPICS TRAINING JOBS OFF-DUTY GRANTS

Officials question naloxone use on repeat overdose patients

This vicious cycle experienced by many addicts has added a new facet to Ohio's grim war against opioid abuse: compassion fatigue

Jun 26, 2017

If it weren't for Narcan, Ken wouldn't be here. Ken is our intern, a Marine, a cat dad. He was revived fifteen separate times before he recovered. We are so so glad you're here, Ken.

[#superstarintern](#) [#endoverdose](#)
[#ioad](#)



"Just throwing Narcan on this opioid fire is not going to fix it," she said. "I'm afraid the government thinks it is."

Dr. Joshua M. Sharfstein, associate dean for public health practice and training at Johns Hopkins Bloomberg School of Public Health, said Narcan saves lives but recovery requires timely access to treatment.

"Frankly, if you are just doing Narcan it's likely you'll have to go out again because it's important to do, because you're saving their life, but it's also important to have the next step...what are we doing to engage them in treatment?"

Stigma (and Goggles?)

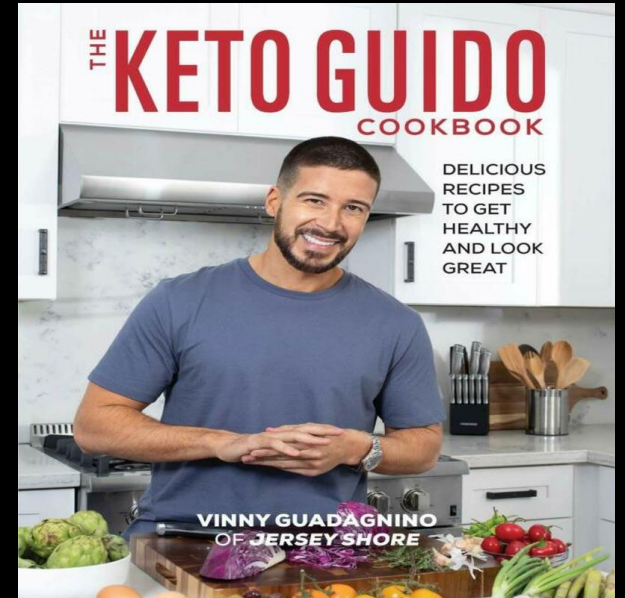


My Anesthesiologist Brothers



Fentanyl, Oxycodone, & Hydromorphone Then Ketorolac?

- Recovery room “13-out-of-10” kidney pain and urethra burning
- Fentanyl was already on board but failed miserably
- BP stabilized → 1 oxy/apap 5/325mg (waited 20 mins, failure)
- “Vitamin D” push you may know as hydromorphone
- To clarify, fentanyl, oxycodone, & hydromorphone failed
- Time to listen to the pharmacist on the gurney and the nurse with a concurring therapeutic opinion → ketorolac
- Ten minutes later, enjoying a cup of OJ and conversation with nurse



Post Ureteroscopy Discharge

Discharge Medications

- 6 tablets of sulfamethoxazole and trimethoprim (1 BID x 3 Days)
- 14 capsules of tamsulosin 0.4mg (1 q PM)
- 8 tablets of oxycodone/APAP 5/325mg (1 q4 PRN)

What does a patient see (and do)
with these instructions:

Take 1 to 2 tablets every 4 to 6
hours

Post Ureteroscopy Discharge

Discharge Medications

- 6 tablets of sulfamethoxazole and trimethoprim (1 BID x 3 Days)
- 14 capsules of tamsulosin 0.4mg (1 q PM)
- 8 tablets of oxycodone/APAP 5/325mg (1 q4 PRN)

- ❖ Oxycodone 5mg x 1.5 MME Factor = 7.5 MMEs/Dose

- Only actually needed APAP/Codeine 300mg/30mg (4.5 MMEs/Day)

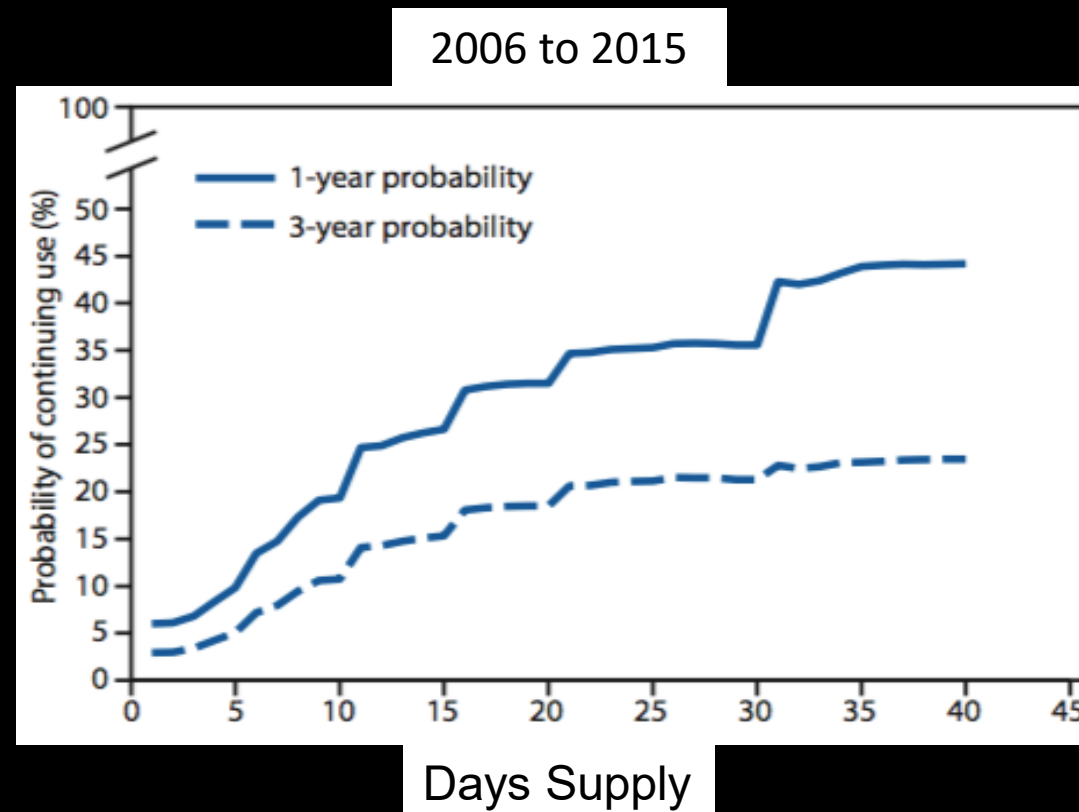
Post Ureteroscopy Discharge

Discharge Medications

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- 14 capsules of tamsulosin 0.4mg (1 q PM)
- 8 tablets of oxycodone/APAP 5/325mg (1 q4 PRN)
- ❖ Oxycodone 5mg x 1.5 MME Factor x 6/day = 45 MME/s Day
- 32 Hour Supply???

Initial Opioids vs Chronic UTILIZATION

Not Addiction



An Ounce of Prevention, Worth a TON of Issues

- Ondansetron was prescribed to prevent N/V
- Pain and Urinary Displeasure continued
- Taking your oxybutynin that you were never prescribed?

Within 3 Days of New Pharmacy Visit....

Pharmacy Benefits Managers (PBMs)

Oxybutynin 5mg (Rx)
(Not the OTC Patch)



Ever observe this product stolen from a pharmacy?

PainWeek®

One of the ways CVS Caremark® helps the [redacted] keep prescription costs down for its employees is through the use of Retail Maintenance Network pharmacies and CVS Caremark Mail Service Pharmacy. **Your benefit plan is designed to move maintenance¹ or long-term prescriptions to 90-day supplies² through Retail Maintenance Network pharmacies or mail service after an initial two 30-day fills through a retail pharmacy.** Not only do 90-day supplies help manage prescription costs, but many plan members find it more convenient.

If you have already changed to a 90-day supply at a Retail Maintenance Network pharmacy, or signed up for mail service, thank you-and no need to read any further!

OXYBUTYNIN TAB
5MG

To begin filling your medication at a Retail Maintenance Network pharmacy, simply ask your doctor to call in a 90-day supply of medication to your preferred Retail Maintenance Network pharmacy. The Maintenance Drug List and the Retail Maintenance Network pharmacy list can both be found at www.wvpeia.com. Click on the Prescription Drug Lists under Popular Resources in the middle of the page.

If you prefer to use mail service, here are three ways to receive refills from the CVS Caremark Mail Service Pharmacy:

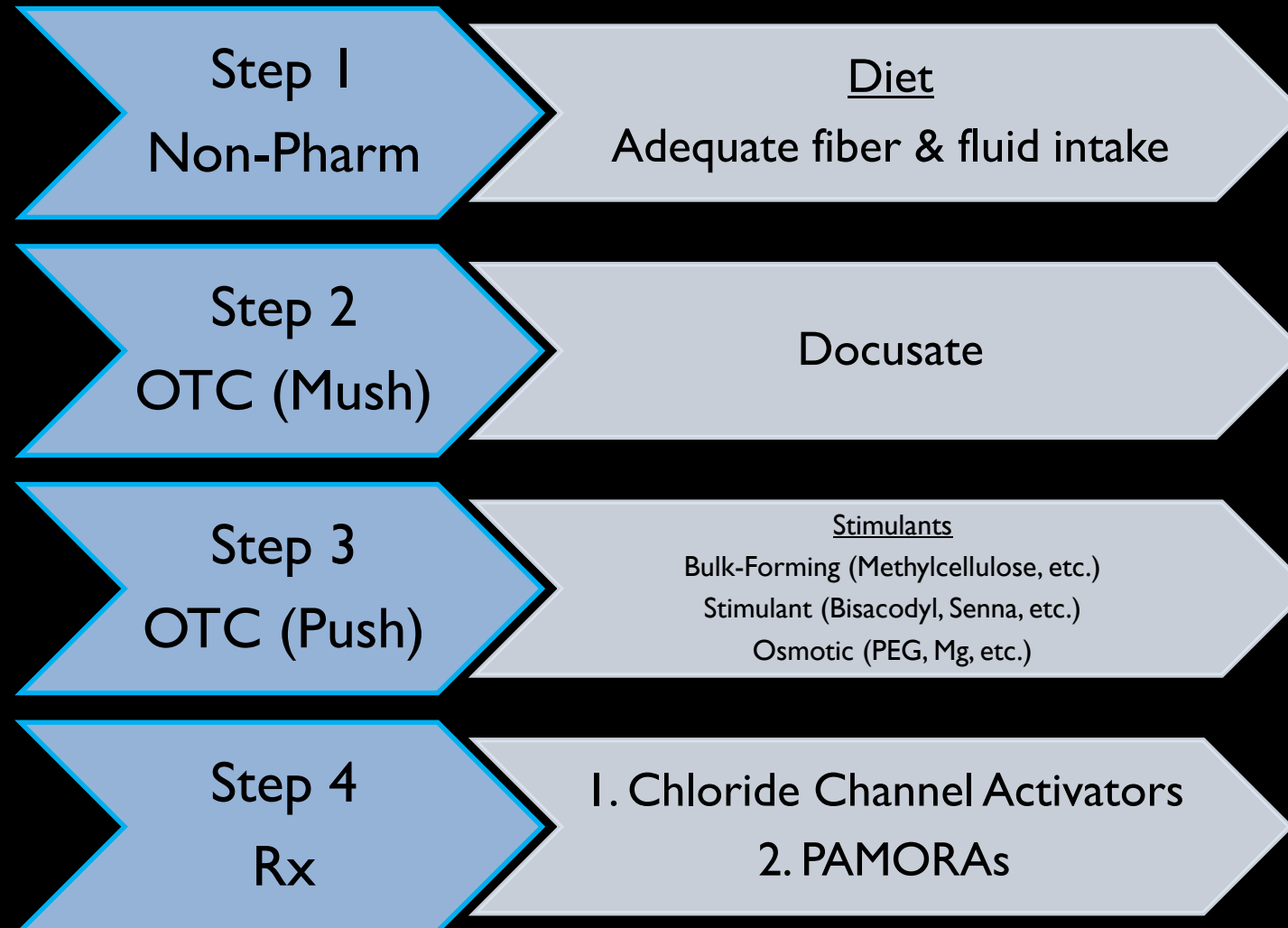
1. **Log in to Caremark.com (and register if necessary)**
Click on "Start a New Prescription." Have your prescription ID card ready and fill in your information. We will contact your doctor for you.
2. **Call the FastStart® number: 1-800-875-0867**
A representative will fill out the order form and contact your doctor for you.

1: A long-term medication is taken regularly for chronic conditions or long-term therapy. A few examples include medications for managing high blood pressure, asthma, diabetes or high cholesterol. 2: Actual quantity may vary depending on your plan. This document contains references to brand-name prescription drugs that are trademarks or registered trademarks of pharmaceutical manufacturers not affiliated with CVS Caremark. Your privacy is important to us. Our employees are trained regarding the appropriate way to handle your private health information.

An Ounce of Prevention, Worth a TON of Issues

- Opioid-Induced Constipation
 - Possibility was never discussed
 - OTC Self-Care Docusate Sodium 100mg BID
 - Ureteroscopy Protocol ???
 - “Please Sign Here” ???

Opioid Induced Constipation (OIC)



By the time a patient discusses with healthcare professional, OTCs likely exhausted




Opioid Induced Constipation (OIC)

Step 4 (Rx)

- Chloride Channel Activator (Lubiprostone)
 - If constipation was present prior to opioid therapy
- Peripheral Acting Mu Opioid Receptor Antagonists (PAMORAs)
 - If constipation presented with initiation of opioid therapy
 - Alvimopan: Inpatient PO only
 - Methylnaltrexone: SC/PO, Take on empty stomach 30 minutes before first meal
 - Naloxegol: 3A4, 25mg PO qAM (1h before/2hrs after meal)
 - Naldemedine: PO +/- Food

Urine Color

- ❖ The yellow coloration of urine results from urobilin that is produced as a product of bilirubin degradation
- ❖ Normal urine color: light yellow to golden

AM I HYDRATED?		
Urine Color Chart		
1		If your urine matches these colors, you are drinking enough fluids
2		Drink more water to get the ideal color in Shade 1 and 2.
3		Dehydrated
<hr style="border: 2px solid red;"/>		
4		You may suffer from cramps and heat-related problems
5		Health risk! Drink more water.
6		Health risk! Drink more water.
7		Health risk! Drink more water.
8		Health risk! Drink more water.

Urine Color Kaleidoscope

Urine Color	Medications	Description
Orange	Chlorzoxazone, Isoniazid, Phenazopyridine, Sulfasalazine, & Warfarin	Consumption of Carrots Monitor for sparse blood in urine (Hematuria)
Red	Chlorzoxazone, Ibuprofen, Phenazopyridine, Rifampin, Senna, & Warfarin	Consumption of Red Beets, Rhubarb, or Carrots Monitor for sparse blood in urine (Hematuria) Myoglobinuria from rhabdomyolysis
Brown	Acetaminophen, Metronidazole, & Nitrofurantoin	Myoglobinuria from rhabdomyolysis (“Hand Drumming”) Acute Renal/Hepatic Disease Metastatic melanoma (Rare Reports)
Purple	Chlorzoxazone Combination of Medications Causing Red or Blue	Gram-Negative bacteria
Blue	Amitriptyline, Cimetidine, Indomethacin, Methocarbamol, Metoclopramide, , & Zaleplon	Methylene Blue
Green	Methocarbamol Medications causing Blue (Added to yellow urine)	Consumption of Asparagus or Black licorice UTI with Pseudomonas
White	X	Infection or Calcium/Phosphate Crystals
Black	Methocarbamol, Methyldopa/L-dopa, Senna, & Sorbitol	Phenol or Copper Poisoning Consumption of Iodine Metastatic melanoma (Rare Reports)

Catheter Removal

- 3 Chair Shuffle
- Friends in Low Places (Garth Brooks)
- Wide Open Spaces (Dixie Chicks)
- Oh My.....
- “PTSD-like” Nap Attempt

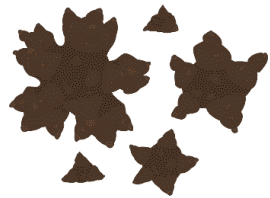
Non-Pharm



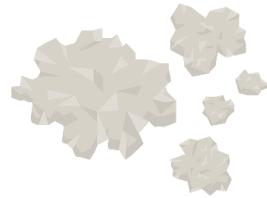
Damn it Doll

Nephrolithiasis

OXALATE STONES



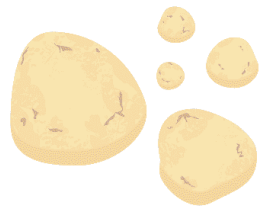
PHOSPHATE STONES



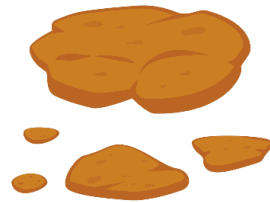
CYSTINE STONES



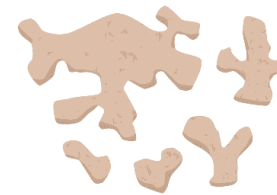
URATE STONES



XANTHINE STONES



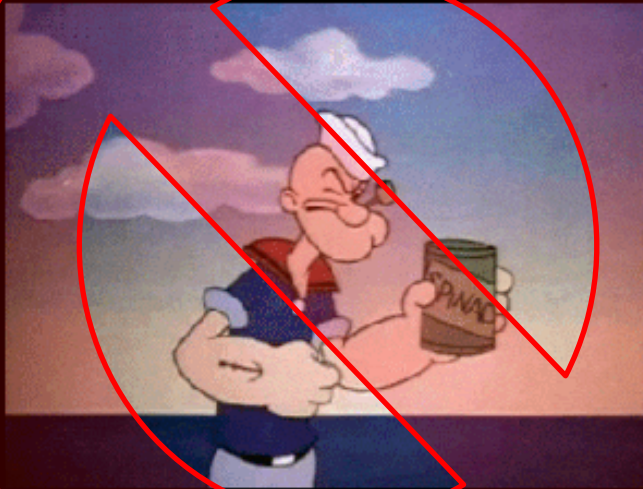
STRUVITE STONES



Low Oxalate Diet

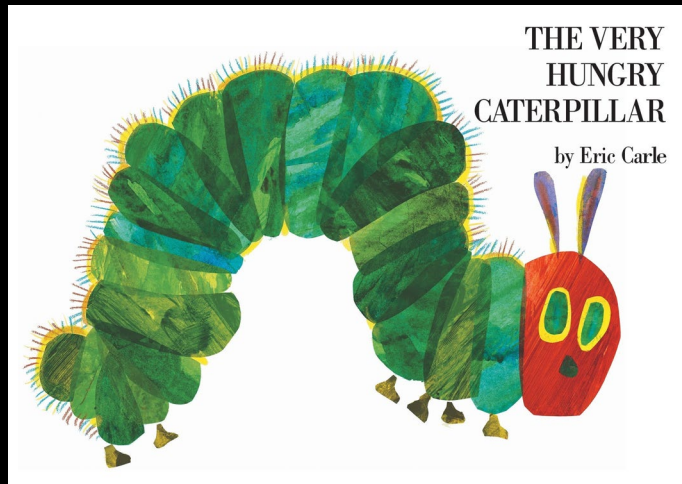
- Typically, a 24-hour urine collection will assist in deciding on the need for dietary oxalate changes
- Average daily diet: Approximately 200 to 300mg oxalate
- Limited daily diet aims for less than 100mg of oxalate
- Food & Beverage oxalate level information is inconsistent
- Must also limit salt (sodium) in diet

High Oxalate Foods

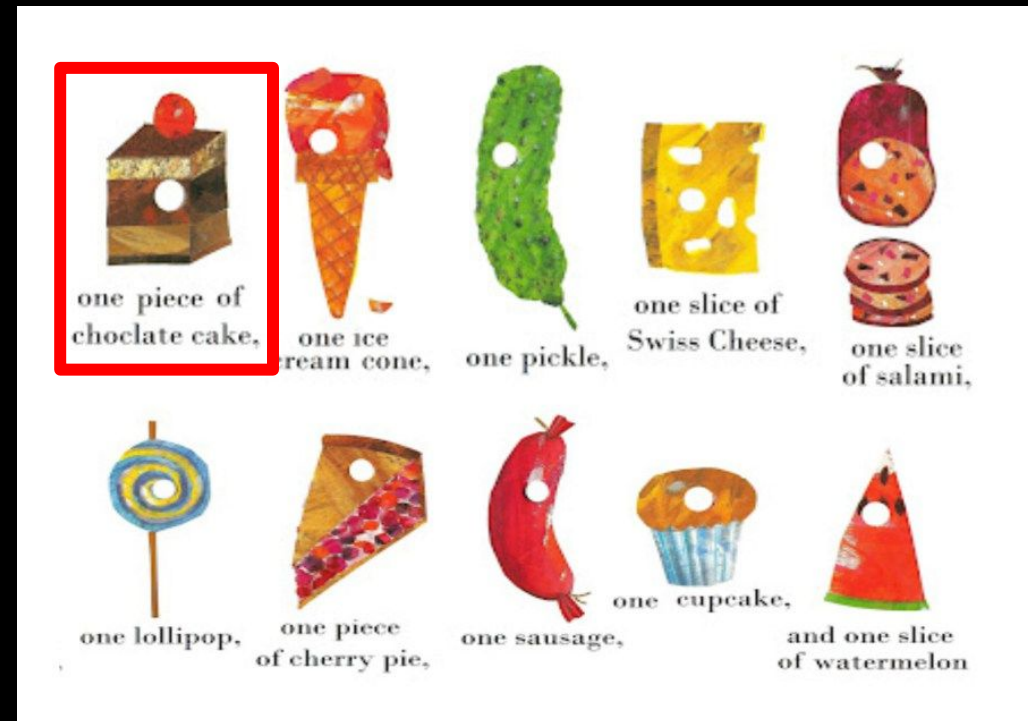


Oxalate Level	Foods
LOW	Popcorn, Apples, Bananas, Pears, Peaches, Cucumbers/Pickles, Cauliflower, Broccoli, Cheeses, Meat, Fish, Crackers, Pudding, Jell-O, Olive Oil, Milk, Coffee, Wine, & Water
15mg to 20mg	Carrots (1/2 Cup), Kidney/Refried Beans (1/2 Cup), Couscous (1 Cup), Tahini (Tbs.), Peanut Butter (1 Tbsp.), Kiwi (1 Fruit), Brussel Sprouts (1/2 Cup), All Purpose Flour (1 Cup), Pasta (2 Cups Cooked), Tomato Sauce (1/2 Cup), Pumpkin Seeds (1 Cup), Muesli (2/3 Cup), Olives (10), Avocado, Celery Raw (1/2 Cup)
21mg to 30mg	Soy Milk (1 Cup), Potato Chips (1oz.), Pancakes (4), Brown Rice (1 Cup), Dried Figs (5), Dates (1), Prunes (1), Chili with Beans (1 Cup), Peanuts (1oz.), Sweet Potato (1 Cup), Wheat Flour (1 Cup), Orange (1), Mashed Potatoes (1 Cup), Dried Pineapple (1/2 Cup)
31mg to 40mg	Brownie (1oz.), Walnuts (7 Nuts), Wheat Brans (1 Cup), Bamboo Shoots (1 Cup), Chocolate Syrup (2oz.), Mixed Nuts (1oz.), Bagel, Yam (1/2 Cup), Veggie Burgers (1)
41mg to 60mg	Natural Stevia, Soybeans (1/2 Cup), Raspberries (1 Cup), Grapefruit (1), Cashews (1oz.), Okra (1/2 Cup), French Fries (4oz.)
61mg to 70mg	Cornmeal (1 Cup), Brown Rice Flour (1 Cup), Hot Chocolate (1 Cup), Cocoa Powder (4 Tsp)
71mg to 100mg	Beets (1/2 Cup), Navy Beans (1/2 Cup), Bulgar (1 Cup), Baked Potato with Skin (1), Corn Grits (1 Cup)
101mg to 130mg	Miso Soup (1 Cup), Almonds (1oz.), Buckwheat (1 Cup)
~300mg	Rice Bran (1 Cup)
~500mg	Rhubarb (1/2 Cup)
~650-750mg	Spinach (1 Cup Raw or 1/2 Cup Cooked)

Low Oxalate Diet Caterpillar Case



Which of these food items should a patient avoid if aiming to prevent calcium oxalate kidney stones?



Who's in the Club?



Audience Question #1

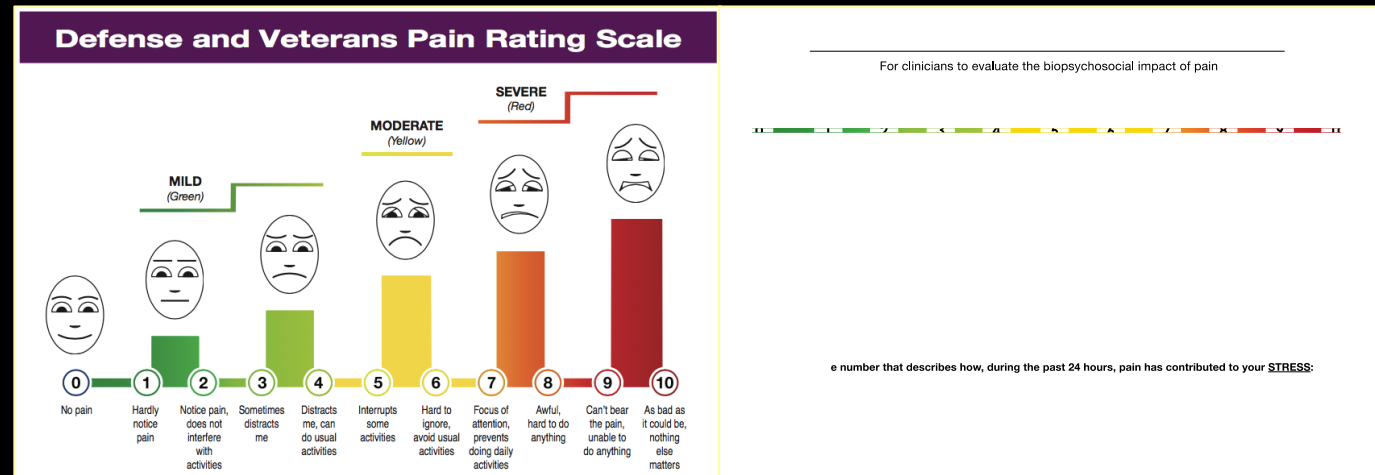
Which of the following pain scales addresses four (4) functional aspects that can greatly assist in managing a patient's pain?

- a) ACPE
- b) APS
- c) CME
- d) DVPRS

Audience Question #1 [Answer]

Which of the following pain scales addresses four (4) functional aspects that can greatly assist in managing a patient's pain?

- a) ACPE
- b) APS
- c) CME
- d) DVPRS [Correct]



Audience Question #2

Justin Payne is prescribed oxycodone ER 20mg BID and oxycodone IR 5mg QID for the management of his chronic lower back pain. How many Morphine Milligram Equivalents (MMEs) is Mr. Payne prescribed per day?

- a) 60 MMEs/Day
- b) 90 MMEs/Day
- c) 120 MMEs/Day
- d) 180 MMEs/Day

Audience Question #2 [Answer]

Justin Payne is prescribed oxycodone ER 20mg BID and oxycodone IR 5mg QID for the management of his chronic lower back pain. How many Morphine Milligram Equivalents (MMEs) is Mr. Payne prescribed per day?

- a) 60 MMEs/Day
- b) 90 MMEs/Day [Correct]
- c) 120 MMEs/Day
- d) 180 MMEs/Day

20mg tablet x 2/Day =	40mg/day
5mg tablet x 4/day =	<u>20mg/day</u>
	60mg/day

$$60\text{mg/Day} \times 1.5 \text{ (MME Factor)} = 90 \text{ MME/Day}$$

Audience Question #3

Which of the following foods should be avoided for those utilizing a low oxalate diet?

- a) Beans, Nuts, & Seeds
- b) Chocolate
- c) Spinach
- d) All of the above

Audience Question #3 [Answer]

Which of the following foods should be avoided for those utilizing a low oxalate diet?

- a) Beans, Nuts, & Seeds
- b) Chocolate
- c) Spinach
- d) All of the above [Answer]



Discussion?

