

OPIOID HAZARD AWARENESS

For Miners



Training Overview

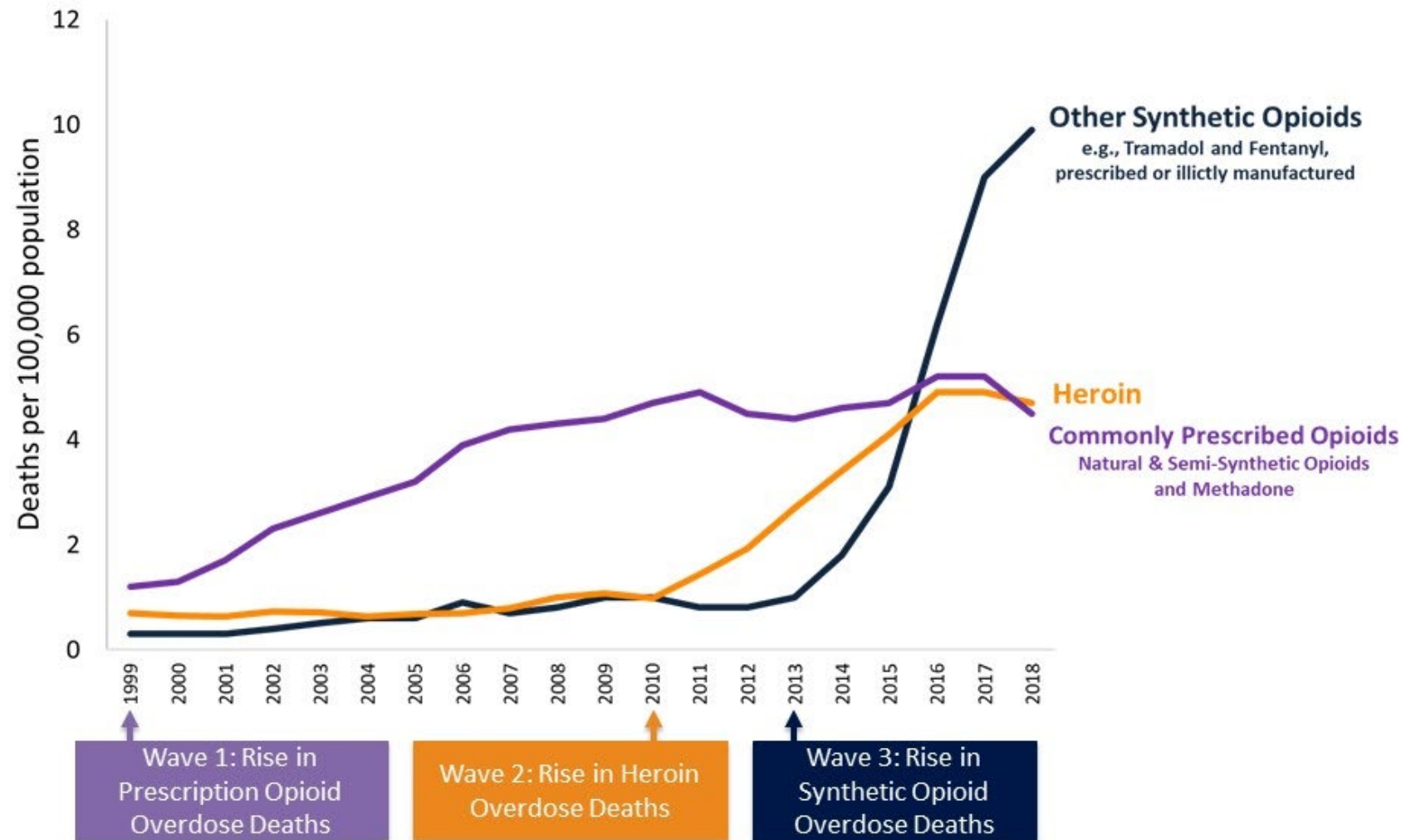
- What's the Problem?
- Why We Should Be Concerned
- Understanding Opioids
- Preventing Opioid Harms
- Reducing the Impact of Opioids and Helping Those Who are Struggling



Opioid Crisis = a Public Health Crisis

- 130 Americans die every day from an opioid overdose -- more than car accidents and gun murders combined
- 1999-2020, 500,000 people died from an opioid overdose in the US
 - 68,630 in 2020 alone
- 92% of overdose deaths are among people over age 24
 - 40% are older than 44
 - 70% are men
- 75% of people with opioid use disorder, started with a prescription
- In 2020, healthcare providers wrote more than 142 million opioid prescriptions (43 prescriptions per 100 people)

3 Waves of the Rise in Opioid Overdose Deaths



SOURCE: National Vital Statistics System Mortality File.

We can do something

- Miners are at greater risk of opioid harms
- Opioid addiction and overdose are preventable
- Everyone can become aware of risks and help others



PRESCRIPTION OPIOID OVERDOSE DEATH RATE: SELECTED OCCUPATIONS

>1 = excess risk



“Extraction” includes mining and oil and gas

Table 1 Opioid Utilization across Industry Groups

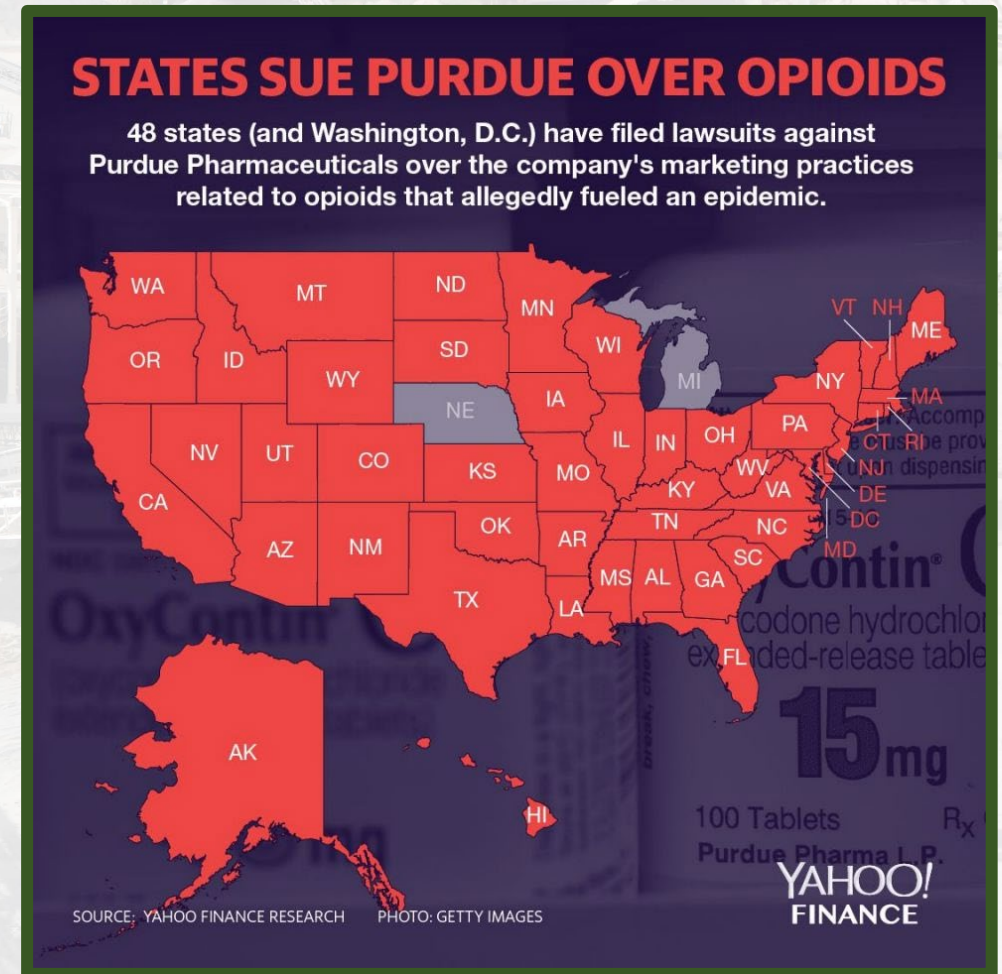
	Among Injured Workers Receiving Pain Medications		Among Injured Workers Receiving Opioids		
	% That Received an Opioid Rx	% That Received 2 or More Opioid Rx	% That Received Opioids on a Longer-Term Basis	% That Had at Least 60 Days of Opioids Supply in Any 90- Day Period ^a	% That Had High- Dose Opioids (MED ≥ 50 mg for at least 60 days) ^a
Industry/occupation categories					
Mining (including oil and gas)	62%	33%	7%	14%	3%
Construction	55%	29%	7%	12%	3%
Agriculture, forestry, and fishing	52%	25%	4%	9%	1%
Public safety	51%	25%	5%	8%	2%
Wholesale and retail trade	50%	23%	5%	9%	2%
Restaurants and entertainment	50%	23%	5%	9%	2%
Health care and social assistance	49%	22%	5%	8%	2%
Manufacturing	48%	23%	5%	9%	2%
Services (except public safety)	48%	23%	5%	10%	2%
Transportation, warehousing, and utilities	48%	24%	5%	9%	2%
Clerical and professional	47%	21%	4%	8%	2%

“Rx” = Prescription

Thumula V, Liu T-C. Correlates of Opioid Dispensing. Workers Compensation Research Institute; 2018.

Opioid Hazard Risk Factors

- Risk for work-related pain and injuries = Risk for opioid painkillers
 - 31% of the injuries reported to MSHA are musculoskeletal-related
 - 30% of stone, sand, and gravel miners report work-related pain
 - Doctors write miners R_x for opioids
 - Opioid R_x = “Pass” on Drug tests
- Poor health/physical condition/older?
- Seasonal/boom and bust cycles?
- Pharma marketing?



What is an Opioid?

- Prescription opioids: natural and synthetic painkillers based on the chemistry of the opium poppy
- Non-prescription (illicit opioids): heroin, opium, illegally-produced fentanyl (other synthetic opioids)

Also,
Tramadol and
Codeine

EXAMPLES OF OPIOID CONTAINING MEDICINES

	Generic	Brand Name
SHORT-ACTING	morphine	MSIR, Roxanol
	oxycodone	OxylR, Oxyfast, Endocodone
	oxycodone (with acetaminophen)	Roxilox, Roxicet, Percocet, Tylox, Endocet
	hydrocodone (with acetaminophen)	Vicodin, Lorcet, Lortab, Zydone, Hydrocet, Norco
	hydromorphone	Dilaudid, Hydrostat
LONG-ACTING	morphine	MSContin, Oramorph SR, Kadian, Avinza
	oxycodone	Oxycontin
	fentanyl	Duragesic patch

Opioid Side Effects

- All are narcotics: Drowsiness
- Constipation and nausea
- Changes in the brain
- Physical dependence
- Addiction
- Withdrawal symptoms (dope sick)
- Substance Use Disorder
- Respiratory suppression (death)



This medication will cause drowsiness. Please avoid driving or operating heavy machinery after taking this drug.

Safety Risks

In 2013, Carl J. Clinton, a 27-year miner, age 46, was killed while operating a haul truck. The truck went over an embankment and rolled on its side into a settling pond and he drowned.

Earlier in his shift, he'd been found sleeping in the truck.

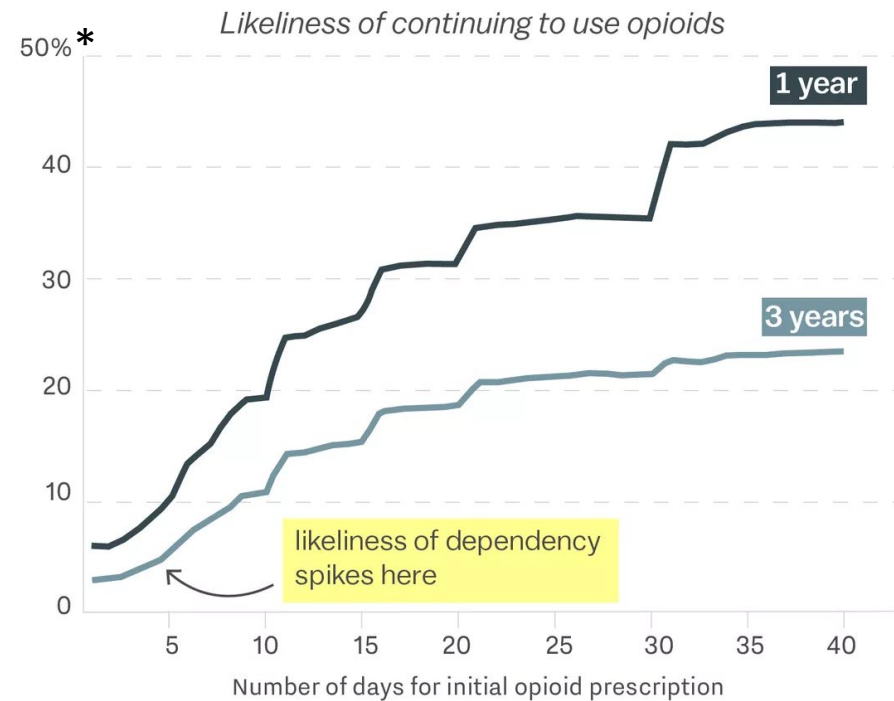
Toxicology report showed several prescription drugs that cause drowsiness including muscle relaxants.



Who gets addicted?

- Anyone who takes prescription opioids can become addicted
- Taking them for more than 4-5 days greatly increases the risk of dependency and addiction...
- Exposure to opioids = risk of addiction

Risk of continued opioid use increases at 4-5 days



Source: Centers for Disease Control and Prevention

Credit: Sarah Frostenson

* Percent of people with R_x

Vox

Special Risk Factors for Addiction and Overdose

- Opioid Prescription Characteristics
 - Higher doses = higher risk of addiction and overdose, but even low doses (such as 20-50 MME) can present a risk
 - Prolonged use
 - Extended Release and Long-Acting Formulations
- Healthcare Conditions and Individual Characteristics
 - Respiratory conditions (Sleep Apnea, Asthma, or Chronic Obstructive Pulmonary Disease)
 - Mental Health Disorders (Depression, Anxiety, Post-traumatic Stress Disorder)
 - History of alcohol or substance abuse
- Using Other Medications
 - Benzodiazepines (alprazolam, lorazepam, or diazepam)
 - Sedative/hypnotic agents (zolpidem or eszopiclone)
 - Muscle relaxants (carisoprodol, chlorzoxazone, or methocarbamol)
 - Antipsychotics (haloperidol, quetiapine, or risperidone)
 - Other central nervous system depressants (alcohol or street drugs)

Opioids may interact with other medications that may increase your risk of overdose, arrhythmias, or seizures...***Check with your healthcare provider and pharmacist before taking other medications in conjunction with opioids***

Addiction is a Disease

Dependency = A person using a substance needs it and/or they feel sick or can't function if they stop using it.

Substance Use Disorder (SUD) = An on-going brain ***disease** where the sufferer will look for and use drugs, despite harmful consequences of their behavior. Can't stop using even if they want to.

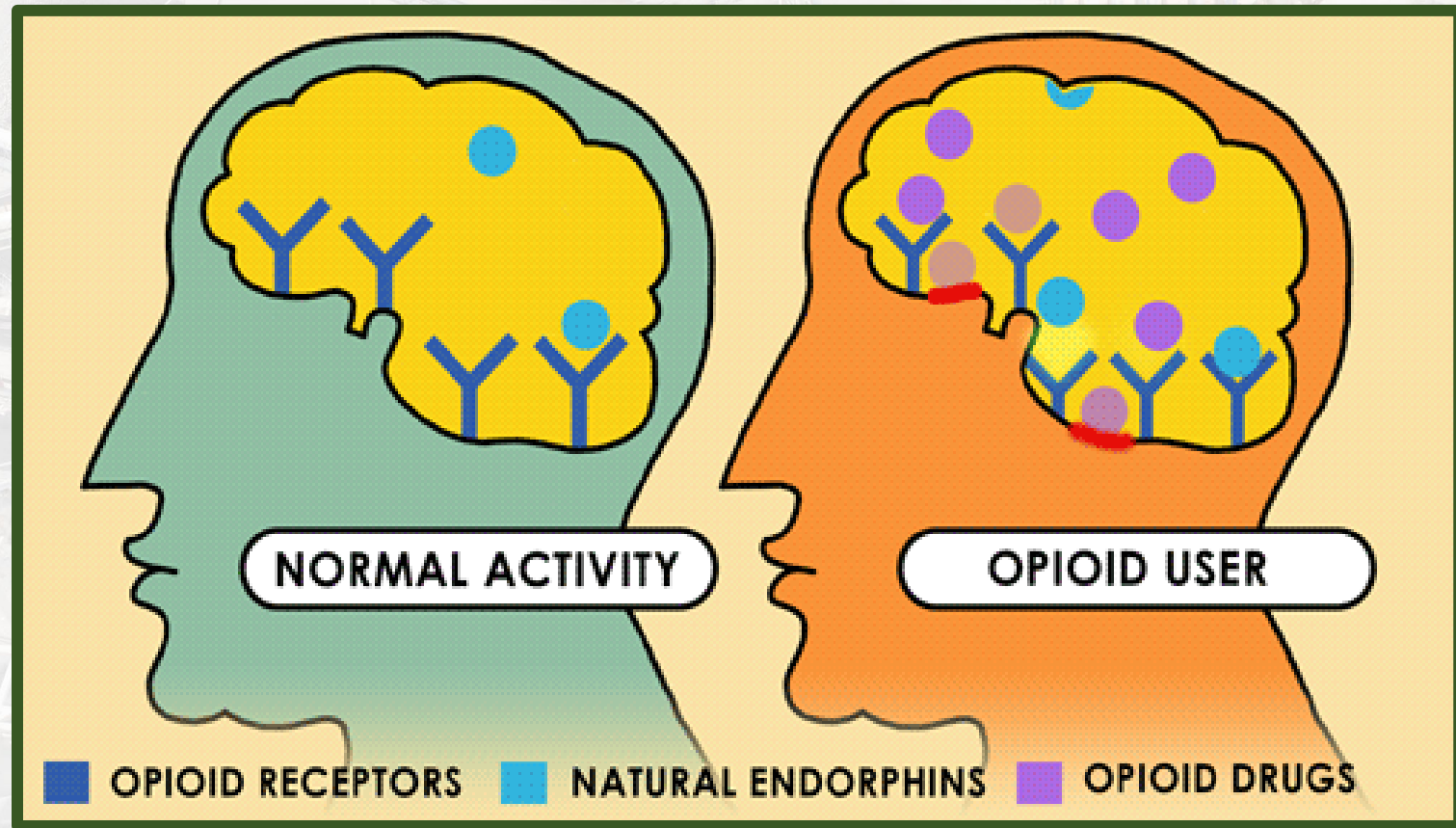
***Disease** = A condition that changes the way the body functions.

Opioids Hijack the Brain

1. Pain “killing” = Opioids increase the brain’s ability to feel more pleasure than it would naturally.
2. Then, the re-wired brain demands more opioids to satisfy “the new normal.”

If it doesn’t get them, it sends out chemicals to make the person feel anxious and sick.

3. The re-wired brain even shuts down the part of itself that can help make good decisions.



Prevention and Harm Reduction

LEVEL 1 Prevention:

Reduce/eliminate the risk factors.

LEVEL 2 Prevention:

If someone is injured or in pain (job- or not job-related), encourage them to get care that doesn't include opioids.

LEVEL 3 Prevention/Harm Reduction:

If they are taking opioids, help them reduce their use and stop.

LEVEL 1: Prevent the Causes of Pain

- Address common hazards:
 - Vibration
 - Sedentary work
 - Getting in/out of truck/equipment
 - Falls from equipment
 - Site hazards
 - Lifting/pushing/pulling
- Take action for safety:
 - Safety committees, report hazards
 - Ergonomically-designed equipment and tasks
 - Follow safety protocols/avoid shortcuts
 - Reduce slip, trip, and fall hazards
- Physical and mental fitness



LEVEL 2: Avoid Exposure to Opioids

- Avoid long-term prescriptions (>3 days)
- Avoid combined prescriptions (tranquilizers + muscle relaxants + opioid painkillers)
- Advocate for good care, including non-opioid treatment
- Make sure your doctor is following CDC/Medical Guidelines for Prescribing



Harvard Medical School study finds exercise helps relieve chronic pain

LEVEL 2: Advocate for Yourself

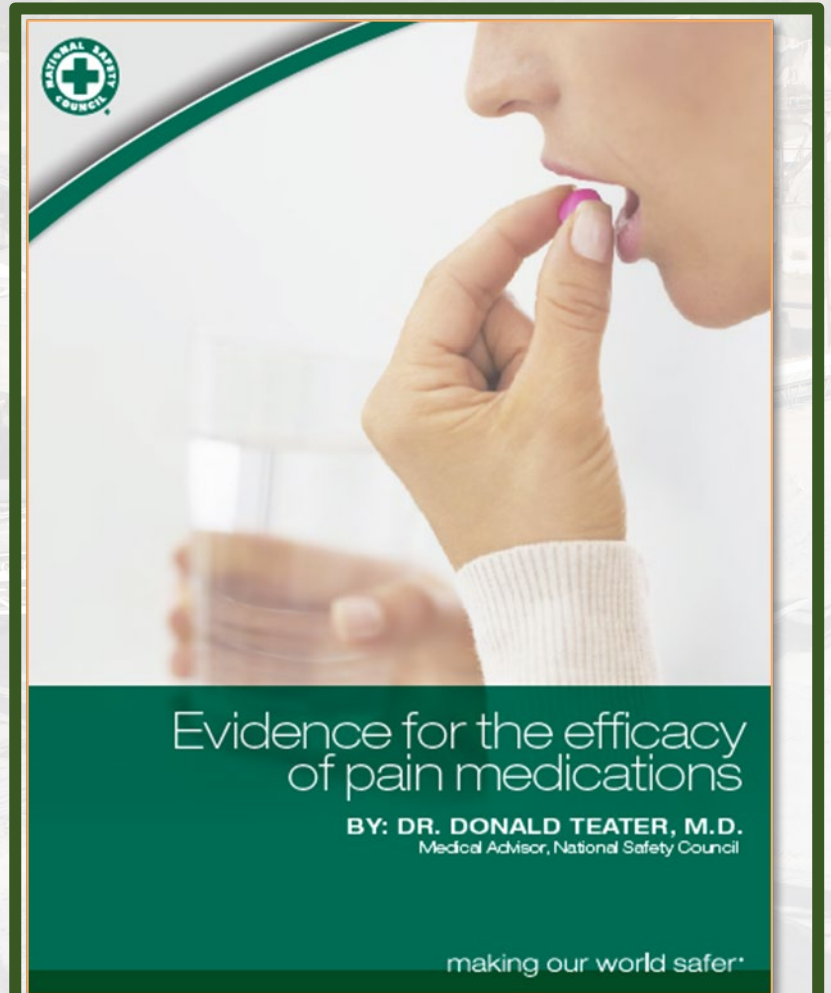
Tips for the Doctor's Office

1. Ask if prescribed medication is an opioid. If it is, ask what the risks are, especially in combination with other medications.
2. Explain that employees are, or could be, drug-tested at work.
3. Explain that mining work is “safety-sensitive”.
4. Ask for the lowest dose and shortest duration opioid prescription.
5. Ask about alternatives to opioids, including physical therapy and skills for pain management.

What about my pain?

Study after study shows that opioids aren't effective painkillers and can make pain worse.

Opioids don't work as well as over-the-counter pain medications and other ways of controlling pain. This was learned in studies that looked at dental pain, pain after accidents, post-surgical pain, severe pain from kidney stones, back pain, and chronic pain.



Source: National Safety Council

What do you think?

- Does drug testing reduce opioid harms?
- Should prescription opioid painkillers be included in drug tests?
- If someone is taking prescription opioid painkillers, can they perform their job safely?
- Should doctors be able to say someone is “fit for duty” if they are taking opioids?
- Should management ask miners to reduce or eliminate prescription opioid use at the mine?

LEVEL 3: Substance Use Disorder Treatment

1. Detox/Withdrawal Management OR Tapering with Pain Management

2. Treatment for Opioid Use Disorder

- MAT = Medication-Assisted Treatment combines talk (behavioral) therapy and medications to reduce dependence
- FDA-approved medications:
 - Methadone
 - Buprenorphine [Suboxone®]
 - Naltrexone [Vivitrol®]

3. Recovery Support

- AA/NA

“There is no “one size fits all” approach to opioid disorder treatment. Some people stop using on their own; others recover through support groups or treatment facilities. Because Medication-Assisted Treatment is linked to better outcomes, FDA-approved medication should be offered.”

-- Substance Abuse and Mental Health Services Agency (SAMHSA)

LEVEL 3: Reduce the Harms of Stigma

What is Stigma?

Stigma = shame or disgrace attached to something regarded as socially unacceptable.

...Believing only bad people have problems or they deserve to be punished for making bad choices.

How does stigma cause harm?

- It interferes with people coming forward for help: 23.5 million Americans struggle with substance use, 11% receive treatment.
- It's a hope killer.

LEVEL 3: Reduce the Harms of Opioid Addiction

- Can you offer support to someone who is struggling?
- Can you share resources for help?
- Can you communicate directly about your concerns based on what you observe?
- Can you eliminate stigma and judgment, including about treatment?
- Are you ready to reverse an overdose?



Common Challenges

It's not only opioids. Many of us struggle with:

- Depression, anxiety, anger, and other mental health issues, including thoughts of suicide
- Alcohol and other substances
- Gambling
- Family conflict
- Financial problems
- Health problems



Who can you talk to about this?
Can you help someone?

Resources

Employee Assistance Programs – ask your employer...

National Helpline

1-800-662-HELP (4357)

<https://www.samhsa.gov/find-help/national-helpline>

National Suicide Prevention Lifeline

1-800-273-8255 www.suicidepreventionlifeline.org

Learn to COPE

1-508-738-5148 www.learn2cope.org

SHATTERPROOF™

1-800-597-2557 www.shatterproof.org/



Conclusion

For questions and suggestions about this module, please contact
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