

Ready, Set...

**Pause**  
Not all pain is the same



# NANCY POOK MD FACEP

- Medical Director, KETTERING HEALTH NETWORK  
Network Operations Command Center  
Network Emergency Services
- Co-chair, GDAHA Research and Community  
Paramedicine Committee
- Associate Clinical Faculty, WSU School of Medicine
- Member, COAT Prescribing Committee
- Member, OHIO ACEP NIX OPIATES EDUCATION TEAM
- Board Member, Ohio Hospital Association Opiate  
Response Initiative
- Board Member and Vice-President, Emergency Medicine  
Specialists, Inc.

# Objectives

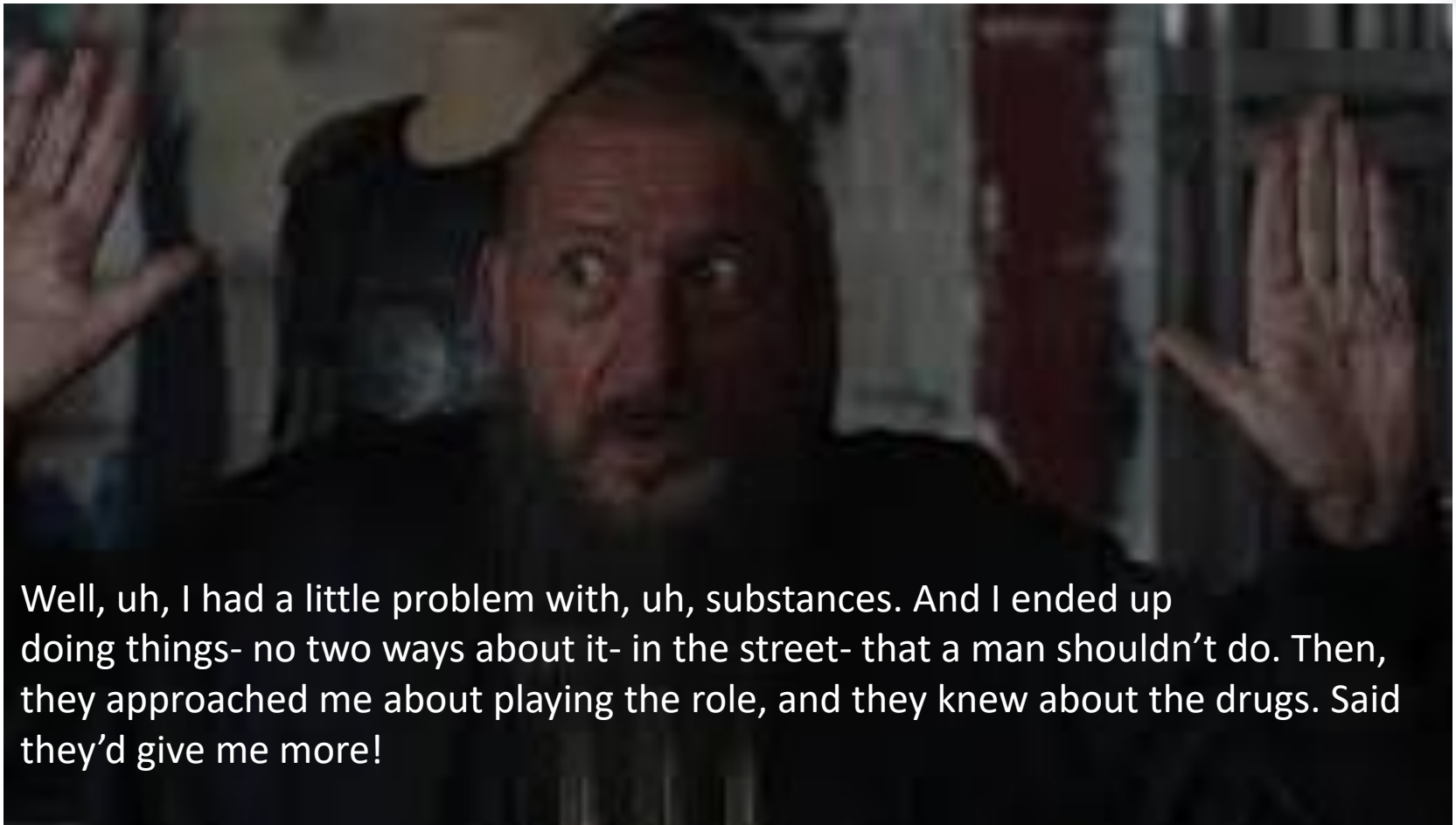


- A conversation about
  - PAIN
  - SUBSTANCE USE DISORDER
  - SAFE PRESCRIBING
  - And a tool for compassionate and professional patient care

From “The Overdose Capital of America”

NBC news June 17, 2017

# It's complicated.



Well, uh, I had a little problem with, uh, substances. And I ended up doing things- no two ways about it- in the street- that a man shouldn't do. Then, they approached me about playing the role, and they knew about the drugs. Said they'd give me more!

# It's complicated: Susan and Bobby



# Bobby's phone



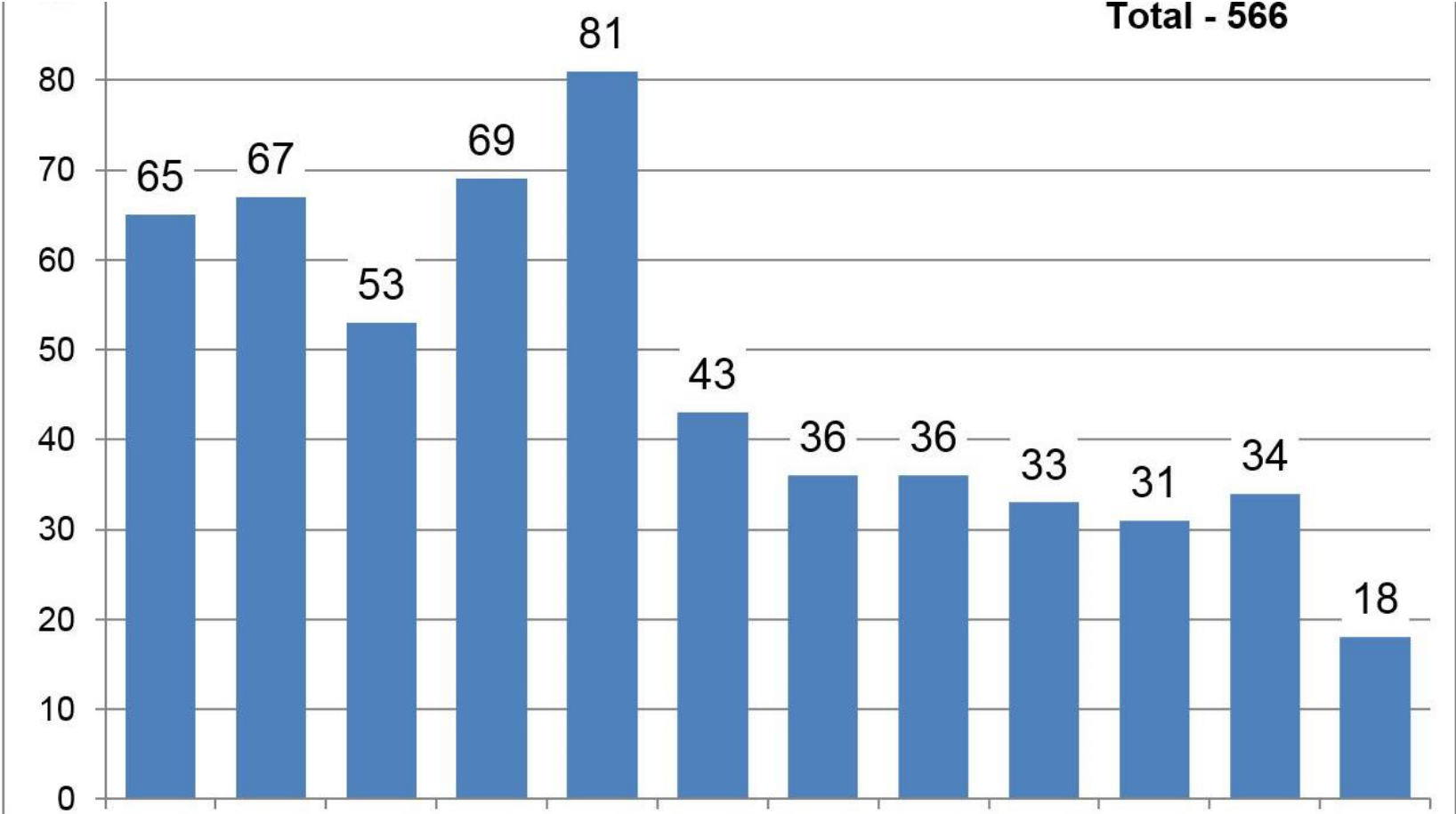
 Want Ad-Free Talkatone?  
Tap to disable advertisements.

# Bobby's phone



 Want Ad-Free Talkatone?  
Tap to disable advertisements.

# Dayton and Montgomery County Public Health Department Data 2017



<http://www.phdmc.org/coat/158-accidental-overdose-death-totals>

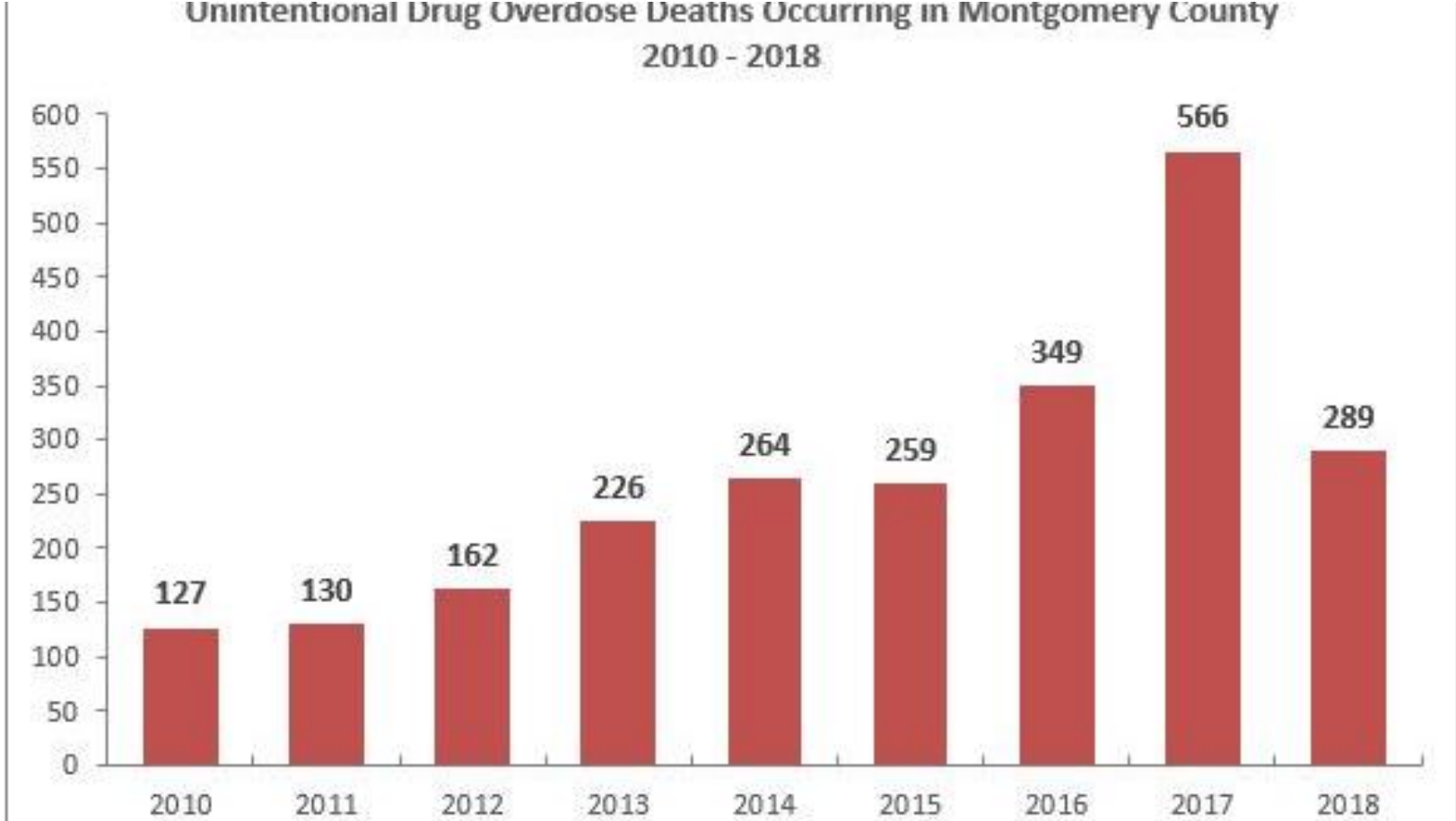




# Unintentional Drug Overdose Deaths in Montgomery County 2010-2018



Unintentional Drug Overdose Deaths Occurring in Montgomery County  
2010 - 2018



# WSU OVERDOSE DATA- April 2017



N=100 accidental overdose deaths

91% white

65% male

99 tested positive for fentanyl

56% tested positive for acryl fentanyl and furanyl fentanyl

3 carfentanyl positives

Only 3 heroin positives

Daniulaityte et. al. CITAR Boonshoft School of Medicine, Wright State University

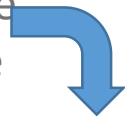


Mike Peters, Pulitzer Prize winning editorial cartoonist, Dayton Daily News

# THE PATHWAY TO FENTANYL



Individual abuses Opiate Prescription pills for the first time recreationally



Escalating Doses Required in an attempt at the same response as the body becomes accustomed to the effect



Supply becomes difficult secondary to cost, and user looks to different avenues



Introduced to Heroin because it is a cheaper high



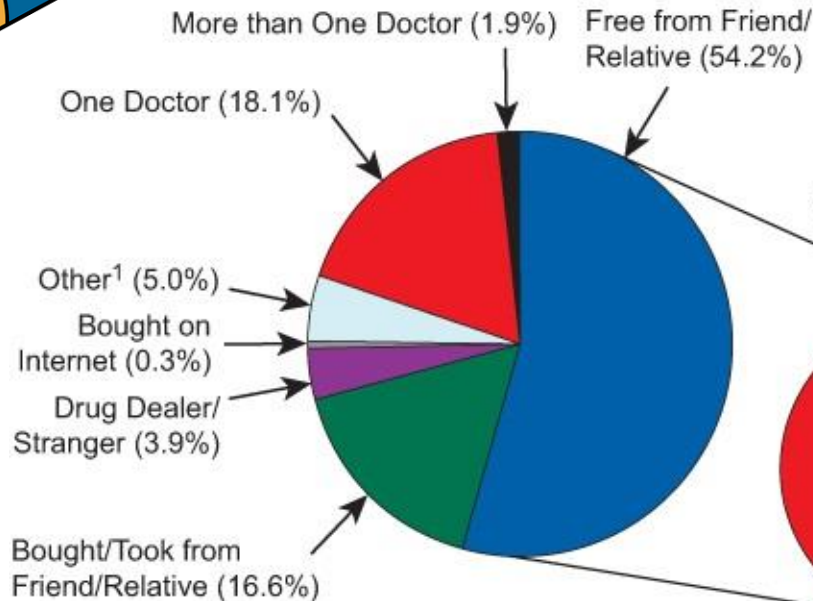
Most people start by smoking/snorting heroin, vowing to never inject and inevitably become intravenous users



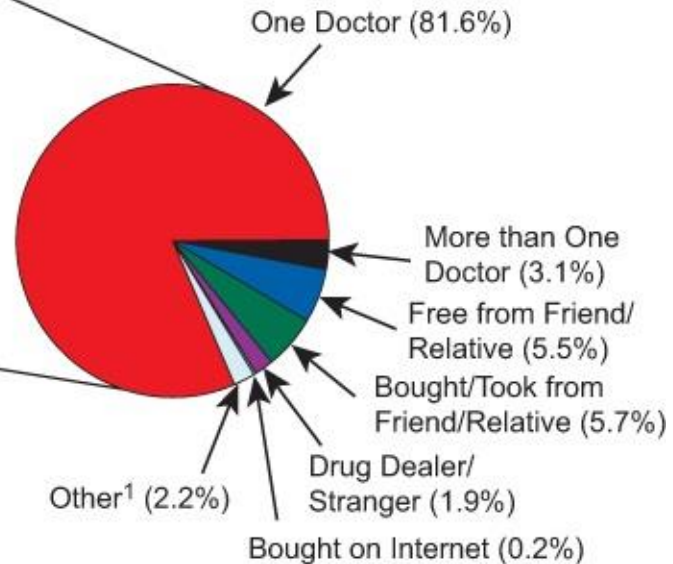
# THE PATHWAY TO FENTANYL



Source Where User Obtained



Source Where Friend/Relative Obtained



# DOPAMINE PATHWAYS

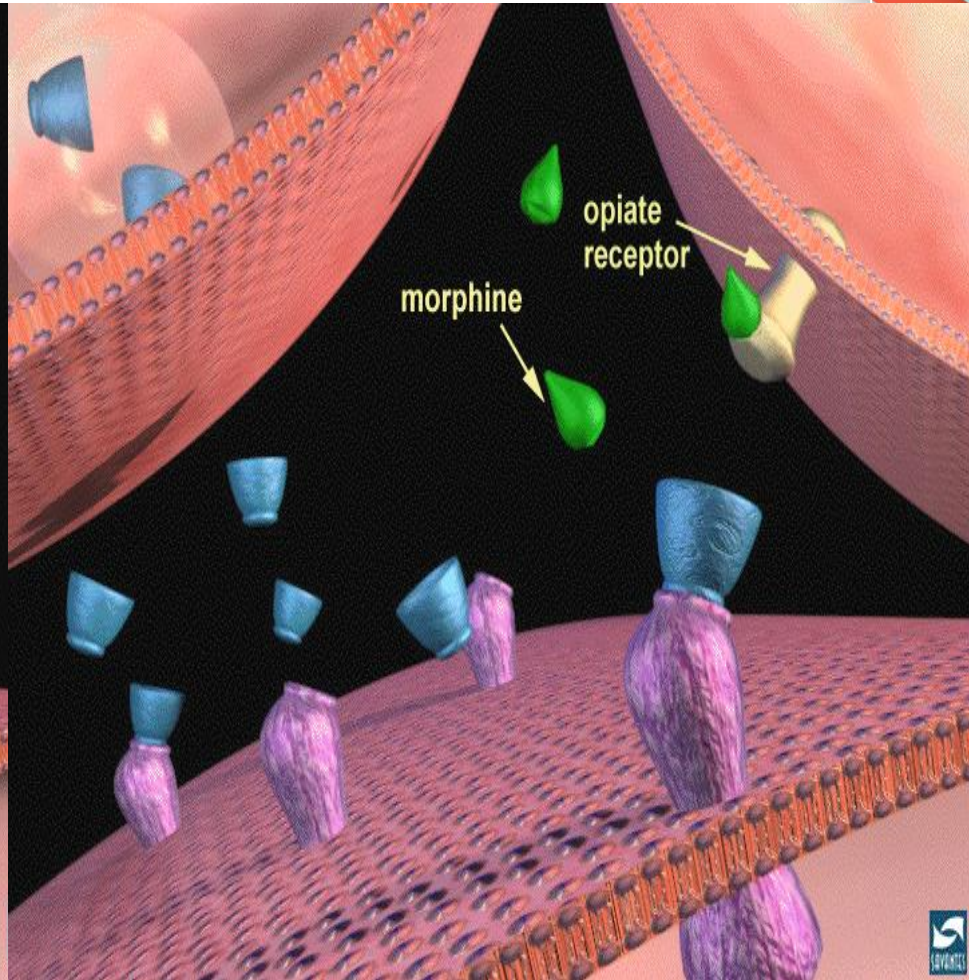
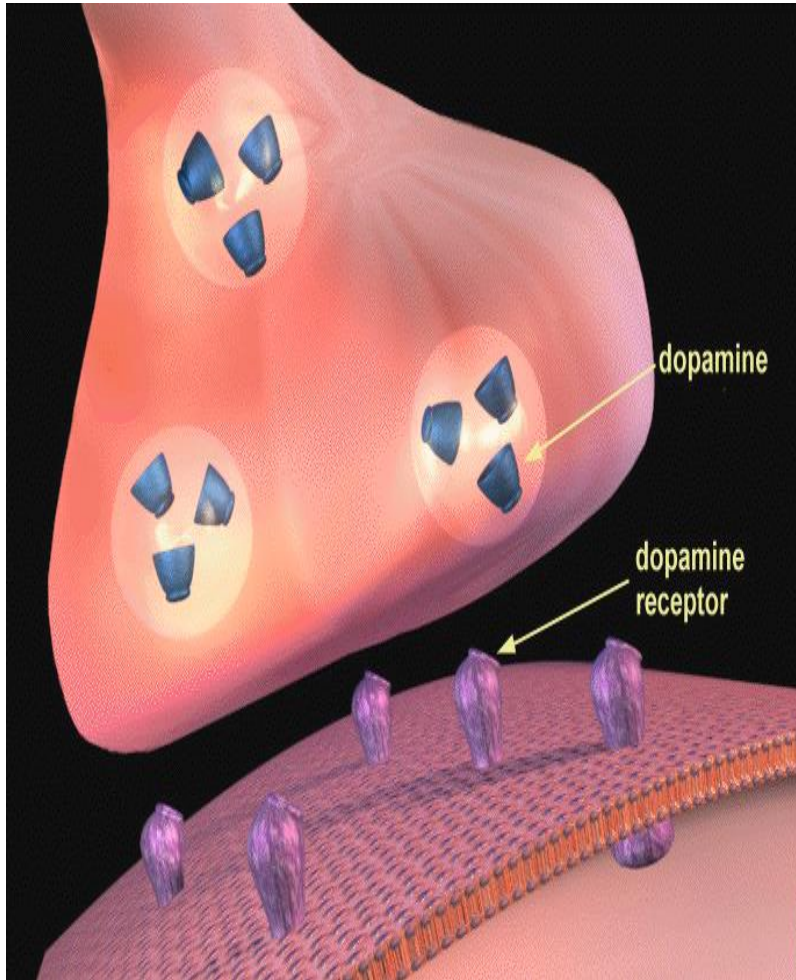


Frontal Cortex  
executive function  
personality

“Runner’s High”

Addiction hijacks the brain

# DOPAMINE PATHWAYS



# Addiction HIJACKS the brain





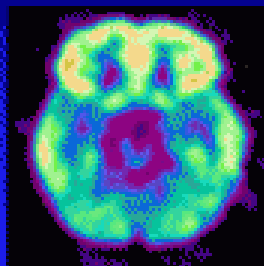
# Addiction changes everything



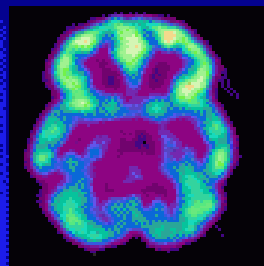
## *Addiction is Like Other Diseases...*

- It is preventable
- It is treatable
- It changes biology
- If untreated, it can last a lifetime

**Decreased Brain Metabolism  
in *Drug Abuser***

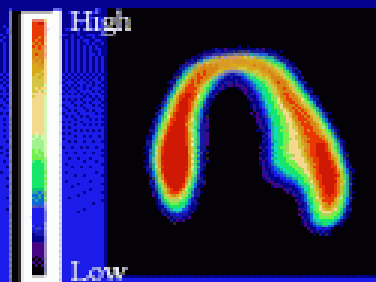


**Healthy Brain**

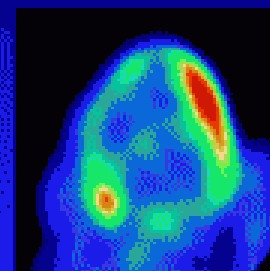


**Diseased Brain/  
Cocaine Abuser**

**Decreased Heart Metabolism  
in *Heart Disease Patient***



**Healthy  
Heart**



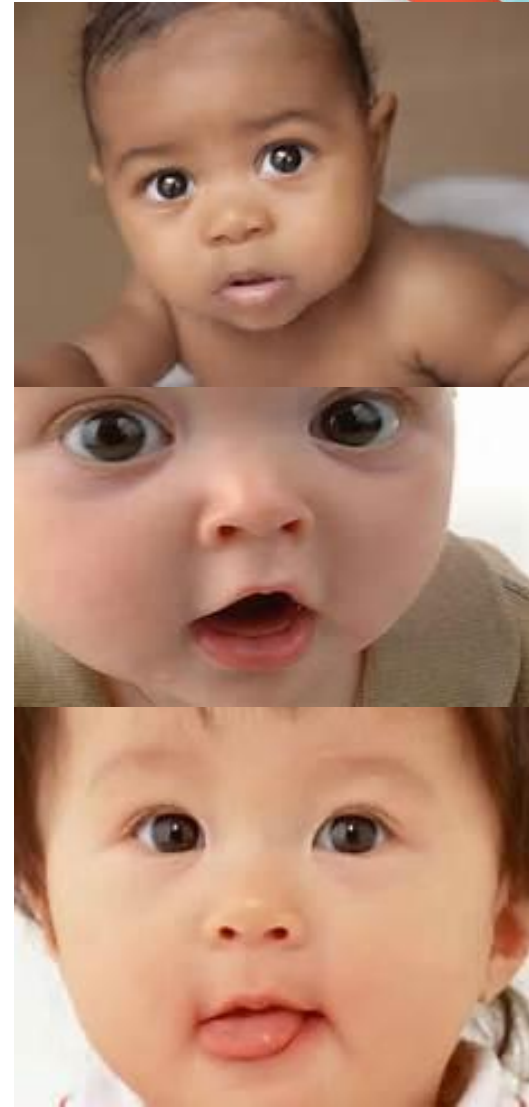
**Diseased Heart**

*Research supported by NIDA addresses all of these  
components of addiction.*

# Addiction changes everything



- Good people
- Good families
- Good communities
- Good schools



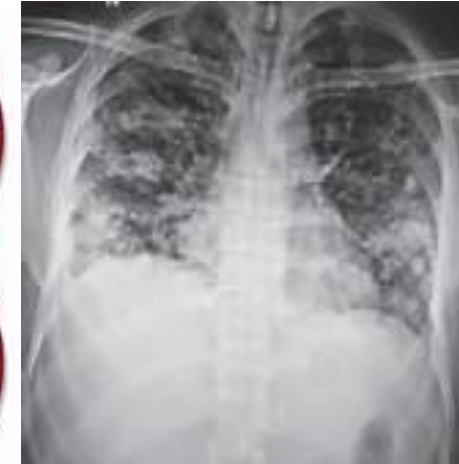
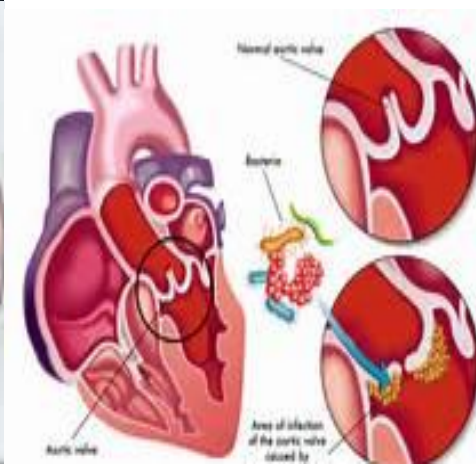
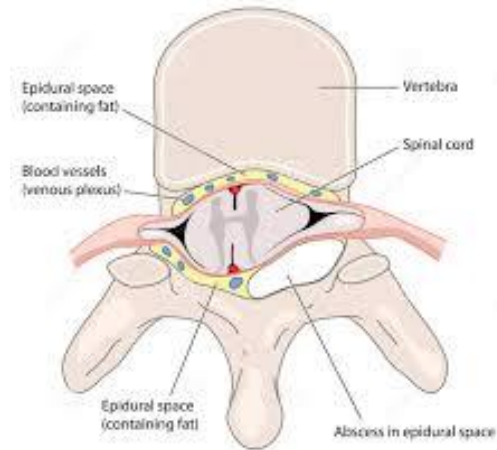
# Addiction changes everything



# Addiction changes everything



Acute fulminant infection  
Organ failure  
Hepatitis  
HIV

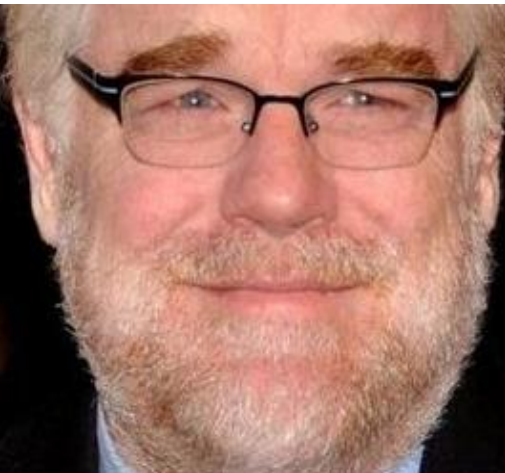


# Addiction changes everything



- US cost est. \$55.7 billion in 2007 Pain Medicine 2011; 12:657-667
- 10 years later, \$700 billion annually Addiction Policy Forum 2017
- US Healthcare attributed to Rx pain killers \$25B CDC
- Ohio \$1.076 billion in 2007 Matrix Global Advisors 2015
- Every life is priceless

*Phillip Seymour Hoffman age 46*



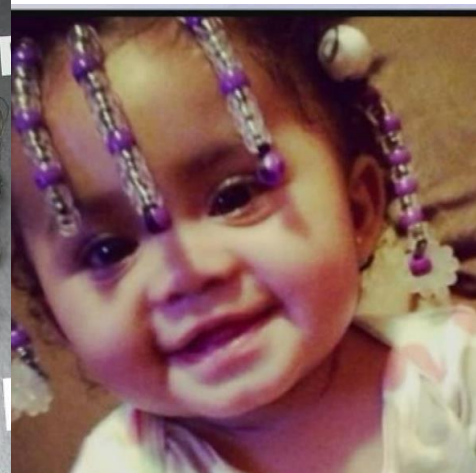
*Prince age 57*



*Heath Ledger age 28*



*Tiairee ages*



# Weiner, et. al.

- Non-fatal OD treated in ED
- Massachusetts
- 17,421 patients
- 5.5% died within one year





# THE BEAT ON THE STREET





# HEROIN/FENTANYL



# Carfentanil

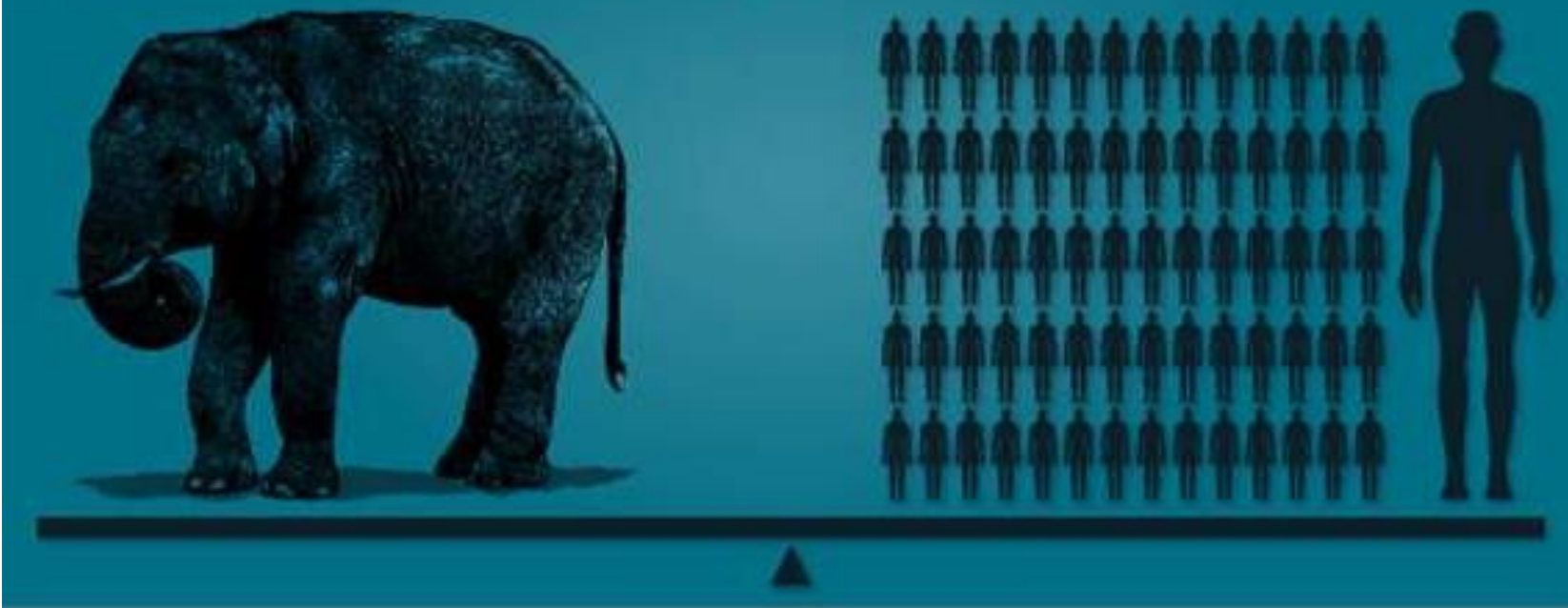


100X more potent than fentanyl

# Carfentanil



To put this in perspective, wild African elephants—an animal that Carfentanil is used on—weigh between **5,000 and 14,000 lbs** as reported by National Geographic, which is roughly **26 to 72 times** the weight of your average adult male of **195.5 lbs**.



# COUNTERFEIT PILLS



**REAL**



**FAKE**



Source: SF Public Health

# FENTANYL IN MARIJUANA?



# KRATOM

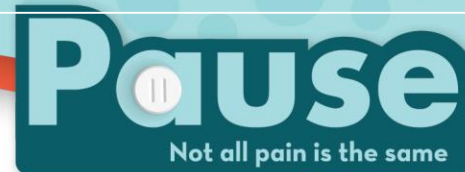


# FLAKKA



Alpha-pyrrolidinopentiophenone (alpha PVP)

# METHAMPHETAMINE

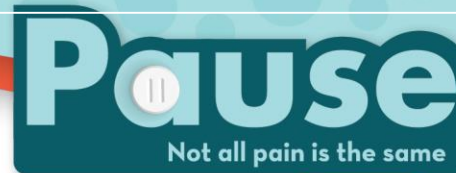




# COCAINE

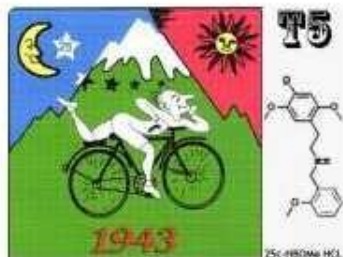


# DARK WEB MAIL ORDER DRUGS?



Shop by Category

- Drugs 8,104
  - Cannabis 2,063
  - Dissociatives 193
  - Ecstasy 681
  - Opioids 594
  - Other 435
  - Precursors 39
  - Prescription 1,666
  - Psychedelics 974
  - Stimulants 1,039
- Apparel 265
- Art 118
- Books 869
- Collectibles 2
- Computer equipment 40
- Custom Orders 85
- Digital goods 548
- Drug paraphernalia 291
- Electronics 79
- Erotica 515
- Fireworks 2
- Food 8
- Forgeries 75



1,000 x 25c-NBOMe HCL blotters (800ug)  
\$9.73



5g white russian  
\$1.69



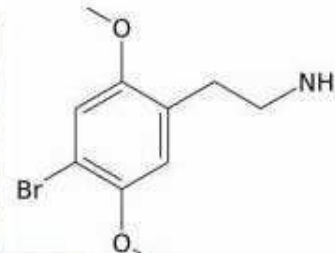
Cocaine Kokain Koks FLEX -- HIGH GRADE - 0.5  
\$2.04



5g Good quality Hash" from Chaouen  
\$1.28



Kush  
\$6.09



5g Good quality "Ali baba's Hash" from Chaouen | emerald 200mg  
\$1.71



# Xylazine (horse sedative)



Use initially seen in Puerto Rico; recent adulterant deaths in OH



# BUILDING

a safe prescribing PRACTICE



## Case #1

- 60 yo male
- PMH: HTN hyperlipidemia
- on Cozaar and Lipitor
- 12 hour history of abdominal pain, now RLQ
- T 100F BP 170/90
- Formulate a treatment plan

# UNDERSTANDING PAIN



# UNDERSTANDING PAIN

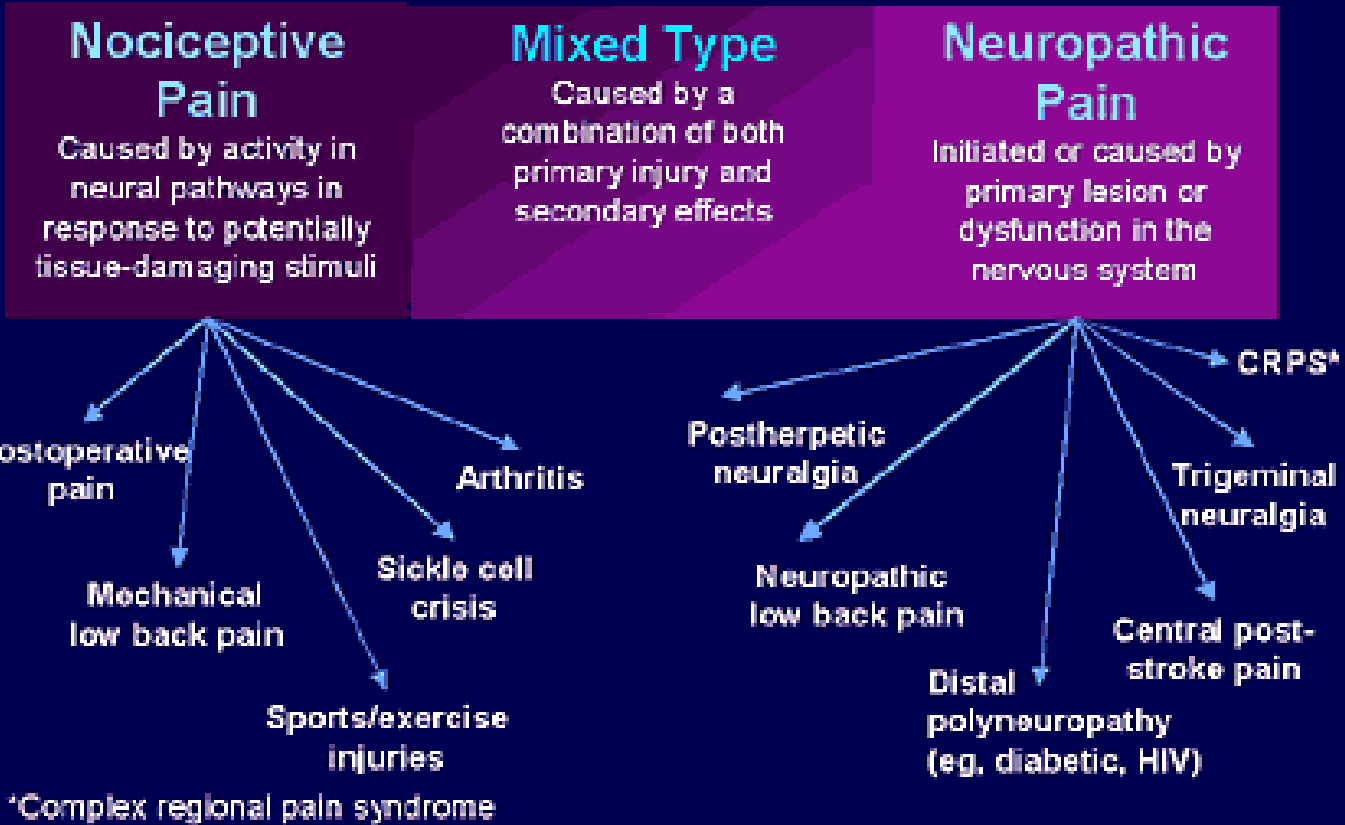


INFLAMMATORY

HYPERALGESIA

ALLODYNIA

## Nociceptive vs Neuropathic Pain



100% functionality





50% functionality



<10% functionality



# Forget the PAIN SCALE!!!



- (We're not there yet).



www.shutterstock.com - 722650015

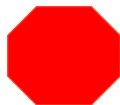
# What does research say?

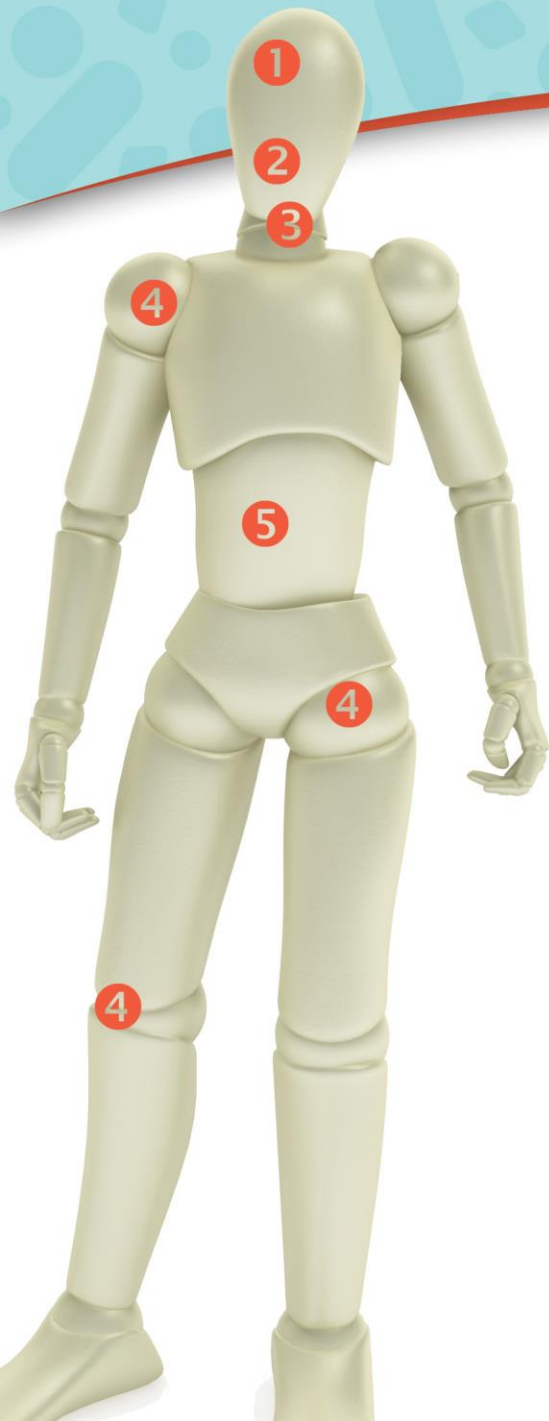


# Ready, set...

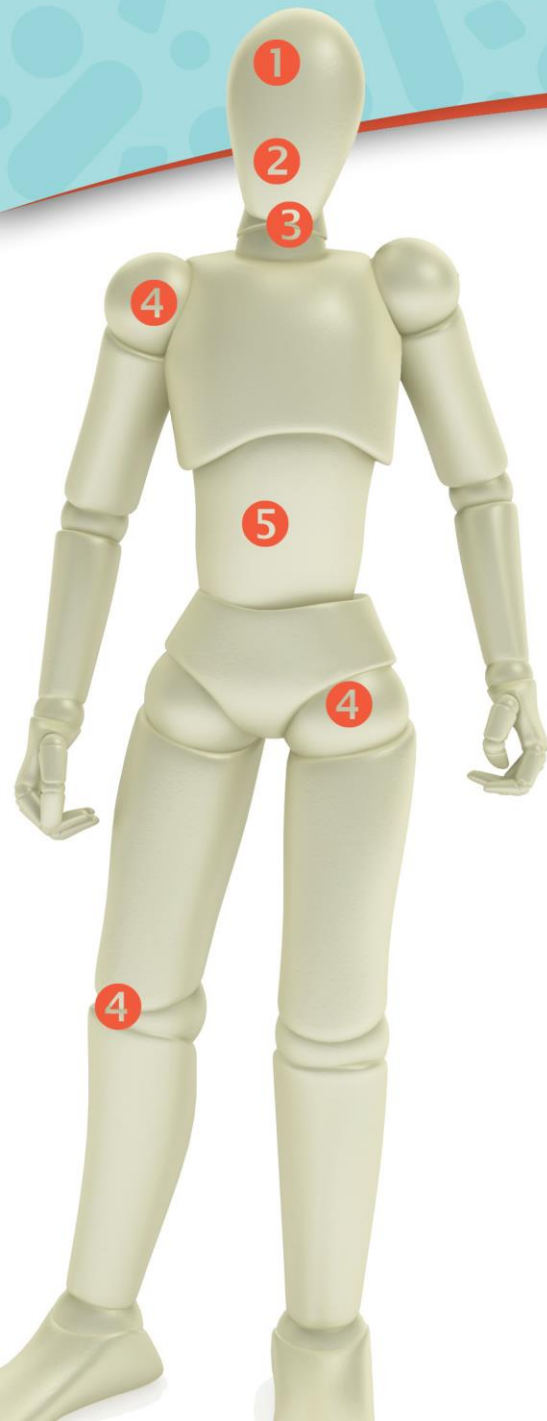


- CDC Rx recommendation: 3-7 day limit for acute pain
- Ohio Rx recommendation: 7 day limit for acute pain, unless documented
- OARRS prescription drug monitoring program check with all addictive Rx
- Warning against concomitantly prescribing opiates and benzodiazepines





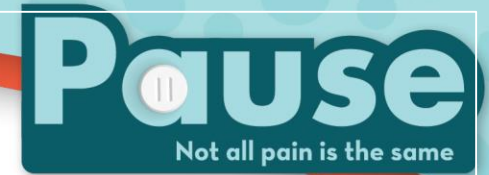
- A primary pathway to manage chronic or benign pain
- Designed with multi-specialty input
- Hospital based Rx
- Outpatient Rx



## KEYS TO SUCCESS

- Standardization
  - Education
  - Built into EPIC- easy recall; correct dosage
  - Accountability
- Provider Report** shows Morphine equivalent to patient ratio
- OHA reporting

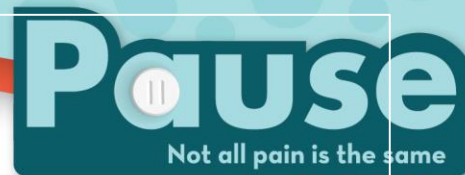
# STANDARDIZATION



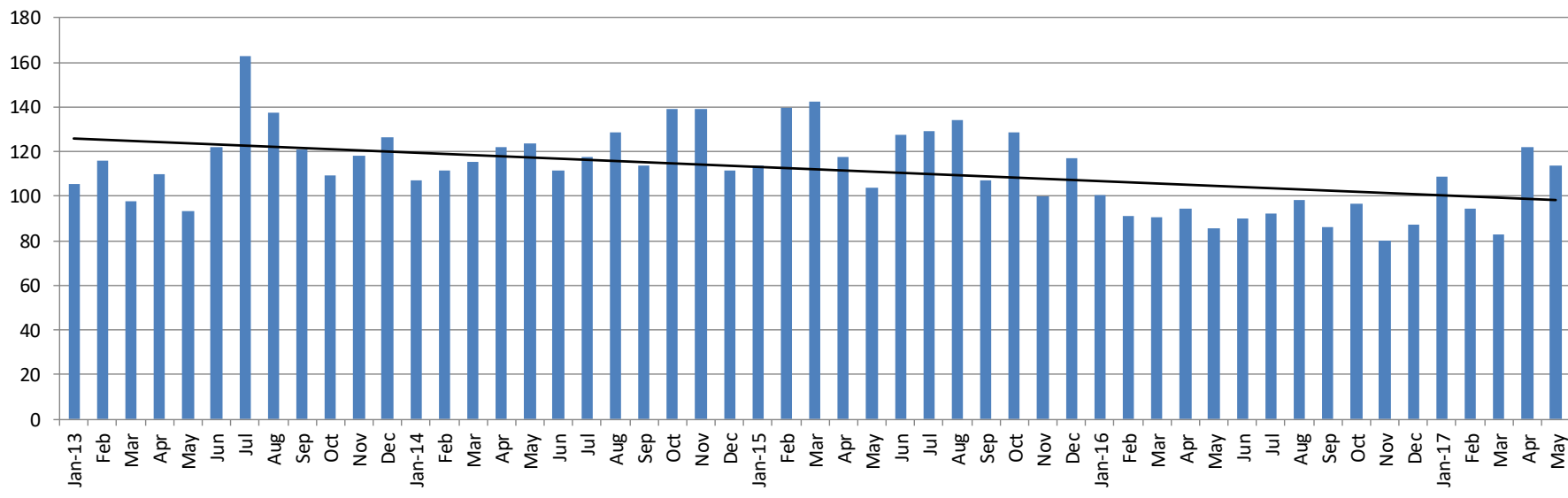
General	Abx Stewardship	Imaging	Medications	Nursing	Think Twice
<b>Chronic Benign Headache</b>					
<input type="checkbox"/>					<input type="checkbox"/> ketorolac (TORADOL) 30 mg IV
<input type="checkbox"/>					<input type="checkbox"/> metoclopramide (REGLAN) 10 mg IV
<input type="checkbox"/>					<input type="checkbox"/> prochlorperazine (COMPAZINE) 10 mg IV
<input type="checkbox"/>					<input type="checkbox"/> promethazine (PHENERGAN) 25 mg IVPB
<input type="checkbox"/>					<input type="checkbox"/> diphenhydramine (BENADRYL) 50 mg IV
<input type="checkbox"/>					<input type="checkbox"/> 0.9 % sodium chloride Bolus 1 liter
<input type="checkbox"/>					<input type="checkbox"/> dextrose 5 % and 0.9 % sodium chloride bolus
<input type="checkbox"/>					<input type="checkbox"/> sumatriptan (IMITREX) 6 mg SQ
<input type="checkbox"/>					<input type="checkbox"/> valproate (DEPAICON) 500 mg in 0.9 % sodium chloride 500 mg IVPB
<input type="checkbox"/>					<input type="checkbox"/> methylPREDNISolone sodium succinate (PF) (SOLU-MEDROL) 125 mg IV
<input type="checkbox"/>					<input type="checkbox"/> lidocaine 10 mg/ml (1 %) 5 ml Injection
<input type="checkbox"/>					<input type="checkbox"/> bupivacaine PF (MARCAINE MPF) 0.5 % (5 mg/mL) 5 ml Injection
<b>Chronic Neck or Back Pain</b>					
<input type="checkbox"/>					<input type="checkbox"/> ketorolac (TORADOL) 30 mg IM
<input type="checkbox"/>					<input type="checkbox"/> orphenadrine (NORFLEX) 60 mg IM
<input type="checkbox"/>					<input type="checkbox"/> ibuprofen (ADVIL,MOTRIN) 800 mg PO
<b>Chronic Dental Pain</b>					
<input type="checkbox"/>					<input type="checkbox"/> ibuprofen (ADVIL,MOTRIN) 800 mg PO
<input type="checkbox"/>					<input type="checkbox"/> ketorolac (TORADOL)30 mg IM
<input type="checkbox"/>					<input type="checkbox"/> chlorhexidine (PERIDEX) 0.12% mouth rinse
<input type="checkbox"/>					<input type="checkbox"/> benzocaine (HURRICAIN ONE) 20 % topical spray
<input type="checkbox"/>					<input type="checkbox"/> penicillin v potassium (VEETID) 500 mg PO
<input type="checkbox"/>					<input type="checkbox"/> clindamycin (CLEOCIN) 300 mg PO
<input type="checkbox"/>					<input type="checkbox"/> bupivacaine PF (MARCAINE MPF) 0.5 % (5 mg/mL) 5 mL Injection
<b>Chronic Joint Pain</b>					
<input type="checkbox"/>					<input type="checkbox"/> ibuprofen (ADVIL,MOTRIN) 800 mg PO
<input type="checkbox"/>					<input type="checkbox"/> ketorolac (TORADOL) 30 mg IM
<input type="checkbox"/>					<input type="checkbox"/> orphenadrine (NORFLEX) 60 mg IM
<input type="checkbox"/>					<input type="checkbox"/> orphenadrine (NORFLEX) 100 mg PO
<input type="checkbox"/>					<input type="checkbox"/> lidocaine (LIDODERM) 5% 1 Patch
<input type="checkbox"/>					<input type="checkbox"/> Apply Splint/Cast/Sling/Other Orthotics
<b>Chronic Abdominal Pain</b>					
<input type="checkbox"/>					<input type="checkbox"/> dicyclomine (BENTYL) 20 mg IM
<input type="checkbox"/>					<input type="checkbox"/> hyoscyamine (LEVSIN) 125 mcg
<input type="checkbox"/>					<input type="checkbox"/> ketorolac (TORADOL) 30 mg IV
<input type="checkbox"/>					<input type="checkbox"/> methocarbamol (ROBAXIN) in 0 mg IVPB
<input type="checkbox"/>					<input type="checkbox"/> polyethylene glycol (MIRALAX) :
<input type="checkbox"/>					<input type="checkbox"/> lidocaine (XYLOCAINE) 1.5 mg/k



# SUCCESS: KETTERING ED



KH ED Opiate/Patient Ratio 2013 - May 2017



# SUCCESS: KETTERING HEALTH NETWORK

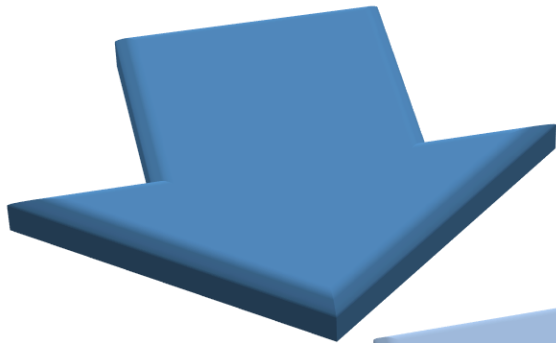


ED RECIDIVISM

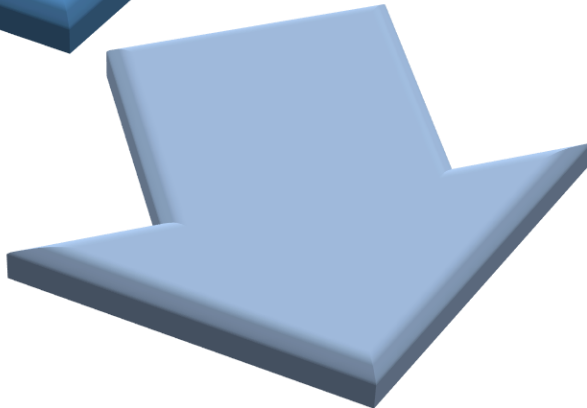
# Rx Standardization

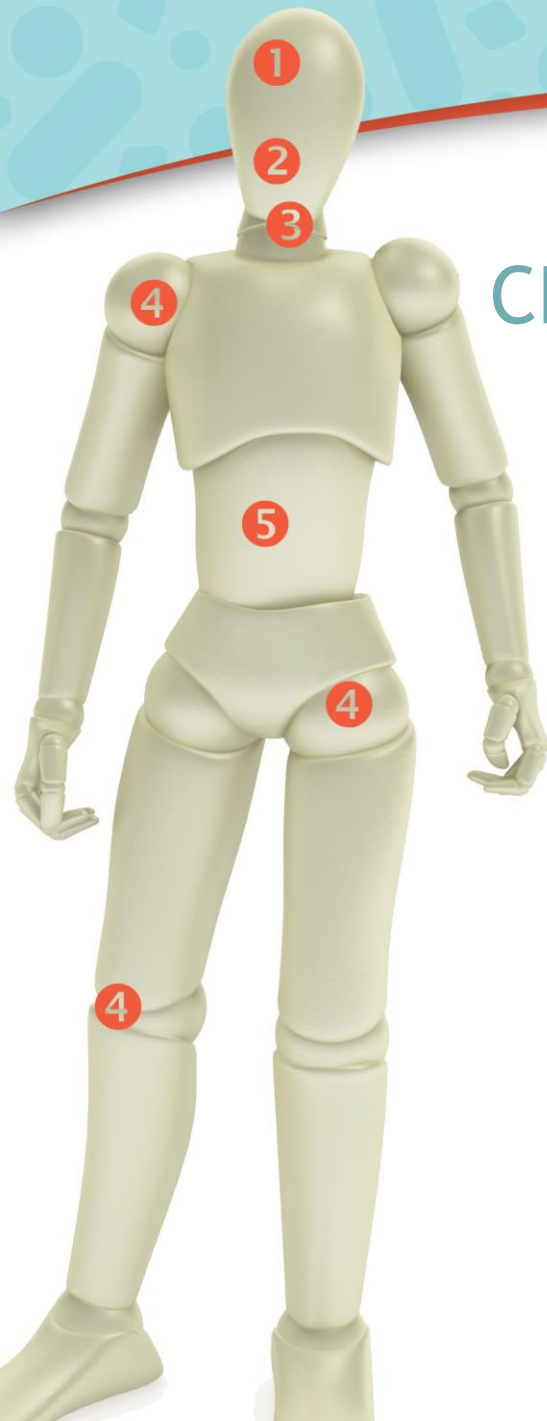


Opioid Rx 33%



Benzodiazepine  
Rx 67%





## CHRONIC BENIGN HEADACHE

Put out the fire: immediate treatment to prevent progression

NSAIDs

Triptans

Muscle relaxant

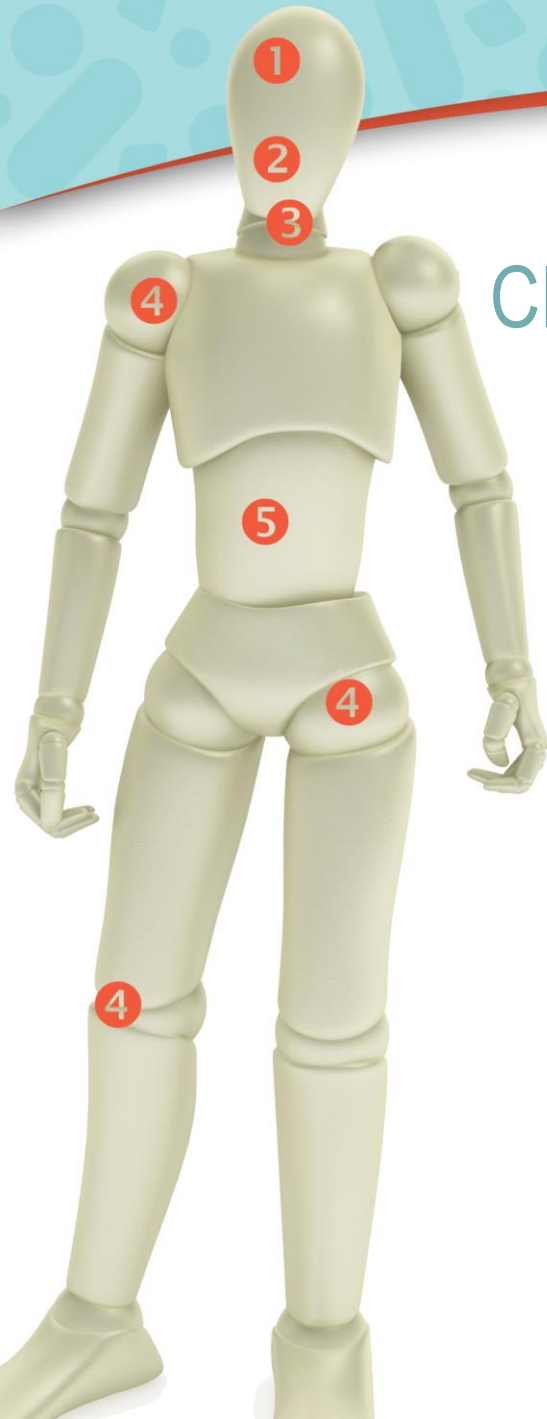
Anti-emetic

Steroids if protracted headache

Biofeedback

Prophylaxis

Discontinue daily rescue meds in REBOUND headache syndrome



## CHRONIC NECK OR BACK PAIN

NSAIDs

Muscle relaxer

Lidocaine topical or patch

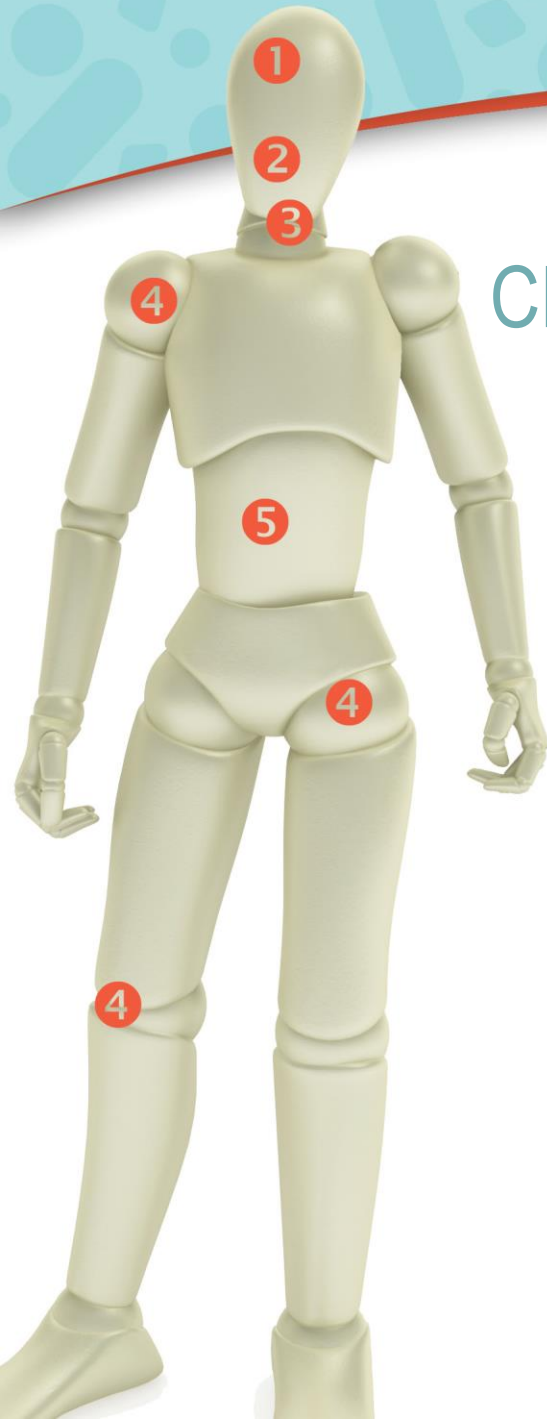
Gabapentin (Neurontin) if neurogenic pain

Trigger point injection

Massage

TENS

Physical therapy



## CHRONIC DENTAL PAIN

NSAIDs

Clorhexidine (Peridex) mouth wash

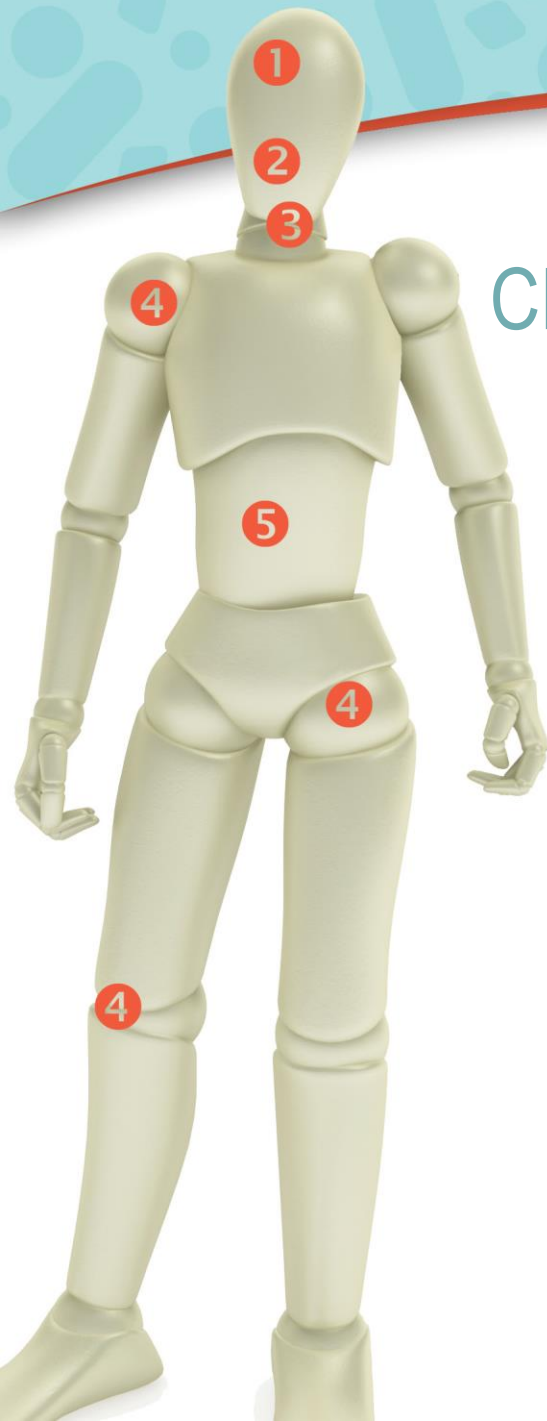
Benzocaine topical

Antibiotics if infection

TMJ

Muscle relaxer

OTC bite block



## CHRONIC JOINT PAIN

NSAIDs

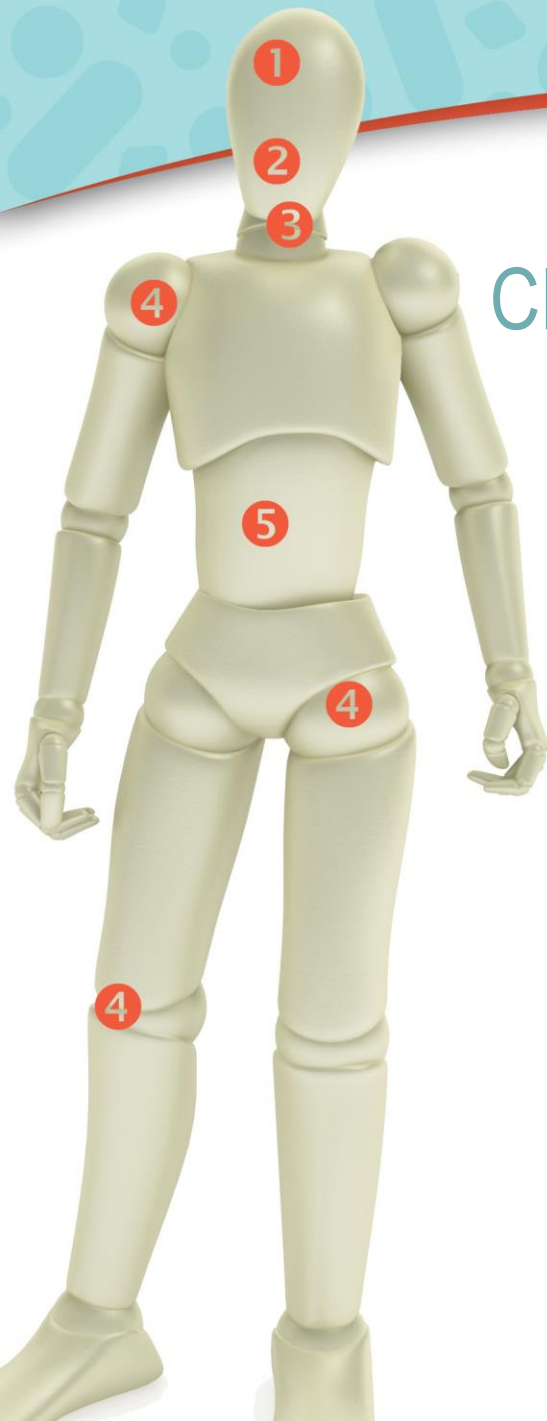
Muscle relaxer

Lidocaine topical or patch

Compression sleeve or splint prn

Physical therapy

Weight reduction prn



## CHRONIC ABDOMINAL PAIN

Dicyclomine (Bentyl) or Hycosamine (Levsin)

Anti-emetic

H2 blocker or PPI

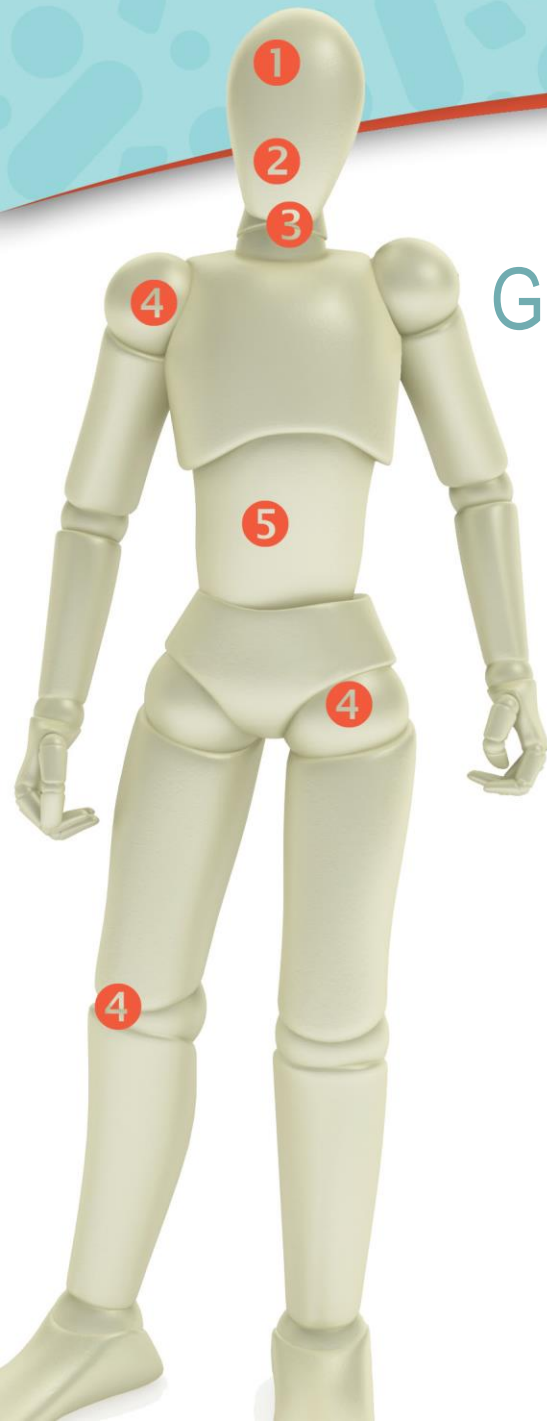
IV Lidocaine for renal colic

Stool softener if constipation; intermittent laxative use prn

Muscle relaxer may be helpful in some cases

Diet recommendations





## GENERAL PRINCIPLES

Specialty referral prn

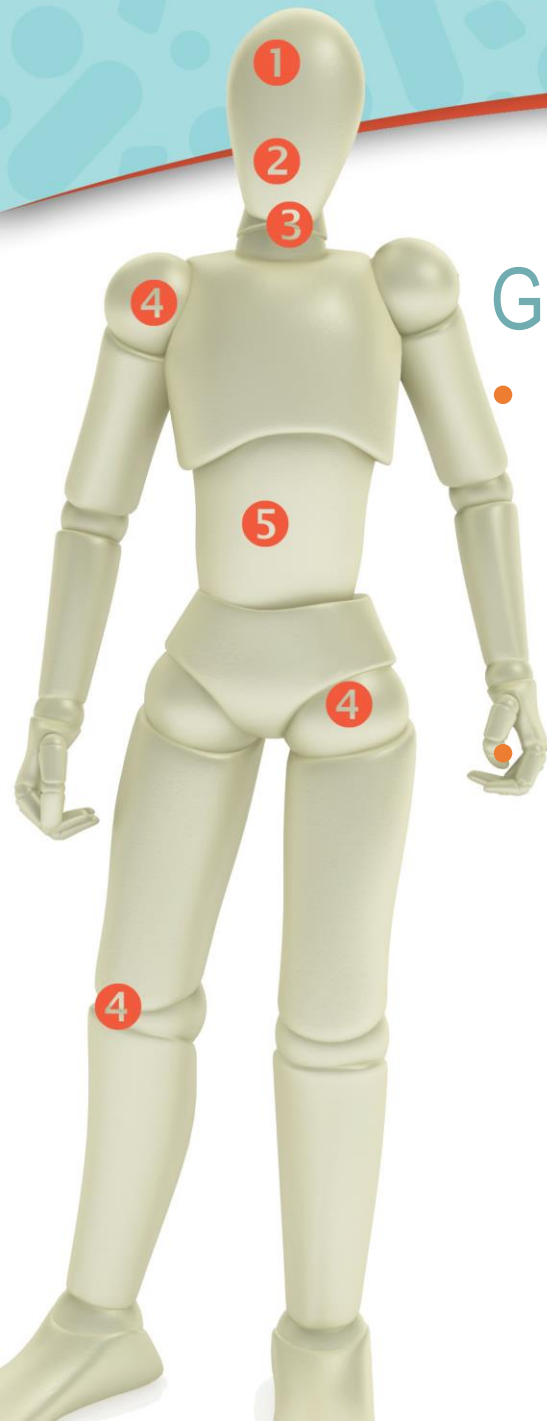
Age, comorbidities, and risk/benefit ratio should be considered with any prescription order

Consider acetaminophen with any pain syndrome, unless contraindicated



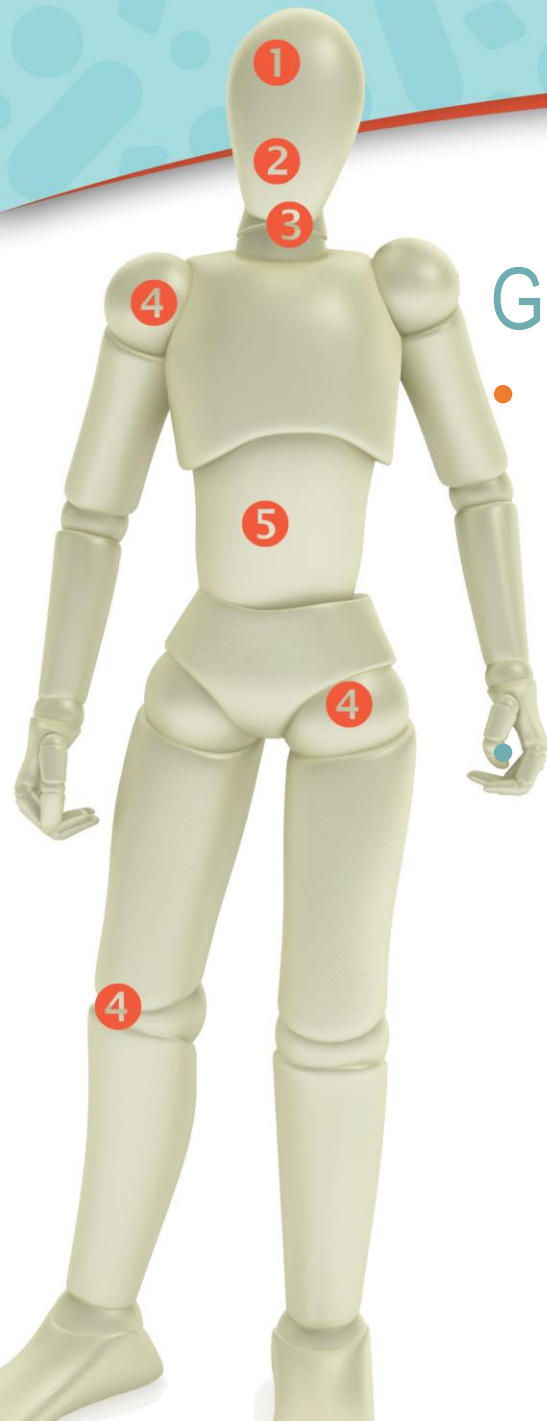
## GENERAL PRINCIPLES

- Lifestyle counseling: weight reduction, stress reduction, biomechanics, cognitive behavioral therapy, biofeedback, smoking cessation
- Therapies: massage, occupational, physical, manipulation
- Dietary recommendations



## GENERAL PRINCIPLES

- **Gastroparesis** reminder: all opiates are contraindicated in the setting of gastroparesis as they slow GI transit; educate patient as needed
- **Cannabinoid hyperemesis syndrome** should be considered in cases of recurrent vomiting and abdominal cramping and is best treated primarily by discontinuation of cannabinoid products



## GENERAL PRINCIPLES

- **Opioid induced hyperalgesia** - may be triggered by rapidly escalating doses or chronic opioid use - treatment is wean  
Unresolved **behavioral health** conditions often accompany somatic complaints

## Case #2

- 45 year old female
- Rolled her ankle, fell down a couple of stairs last night
- Pain is 10/10
- Ankle is swollen; cannot bear weight today
- What do you do?
- Next steps?

# Normal x-ray



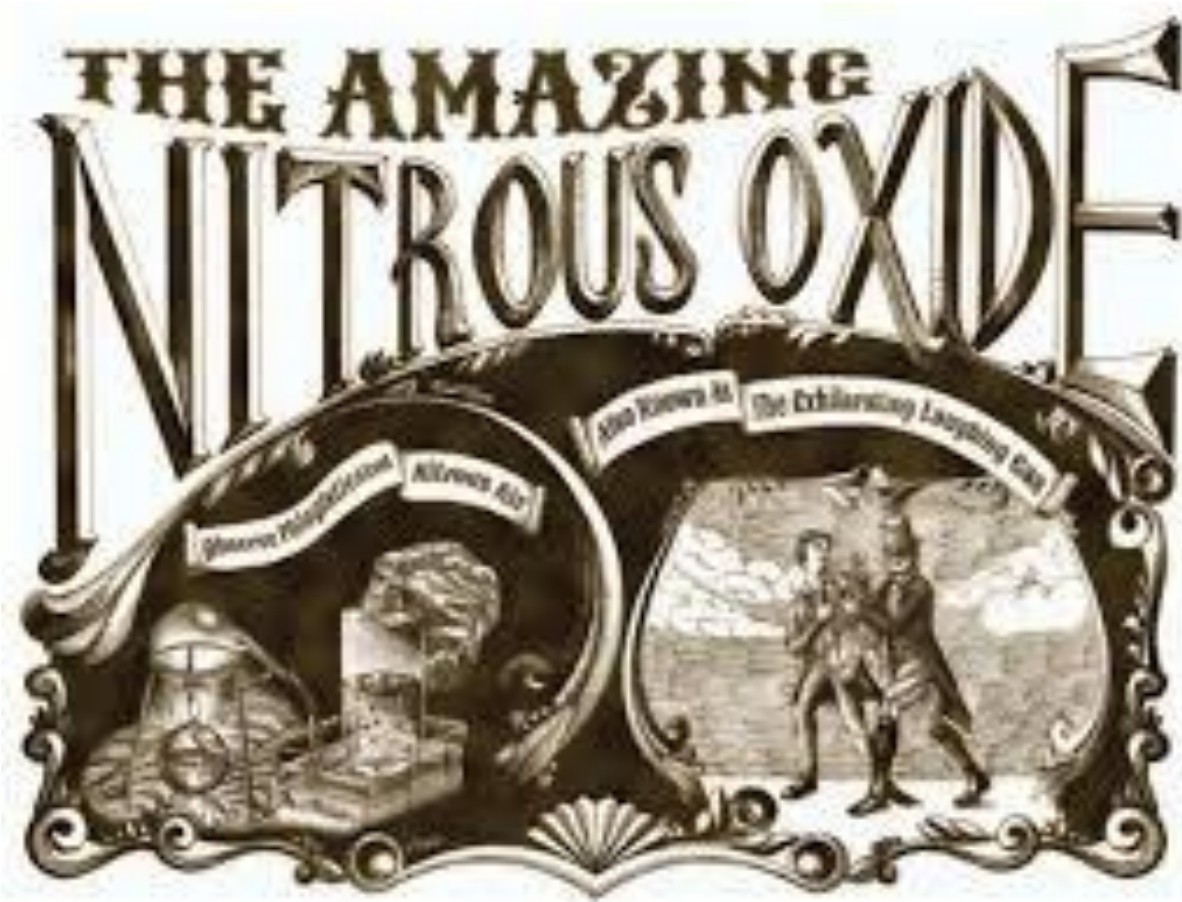
# Avulsion fracture



# Trimalleolar fracture







OB

**Pause**  
Not all pain is the same



# Pediatrics



# Nitrous oxide



# Outpatient PAUSE



Images References Dictations Media Manager Print AVS Request Outside Records

vital Signs  
Allergies  
Medications  
History  
Care Teams  
Functional Review  
Functional/Cognitive  
Progress Notes  
Goals  
Lines/Drains/Airw...  
SCREENING  
Health Risk Assess  
Hearing/Vision  
Mini-Mental Statu...  
PHQ-9 (Age 18+)  
GAD  
Mood questionnaire  
Alcohol Use Disor...  
Medication Adher...  
Pain Assessment  
SDMT  
Foot Exam  
Eye Exam  
ORDERS  
**BestPractice**  
SmartSets  
SS Disclaimer  
Verify Rx Benefits  
Outside Meds

CVS/pharmacy #3477 - CENTERVILLE, OH - 400 MIAMISBURG-CENTERVILLE ROAD Remove Pend  
937-433-2588 Sign

### PAUSE - An Alternative to Opioid Management

Always consider these factors when prescribing:

- Age, co-morbidities, and risk/benefit ratio
- Specialty referral as appropriate
- Unresolved behavioral health conditions often accompany somatic complaints - specialty referral is appropriate
- Gastroparesis reminder: all opiates are contraindicated as they slow GI transit; educate patient as needed
- Cannabinoid hyperemesis syndrome should be considered in cases of recurrent vomiting and abdominal cramping, and is best treated primarily by discontinuation of cannabinoid products.
- Opioid-induced hyperalgesia (hyperacute response to even minor physical activation) may be triggered by rapidly escalating doses or chronic opioid use; treatment is to wean.

Non-prescription Treatment Options:

- Lifestyle counseling
- Therapies
- Dietary modifications
- [Pause - Not all pain is the same](#)

#### Pain Medication and Treatment Options

- ▶ Benign Headache click for more
- ▶ Musculoskeletal Pain click for more
- ▶ Benign Abdominal Pain click for more
- ▶ Dental Pain click for more
- ▶ Neuropathic Pain click for more

#### Additional SmartSet Orders

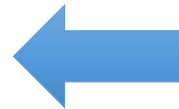
Search

*You can search for an order by typing in the header of this section.*

## ▼ Pain Medication and Treatment Options

### ▼ Benign Headache

- naproxen (NAPROSYN) 500 mg tablet  
500 mg
- ibuprofen (MOTRIN) 400 mg tablet  
400 mg
- ibuprofen (ADVIL, MOTRIN) 800 mg tablet  
800 mg
- methocarbamol (ROBAXIN) 500 mg tablet
- methylPREDNISolone (MEDROL, PAK,) 4 mg dose pack
- Prednisone Tapering Dose
- predniSONE (DELTASONE) 10 mg tablet pack
- sumatriptan (IMITREX) 25 mg tablet  
25 mg
- promethazine (PHENERGAN) 25 mg suppository  
25 mg
- prochlorperazine (COMPAZINE) 25 mg suppository  
25 mg
- prochlorperazine (COMPAZINE) 10 mg tablet  
10 mg
- ondansetron (ZOFRAN ODT) 4 mg disintegrating tablet  
4 mg
- Benign headache [R51]
- Muscle tension headache [G44.209]
- Therapy: Referral to Sports Medicine for Biofeedback  
Internal Referral, Routine, Sports Medicine, Eval and Treat
- Education: Understanding Headaches
- Education: Biofeedback
- Education: Stress Relief
- Education: Migraine: Simple Steps to Head off the Pain



Pharmacologic options



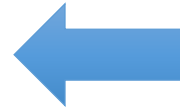
Therapy referral



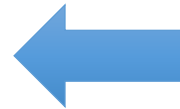
Diet/education

## ▼ Musculoskeletal Pain

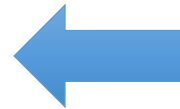
- Musculoskeletal pain [M79.1]
- ibuprofen (ADVIL,MOTRIN) 800 mg tablet  
800 mg
- ibuprofen (MOTRIN) 400 mg tablet  
400 mg
- diclofenac (VOLTAREN) 1 % topical gel  
2 g
- methocarbamol (ROBAXIN) 500 mg tablet  
500 mg
- Lidocaine-menthol Patch  
1 patch
- gabapentin (NEURONTIN) 600 mg tablet  
600 mg
- TENS Unit
- Compression Sleeve or Splint for arm  
Print
- Compression Sleeve or Spilint for Calf  
Print
- Therapy: Referral for Osteopathic Manipulation Therapy
- Therapy: Referral for Massage Therapy  
External Referral
- Therapy: Referral for Occupational Therapy  
Internal Referral, Routine, Occupational Therapy, Eval and Treat
- Therapy: Referral for Physical Therapy  
Internal Referral, Routine, Physical Therapy, Eval and Treat
- Therapy: Referral for Accupuncture
- Therapy: Referral for Medical Nutrition Therapy (MNT)  
Internal Referral, Routine, Nutrition, Eval and Treat
- Education: Weight and Joint Pain
- Education: Understanding TENS
- Education: Exercise and Musculoskeletal Pain



Pharmacologic options



Orthotic support



Therapy referral



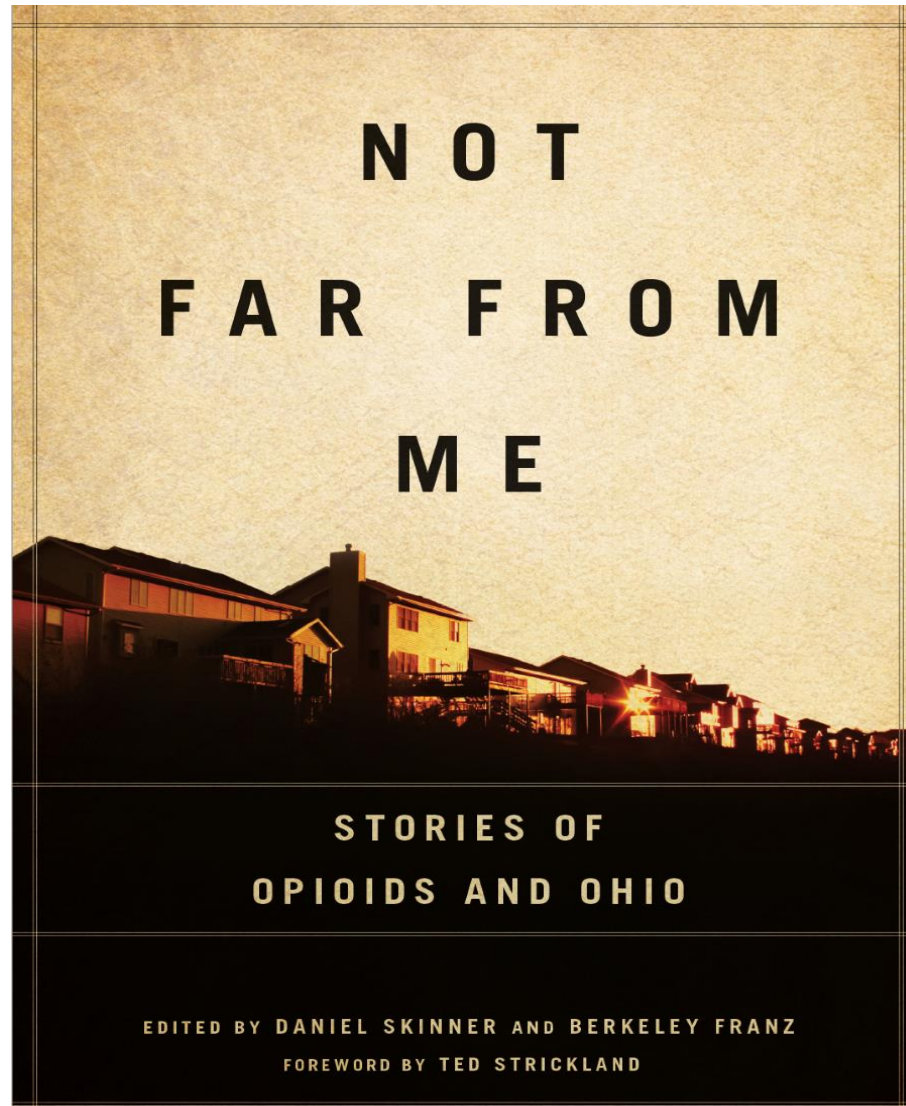
Education

## Case #3

- 32 year old male
- B9 medical history
- Doubled over in pain, holding his right flank, diaphoretic, just vomited
- What do you do?



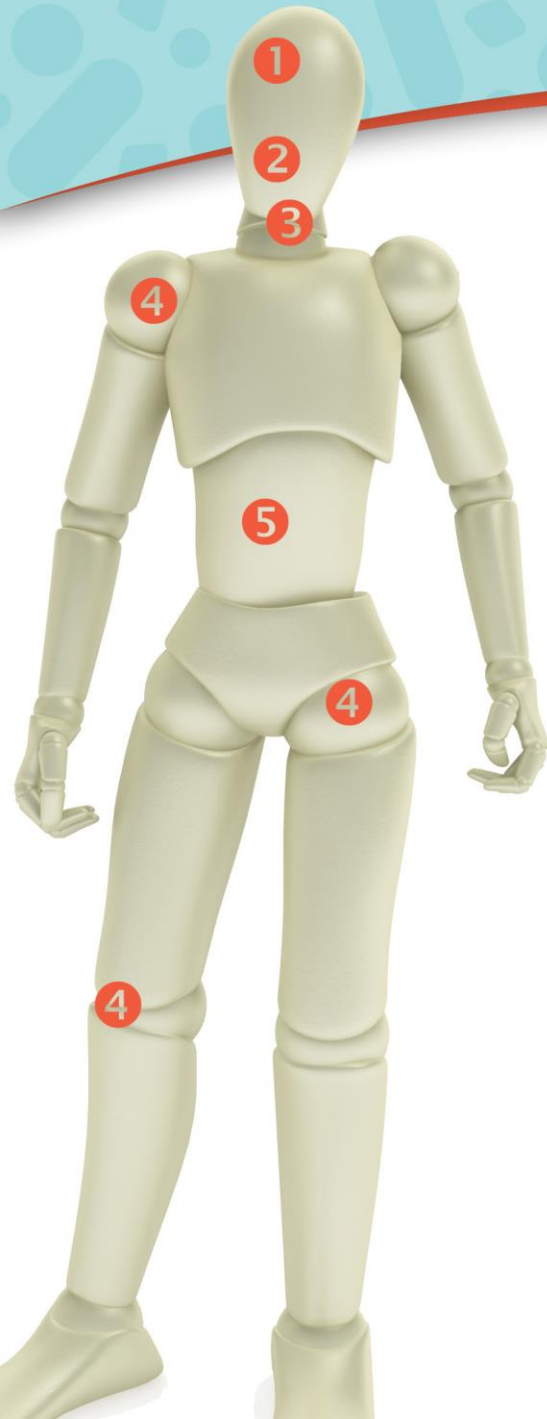
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# What's next?





# THANK YOU

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*The way to get started is to quit talking and begin doing.*  
-Walt Disney