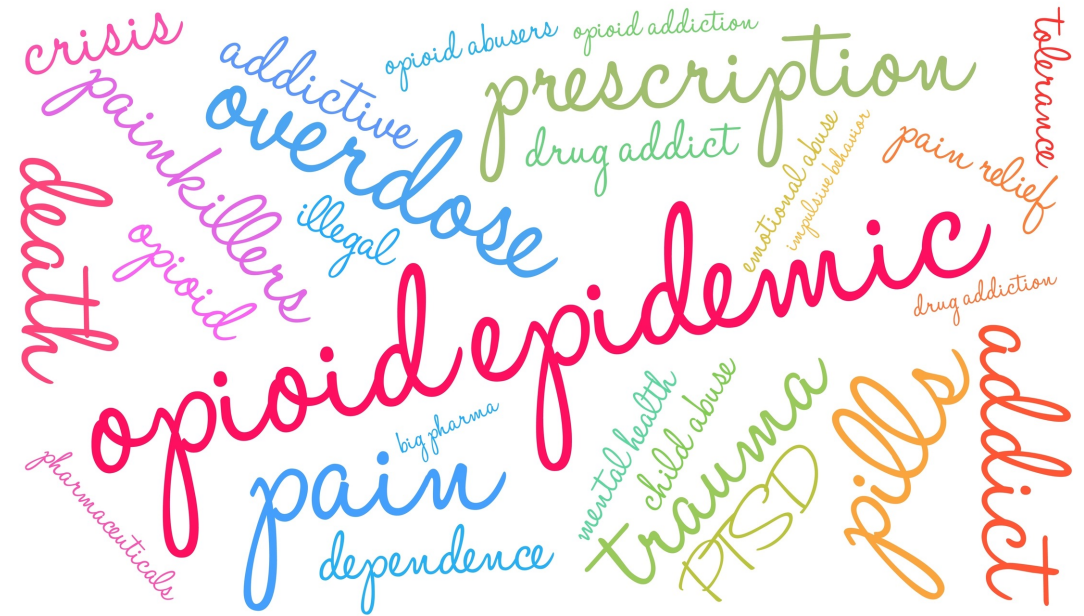


Safety Sensitivity- A Look at Opioid Use in Agriculture

Agrability March 15, 2022
National Training Workshop

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AgriSafe Network



Today's Objectives

- Understand the prevalence of occupational hazards among farming occupations
- Recognize occupational implications as they relate to acute and chronic pain
- Gain strategies to improve conversations about occupational pain
- Identify resources to aid in facilitating candid discussion about pain

Farming Population and Injury

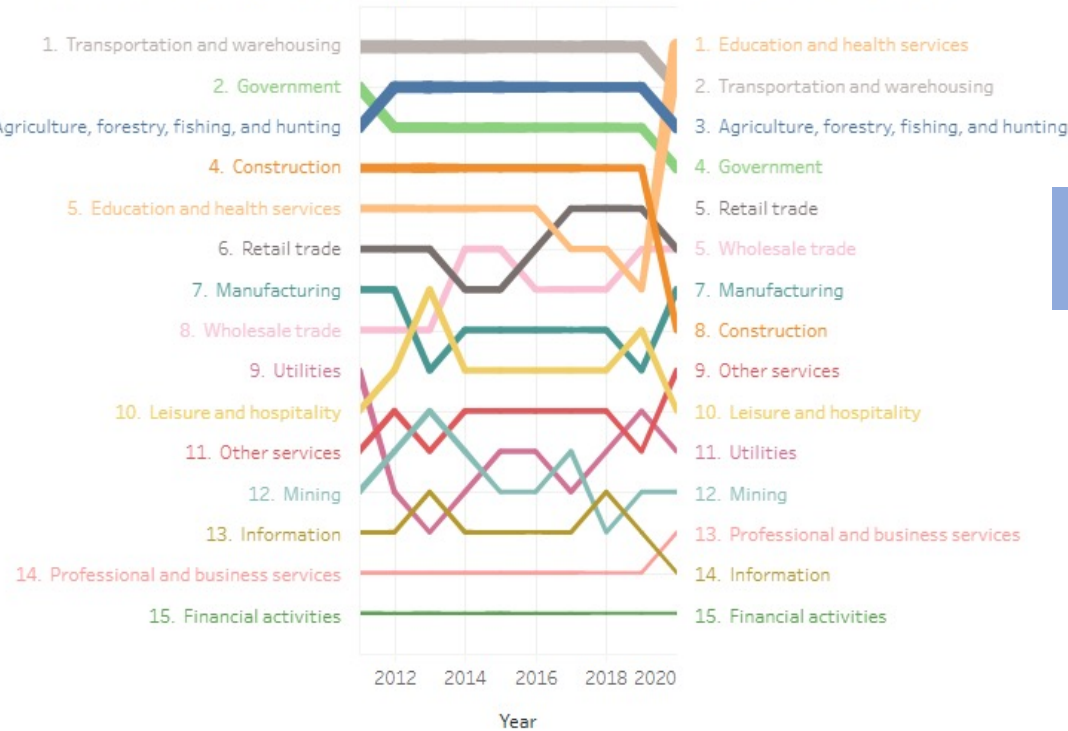
- As of 2017 Census data, there are **3.4 million** farmers working in the U.S. with over 2.7 million being the principal operators
 - 2017 USDA Ag Census
- The agricultural sector continues to rank among one of the most hazardous industries
 - Every day, about **100** agricultural workers suffer a lost-work-time injury.
 - NIOSH Agricultural Safety



What is the most dangerous industry?

- < The answer depends Rank by death rates Rank by number of deaths **Rank by nonfatal injury and illness rates** Rank by number of nonfatal injuries and illnesses >

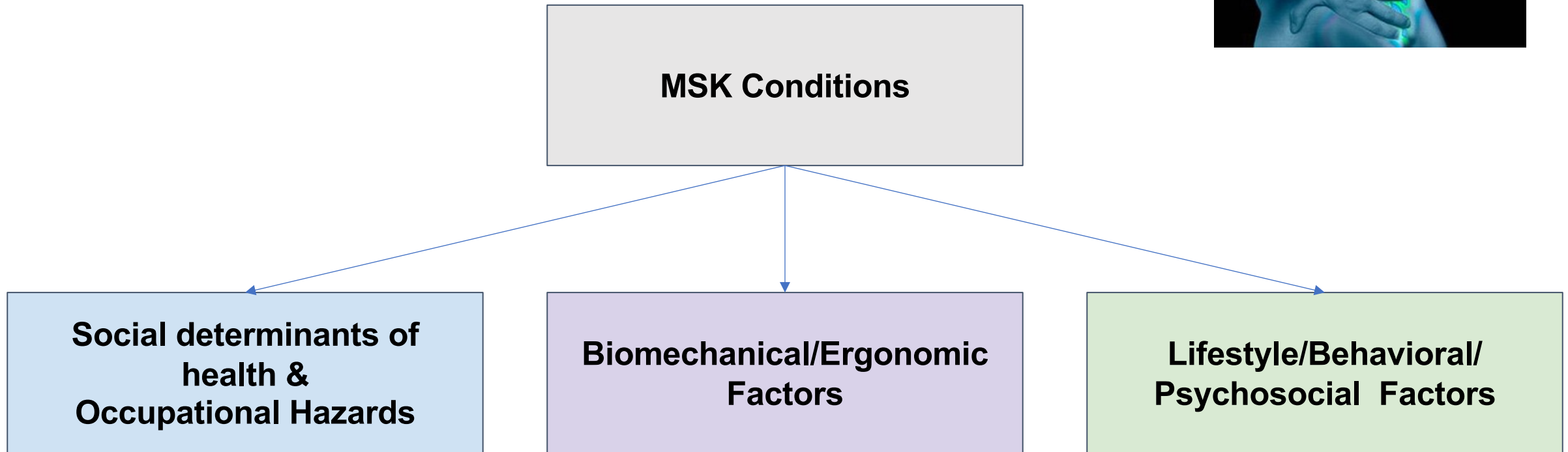
Because of COVID-19 illnesses, the education and health services industry moved from the 7th ranked in 2019 to experiencing the highest nonfatal injury and illness rate involving days away from work per 10,000 workers in 2020.



Agriculture ranked third in 2020 – 188.7/100,000

<https://injuryfacts.nsc.org/work/industry-incidence-rates/most-dangerous-industries/>

Contributing Risk Factors for Pain



*Includes injury to soft-tissues caused by sudden/sustained exposure to repetitive motion, force, vibration, and awkward positions

Classifications of Pain

Time frame

- **Acute**
 - *Often direct cause of injury*
 - *Disease, inflammation, injury*
 - *Sudden, < 3 months*
- **Chronic**
 - *May last months to years*
 - *Gradual or sudden*
 - *Cause may be unknown*
 - *Course unpredictable with flair ups common*
 - *More difficult to treat*

Etiology

- **Nociceptive**
 - *Damage to tissue*
 - *Sharp, aching, throbbing, cramping*
- **Neuropathic**
 - *Damage to peripheral nerves or CNS*
 - *Peripheral: burning, shooting, sharp, electric shock*
 - *CNS: burning, shock like, numbness, changes in motor reflexes or strength*



Chronic pain factors in Agriculture

- Affects older adults
- Men less likely to report and seek treatment
- Women report higher pain intensity and disability
- Sleep deprivation
- Neck, back, osteoarthritis

(Mills, Nicolson, & Smith, 2019)

- Average age of producers 57.5
- 63% producers are male
- Growing number of producers are female (USDA 2017)
- Long hours, limited sleep and fatigue
Fatigue leads to increase injuries (NIOSH)
- Majority musculoskeletal related (CDC)

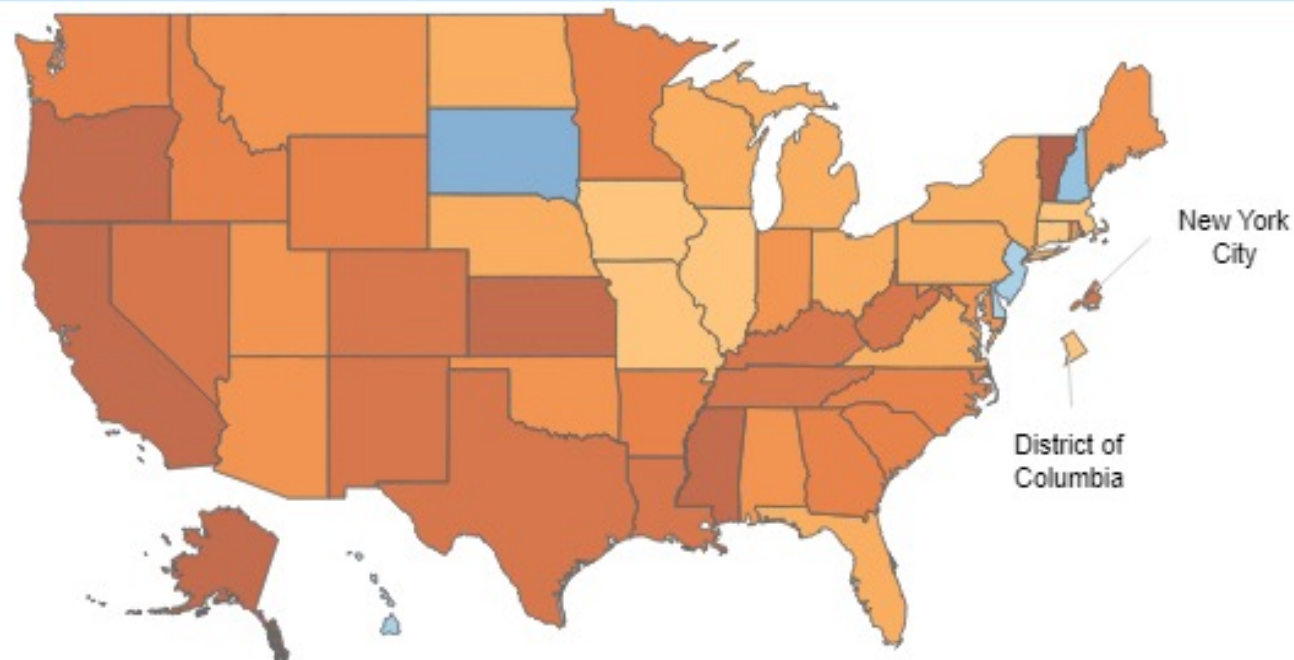
Background on Opioids

- More than 72,000 people died of a drug overdose in 2019, and over 50,000 of those deaths involved opioids.
- National Institute on Drug Abuse
 - Opioids are a class of drugs that include the illegal drug **heroin**, synthetic opioids such as **fentanyl**, and pain relievers available legally by prescription, such as **oxycodone** (OxyContin[®]), **hydrocodone** (Lortab) (Vicodin[®]), codeine, morphine, etc.
 - Mostly prescribed to treat moderate to severe pain
- Opioid effects
 - Can cause slowed breathing (hypoxia)
 - Dangerous when combined with benzodiazepines
 - Can lead to coma, permanent brain damage, death

Terminology

Term	Definition
Abuse	Use of a prescription drug for nontherapeutic purposes
Addiction	Chronic, compulsive substance use that occurs despite personal harm or negative consequences Physical dependence on a substance
Misuse	Use of a prescription drug without a prescription Use of a prescription drug in a manner other than as directed
Opioid use disorder	Problematic pattern of opioid use that is based on unsuccessful efforts to cut down, failure to fulfill obligations related to work, school, family, etc.
Physical dependence	Adaptation to a drug that produces symptoms of withdrawal when the drug is stopped
Tolerance	Reduced response to a drug with repeated use

Figure 1b. Percent Change in Predicted 12 Month-ending Count of Drug Overdose Deaths, by Jurisdiction:
June 2020 to June 2021



Select predicted
or reported
number of deaths

● Predicted

○ Reported

Percent Change for
United States

20.6



Legend for Percent Change in Drug Overdose Deaths Between 12-Month Ending Periods



Scope of the Opioid Crisis



74% of farmers & farmworkers say they have been directly impacted by the opioid epidemic.



3 in 4 farmers say it is easy to access large amounts of opioids without a prescription.



Only 1 in 3 rural adults say it would be easy to access addiction treatment.

Risk Factors for Rural Agricultural Opioid Use

1

Nature of work

2

Occupational
injuries

3

Age

- Chronic pain
- Comorbidities

4

Prescribing patterns

5

Stigma and
stereotypes

Risk Factors for Rural Opioid Use

1

High rates of
poverty and
unemployment

2

Low educational
attainment

3

Geographic
isolation yields
limited resources

4

Increased
availability of
prescription opioids

- Rural community
networks

5

Stigma and beliefs
about addictions

- Lack of anonymity



National Safety Council

IMPACT OF STIGMA

- Stigmatizing people who have SUDs results in shame and isolation
- People who are ashamed of their drug use are more likely to hide it
- People with SUD may wait until their SUD has progressed before seeking help
- Data from the 2017 National Survey on Drug Use and Health:
 - 37.7% of respondents indicated that they didn't seek treatment for reasons related to stigma and bias— up from 25.4% in 2016
 - Over 20% of respondents specifically highlighted fear of a negative impact on employment status as a barrier to seeking treatment

<https://www.nsc.org/pages/prescription-drug-employer-kit>

Opioid overuse can impact mental health

- **According to a study done by St. Louis University**
- 10 % of over 100,000 patients prescribed opioids developed depression after a month of using the medications
- these were patients that had not received a diagnosis of depression prior to treatment
- those with a pre-existing mental illness are more likely to become addicted to opioids

Harm Reduction and Prevention



Naloxone



Mechanism of action

- Opioid antagonists that competes and displaces opioid medications at opioid receptor sites
- Works in under 3 minutes


Adverse effects

- Well-tolerated overall
- Change in blood pressure, tachycardia, restlessness, hot flash, nausea, vomiting, agitation from opioid withdrawal


Reduce vibration in the equipment where you spend hours and hours

Whole Body Vibration


WBV occurs when the shaking motion of a vehicle is transferred to the operator through the feet, seat, or backrest.




Health Effects




Speech interference




Muscle fatigue and cramping




Disruption of balance and perception



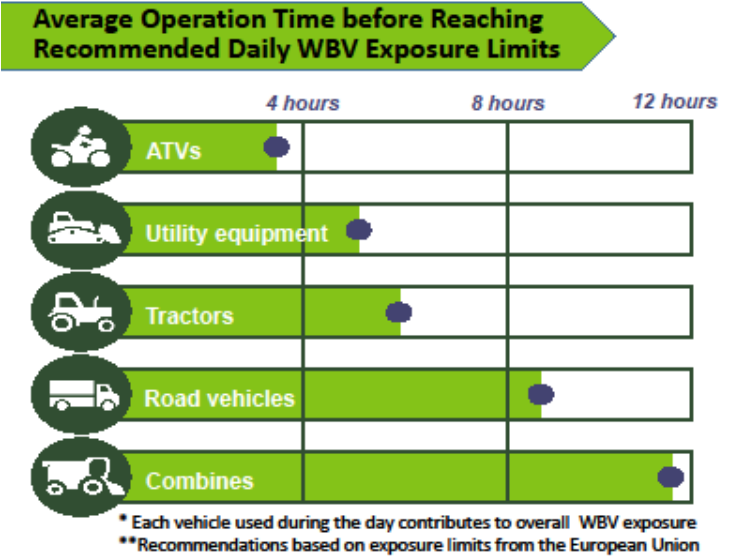
Increased heart rate and blood pressure



Increased breathing rate



Low back pain and damage to the spine



Nonpharmacologic Examples...

Acupuncture

Aquatic Exercise Therapy

Cognitive Behavioral Therapy

Exercise Therapy (Consider Prescribed/Consult)

Massage

Meditation

Occupational Therapy (OT)

Osteopathic Manipulation Therapy (OMT)

Physical Therapy (PT)

Tai Chi

Yoga



<https://www.cdc.gov/drugoverdose/prescribing/clinical-tools.html>
<https://www.hhs.gov/sites/default/files/pmtf-final-report-2019-05-23.pdf>

AGRISAFE PILATES

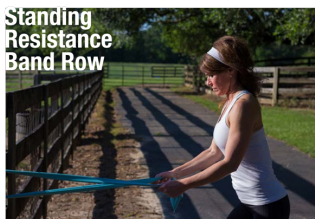
BEGINNING BASIC INSTRUCTIONS

These exercises are designed to improve balance, core strength and flexibility. At all times, the core is engaged with the rib cage drawn together and the navel pulled towards the spine. Remember to breathe with each exercise focusing on exhaling on the exertion and drawing the navel even deeper into the spine. All exercises can be repeated 8-12 times.

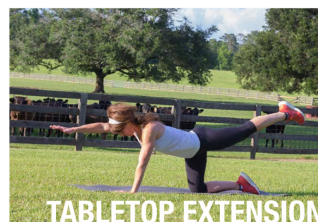


***Back *Shoulders*Core**
Anchor resistance band to a stable post about waist height. (Handheld weights can be substituted.) Soften the knees, brace the core and extend arms forward and eliminate any slack in the band. Keeping the shoulders relaxed, pull elbows back squeezing the shoulder blades together. Spine remains in the neutral position.

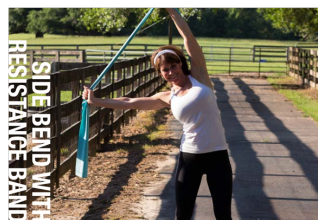
Standing Resistance Band Row



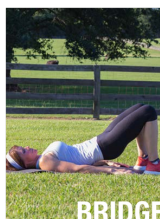
***Back *Abdominals *Hips*Legs*Glutes**
Begin on the hands and knees and engage abdominals to find a neutral spine position. Without moving the center of the body, extend the right arm and left leg squeezing through the glutes and hips. Repeat on the other side.



***Obliques *Back* *Shoulders**
Stand with knees soft, feet hip distance apart. Raise resistance band directly over shoulders. Maintain the distance between the hands and bend towards the right. Gently pull down with the right arm then return to shoulder width and stand back up. Repeat on the left side. Avoid any twisting in the hips or spine.

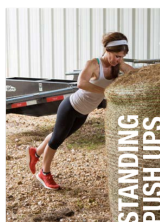


***Abdominals *Shoulders*Back**
Begin in plank position with hands directly under the shoulders (feet no wider than the hips). Draw the right knee into the chest and then the left. Spine should remain in neutral position with the neck extending straight out of the spine. The goal is that the hips do not lift or lower throughout the exercise.



BRIDGE

***Hamstrings *Glutes*Hips**
Lie on the back with hands by the side. Bend knees and parallel feet no more than hip distance apart. Lift the hips and squeeze through the glutes. Avoid arching the back or allowing the knees to turn in or out.



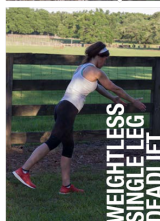
STANDING PUSH UPS

***Shoulders *Chest *Upper Back**
Find a stable surface such as wall or round hay bale, and place hands shoulder width apart. Move feet away 3-4 ft and lower chest towards the surface and then push up. Body should remain in a straight line. Add a challenge by lifting one foot at a time.



TRACTOR SQUAT

***Legs* Glutes*Hips**
Begin standing with knees slightly wider than hip width. Holding onto the tractor, lower hips and keep chest lifted. Return to standing position squeezing the hips at the top.



WEIGHTLESS SINGLE LEG DEADLIFT

***Hamstrings*Glutes *Balance*Core**
Step the left foot forward and extend arms shoulder height. Keeping a flat back, lower the hands towards the ground without hinging the hips. Once the upper body is parallel to the ground, return to standing position. Repeat on the other side.



AGRISAFE YOGA

BEGINNING BASIC INSTRUCTIONS

When trying these poses, nothing should ever hurt. If there is new or sharp pain, move away from the pose. When you feel ready, slowly ease back into the pose and stop when it feels safe and "good". Breathe deeply in every pose, pay attention to the full inhale and complete exhale. Always keep a small bend in your knees, never lock them back when legs are straight. Every body will feel different in each pose. Listen to YOUR body.

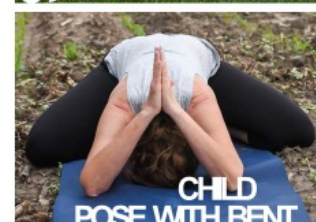


***Spine *Shoulders**
Sit with one leg straight and one knee bent. Wrap opposite arm around knee and use free arm to support spine by placing it on the ground behind you. Move in and out of the twist a few times, at first. Exhaling to twist, inhaling to untwist.



TWIST

***Hips *Knees *Back *Shoulders *Neck**
Knees can be wider or closer together. Ease in and out of pose to warm up hips and knees. Head can relax onto ground or onto hands. Arms can be wherever is most comfortable.



CHILD POSE WITH BENT

***Shoulders *Back *Biceps of legs**
Start standing close, with hands on bin or wall or bale. Slowly walk backwards, leaving hands out in front of you. Keep leaning chest toward ground until you feel a comfortable stretch in the shoulders and backs of legs.



STANDING DOWN

***Hips *Hip Flexors *Calves*Necks*Feet**
Make sure front knee stays directly over ankle (should be able to see toes). Back heel stays lifted. Use a garden tool to help with balance or practice next to a chair or wall for support.



STANDING LUNGE



EAGLE ARMS

***Shoulders *Upper Back**
Cross arms at elbows, bring backs of hands together. If shoulders are flexible enough, you may be able to wrap arms around so palms of hands can come together. Experiment with lifting elbows and moving hands away from face to deepen stretch between shoulder blades.



COW FACE

***Triceps *Shoulders**
Lift one arm straight up, then bend elbow so hand comes behind the head, grab the elbow with other hand and gently increase stretch to comfort level.



SIDE BEND

***Side of body *Spine**
Legs can be flat on ground or one leg can cross over the top of other. Lift tool arm and stretch toward tool or wall. Come in and out of stretch a few times.



SHOULDER STRETCH WITH

***Shoulders *Pectorals *Upper back**
Arms can be as wide as is comfortable. Lift tool above head, then slightly back. Elbows can bend, stop and breathe where it feels good. Can eventually deepen stretch or twist, as shoulders feel ready. Pull front ribs back toward spine to support low back.

DISCLAIMER OF LIABILITY: Injuries of all types can occur when participating in exercise, physical fitness and training programs, hence Agrisafe strongly encourages you to obtain a comprehensive physical examination by a licensed health professional PRIOR to undertaking any exercise demonstrated on this guide. You fully assume the risk of any resulting injury.



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Courtesy of
Dr. Ali Hartman



T – Spine
Opener

Ham String Stretch &
Sciatic Nerve Glider

Quad/Hip Flexor
Stretch

Flagpole Stretch &
Hip/Back Opener

Sleep deprivation

- Insufficient or poor sleep is DRIVER of FUTURE *and* WORSENING pain episodes.
- Huge implications for farmers given nature of work schedule, particularly during harvest/production season when workload spikes DRAMATICALLY

The New York Times

MIND

Why It Hurts to Lose Sleep

Sleep deprivation can make your physical aches more painful. A new study begins to explain how that happens.



Opioids for Acute Pain

What You Need to Know



Types of Pain

Acute pain usually occurs suddenly and has a known cause, like an injury, surgery, or infection. You may have experienced acute pain, for example, from a wisdom tooth extraction, an outpatient medical procedure, or a broken arm after a car crash. Acute pain normally resolves as your body heals. Chronic pain, on the other hand, can last weeks or months—past the normal time of healing.

Prescription Opioids

Prescription opioids (like hydrocodone, oxycodone, and morphine) are one of the many options for treating severe acute pain. While these medications can reduce pain during short-term use, they come with serious risks including addiction and death from overdose when taken for longer periods of time or at high doses.

Acute pain can be managed without opioids

Ask your doctor about ways to relieve your pain that do not involve prescription opioids. These treatments may actually work better and have fewer risks and side effects.

Ask your doctor about your options and what level of pain relief and improvement you can expect for your acute pain.

Nonopioid options include:



Pain relievers like ibuprofen, naproxen, and acetaminophen



Acupuncture or massage



Application of heat or ice

Opioids for Acute Pain: What You Need to Know

If You Are Prescribed Opioids

Know your risks

It is critical to understand the potential side effects and risks of opioid pain medications. Even when taken as directed, opioids can have several side effects including:

- Tolerance, meaning you might need to take more of a medication for the same pain relief
- Constipation
- Nausea and vomiting
- Dry mouth
- Sleepiness and dizziness
- Physical dependence, meaning you have withdrawal symptoms when a medication is stopped—this can develop within a few days
- Confusion
- Depression
- Itching

Know what to expect from your doctor

If your doctor is prescribing opioids for acute pain, you can expect him or her to protect your safety in some of the following ways. Your provider may:

- Prescribe the lowest effective dose of immediate-release opioids
- Prescribe treatment for 3 days or less, which is usually enough for most acute conditions
- Ask you to follow up if your pain is not resolving as quickly as expected
- Check your state's prescription drug monitoring program
- Conduct urine drug testing during the course of your therapy
- Provide instructions on how to taper opioids to minimize withdrawal symptoms

Know your responsibilities

It is critical to know exactly how much and how often to take the opioid pain medications you are prescribed, as well as how to safely store and dispose of them.

- Never take opioids in higher amounts or more often than prescribed
- Do not combine opioids with alcohol or other drugs that cause drowsiness, such as:
 - Benzodiazepines, also known as "benzos" including diazepam and alprazolam
 - Muscle relaxants
 - Sleep aids
- Store opioids in a secure place and out of reach of others (including children, family, friends, and visitors)
- If you have unused opioids at the end of your treatment:
 - Find your community drug take-back program,
 - Find your pharmacy mail-back program, or
 - Flush them down the toilet following guidance from the Food and Drug Administration: <https://www.fda.gov/ForConsumers/ConsumerUpdates/ucm101653.htm>
- Never sell or share prescription opioids

You can help!

- Promote a culture of support – begins with language
- Use inclusive, non-stigmatizing verbal and written language in the workplace.
 - Instead of “drug/opioid abuse,” say “**substance/opioid use or misuse.**”
 - Instead of “drug/opioid abuser,” “addict” or “junkie,” say “**person with a substance/opioid use disorder.**”
- Gently correct people who use stigmatizing terms or who apply negative stereotypes to people with SUDs.
- Build a network of resources to help people get the help they need when they need it.
- *What are barriers you can identify in your area of work or community?*

Thank You from the AgriSafe team!



<https://www.agrisafe.org/>