

# PROVIDING CARE TO RURAL SCHOOLS REQUIRES SPECIALIZED TRAINING

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PROVIDING EDUCATION TO RURAL SCHOOLS REQUIRES SPECIALIZED TRAINING



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# Summary Statement

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- Health education for rural youth and their families is a critical strategy for implementing health promotion and disease prevention practices.
- Nursing education programs lack the time and space to provide in-depth training specific to working in rural communities as mandatory requirements result in full teaching agendas.
- Nurses in rural hospitals, clinics, and schools often have minimal preparation in rural healthcare practice.
- Nurses in agricultural communities are frequently the go-to community educators and need to be prepared to spot signs of heat stress, cold stress, zoonotic diseases, the root cause of respiratory illness, noise exposures, ergonomics, sleep deprivation, and mental health stressors related to agriculture.

# Objectives

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## **Participants will be able to:**

- Recognize a minimum of four aspects of agricultural exposures that directly impact school age youth
- Identify three personal protective options for youth living and working in an agricultural environment
- Access a minimum of three educational training opportunities for rural school nurses

# Who We are

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**Protecting the People Who Feed the World**

## **Mission**

Our mission is to support a growing network of trained agricultural health and safety professionals that assure access to preventative services for farm families and the agricultural community.

## **Belief**

The AgriSafe Network believes agricultural injuries, diseases, and fatalities can be prevented through the effective delivery of agricultural occupational health services.

## **Staff**

Comprised of educators, researchers, and public health advocates with varied backgrounds

## **Provide**

Networking opportunities, webinar trainings, in-person education for groups and organizations, resource material, think tank responses for emerging issues

# What are the Challenges

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23.5% of rural schools report having no nurse compared with 10.3% of urban schools. Journal of School Nursing, 2018

## Geography

- Distance between school sites
- Varied terrain

Weather –

Nurses are farmers and ranchers too!

## Unique student population

- Home is also a full-time worksite
- Exposures are many & varied

Access to supplies /resources

Professional development opportunities

# Brain development

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- Though the brain may be done growing, it does not finish developing and maturing until the mid- to late 20s.
- Teens should get about 9 to 10 hours of sleep a night, but most teens do not get enough sleep. A lack of sleep can make it difficult to pay attention, may increase impulsivity, and may increase the risk for irritability or depression.

<https://www.nimh.nih.gov/health/publications/the-teen-brain-7-things-to-know>

# How young teens and young adults think

(cognitive growth & development)

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Studies have shown that the brain's ability to make decisions and make good judgement calls is still developing in the early twenties:

- Attention span – easily distracted
- Other workers
- Cell phones
- Music (ear buds in )
- Cause & effect relationship - how fast is safe/ how far from danger/ short cuts lead to mishaps
- Often impatient

# Time Constraints

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For many young workers, we need to keep in mind that they likely come to the job with several other time commitments in their lives – especially if they are part time or seasonal workers.

- school
- family
- sports
- another part time job and work
- commitments at home



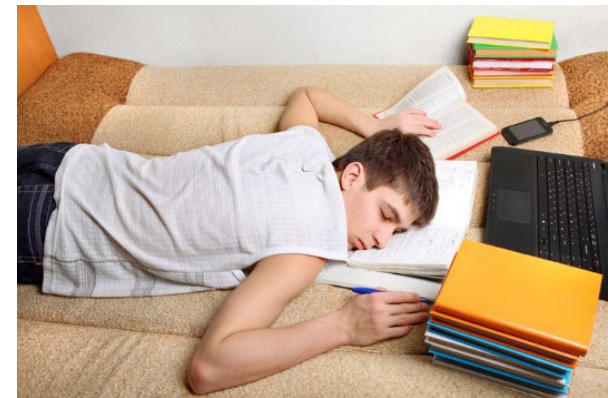


# Sleep Deprivation

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Young workers may be chronically sleep deprived – teens and young adults need more restorative sleep than young children.

- Lack of sleep can have an obvious effect on workplace awareness and function. Sleep deprivation can be affected by:
  - biological circadian rhythms
  - fatigue
  - sleep habits
  - media & technology



\*David C. Schwebel PhD & William Pickett PhD (2012): The Role of Child and Adolescent Development in the Occurrence of Agricultural Injuries: An Illustration Using Tractor-Related Injuries, *Journal of Agromedicine*, 17:2,214-224  
To link to this article: <http://dx.doi.org/10.1080/1059924X.2012.655120>

Photo – AgriSafe photo rights granted

People getting less than six hours of sleep at night are **five times** more likely to be obese and have a **56% increase** in risk for Type 2 diabetes, raising company health care costs.

- Dr.

Leena Johns, Global Medical and Wellness Director, MetLife

# What are the Issues?

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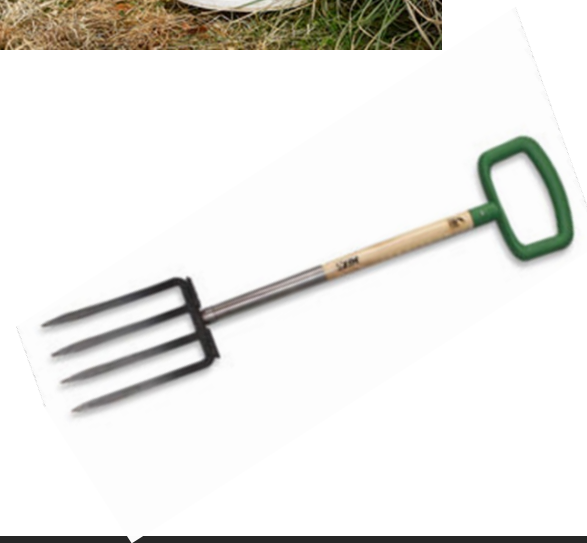
## Injuries

- Small equipment
- Large equipment – tractors, combines, augers
- Vehicles
- ATV/UTVs
- Trips & Falls
- Entrapment
- Electrical
- Animal handling



# Small Equipment

- Lawn & Garden
- Hand tools
- Hydraulics
- Chain saws





Large equipment

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# ATV/UTV

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- All terrain or utility vehicles often have no roll over protection
- Children are operating vehicles that are too large for their stature and ability



# Trips and Falls

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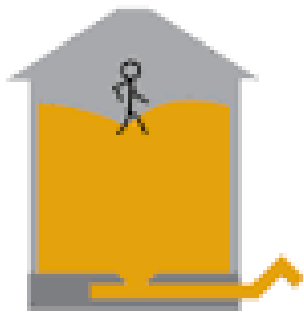




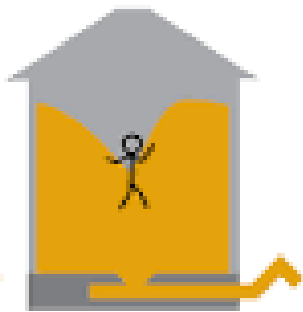
# Entrapments

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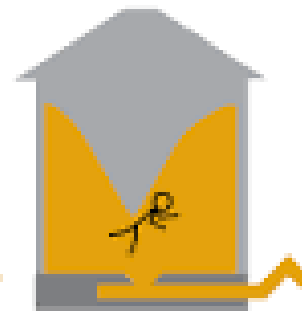
**2-3  
SECONDS**  
TO REACT



**4-5  
SECONDS**  
UNTIL YOU'RE  
TRAPPED



**22  
SECONDS**  
UNTIL YOU'RE  
COMPLETELY  
COVERED



∅ Drowned in Corn: Grain Bin Deaths Hit Record & Feds Step Up Inspections After Accident that Killed 2 Illinois Teens

∅ Canola seed smothers 2 girls, critically injures another



# Entanglements

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- Sweatshirt strings
- Shoelaces
- Frayed clothing
- Jewelry
- Long hair



# Animals

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# What are the Issues?

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## Health Risks

- Heat related illnesses
- Cold weather risks
- Respiratory exposures
- Zoonotic diseases
- Hearing loss
- Chemical/Pesticide exposures



# Heat related Illnesses – teen workers

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Acclimatize

Rest breaks

Sun protection

Hydrate

Young children – overheat quickly  
- often outside with working  
parents




# Heat Related Illnesses (HRI)

Heat Stress – an umbrella term used to describe a condition or process that can raise the deep core body temperature:

- Heat Exhaustion
- Heat Stroke – the most serious condition
- Heat Syncope
- Heat Cramps
- Heat Rash

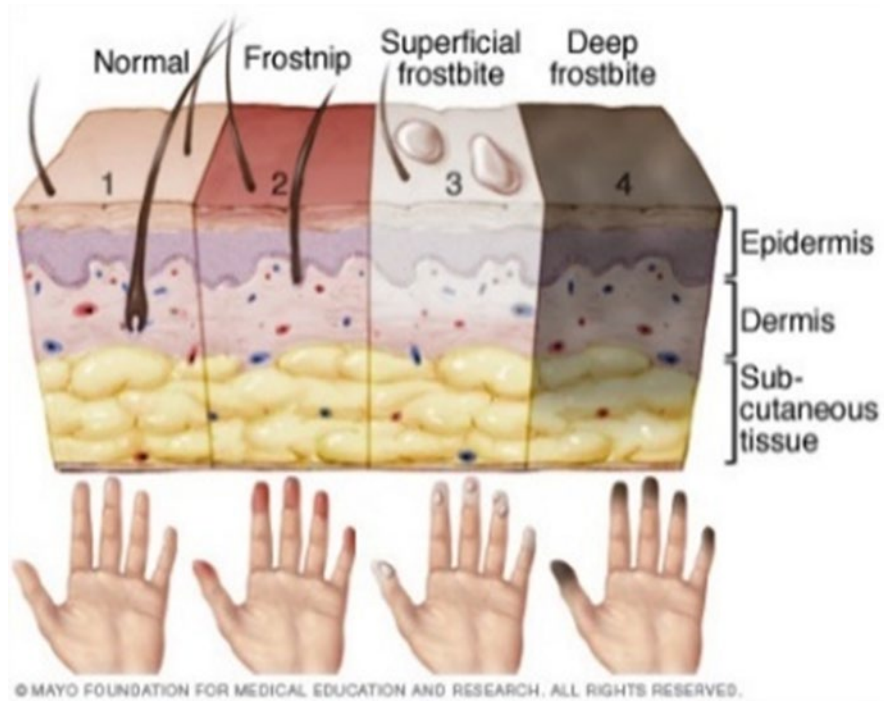
Sources: OSHA Campaign to Prevent Heat Illnesses in Outdoor Workers / Using the Heat Index Guide

HEAT-RELATED ILLNESSES	
WHAT TO LOOK FOR	WHAT TO DO
<b>HEAT STROKE</b>	
<ul style="list-style-type: none"><li>• High body temperature (103°F or higher)</li><li>• Hot, red, dry, or damp skin</li><li>• Fast, strong pulse</li><li>• Headache</li><li>• Dizziness</li><li>• Nausea</li><li>• Confusion</li><li>• Losing consciousness (passing out)</li></ul>	<ul style="list-style-type: none"><li>• Call 911 right away-heat stroke is a medical emergency</li><li>• Move the person to a cooler place</li><li>• Help lower the person's temperature with cool cloths or a cool bath</li><li>• Do not give the person anything to drink</li></ul>
<b>HEAT EXHAUSTION</b>	
<ul style="list-style-type: none"><li>• Heavy sweating</li><li>• Cold, pale, and clammy skin</li><li>• Fast, weak pulse</li><li>• Nausea or vomiting</li><li>• Muscle cramps</li><li>• Tiredness or weakness</li><li>• Dizziness</li><li>• Headache</li><li>• Fainting (passing out)</li></ul>	<ul style="list-style-type: none"><li>• Move to a cool place</li><li>• Loosen your clothes</li><li>• Put cool, wet cloths on your body or take a cool bath</li><li>• Sip water</li></ul> <p><b>Get medical help right away if:</b></p> <ul style="list-style-type: none"><li>• You are throwing up</li><li>• Your symptoms get worse</li><li>• Your symptoms last longer than 1 hour</li></ul>
<b>HEAT CRAMPS</b>	
<ul style="list-style-type: none"><li>• Heavy sweating during intense exercise</li><li>• Muscle pain or spasms</li></ul>	<ul style="list-style-type: none"><li>• Stop physical activity and move to a cool place</li><li>• Drink water or a sports drink</li><li>• Wait for cramps to go away before you do any more physical activity</li></ul> <p><b>Get medical help right away if:</b></p> <ul style="list-style-type: none"><li>• Cramps last longer than 1 hour</li><li>• You're on a low-sodium diet</li><li>• You have heart problems</li></ul>
<b>SUNBURN</b>	
<ul style="list-style-type: none"><li>• Painful, red, and warm skin</li><li>• Blisters on the skin</li></ul>	<ul style="list-style-type: none"><li>• Stay out of the sun until your sunburn heals</li><li>• Put cool cloths on sunburned areas or take a cool bath</li><li>• Put moisturizing lotion on sunburned areas</li><li>• Do not break blisters</li></ul>
<b>HEAT RASH</b>	
<ul style="list-style-type: none"><li>• Red clusters of small blisters that look like pimples on the skin (usually on the neck, chest, groin, or in elbow creases)</li></ul>	<ul style="list-style-type: none"><li>• Stay in a cool, dry place</li><li>• Keep the rash dry</li><li>• Use powder (like baby powder) to soothe the rash</li></ul>



# Cold weather risks

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- **Frost nip**
- **Frost bite**
- **Driving conditions**

## Solution for Cold Weather Issues

Look at the OSHA Quick Card

<https://www.osha.gov/Publications/OSHA3156.pdf>

# Zoonotic diseases

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## Special considerations for children

- Many young people spend their time interacting with pets or young livestock
- Children are at high risk of injury from animal bites -estimated 4.5 million in U.S. bitten by dogs annually
- Children are unaware of pet's temperament or health status



# Zoonotic diseases – signs & symptoms

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- fever – short time or intermittent
- headache
- chills
- excessive fatigue
- joint pain/swelling
- redness over joints

- rashes/hives
- nausea/vomiting/diarrhea
- menstrual cycle changes or
- miscarriage
- orchyitis (scrotal swelling)



Disease	Category	Carrier	Incubation	Symptoms	Care
Ring Worm	Fungal	infected farm animals / pets	10 -14 days	itchy, red, raised patches on skin - may have pustules - may be ring shaped - hair loss	<ul style="list-style-type: none"> <li>keep skin dry</li> <li>antifungals</li> <li>protective clothing</li> </ul> **scratching may cause a secondary bacterial infection
Lyme Disease	Bacterial	ticks	3 days - several weeks	<ul style="list-style-type: none"> <li>"bulls eye" reddened area</li> <li>fever</li> <li>fatigue</li> <li>joint pain</li> <li>swelling</li> </ul>	<ul style="list-style-type: none"> <li>PPE</li> <li>anti-inflammatory</li> <li>antibiotics</li> <li>rest</li> <li>fluids</li> <li>insect repellent</li> </ul>
Brucellosis	Bacterial	<ul style="list-style-type: none"> <li>contact with animal tissue, blood, fluids</li> <li>inhalation</li> </ul>	1 - 15 weeks	<ul style="list-style-type: none"> <li>fever</li> <li>malaise</li> <li>flu-like symptoms</li> <li>can affect heart, bone, other organs</li> </ul>	<ul style="list-style-type: none"> <li>Rest</li> <li>fluids</li> <li>PPE</li> <li>antibiotics</li> </ul>
Leptospirosis	Bacterial	infected animal urine	7 - 12 days	<ul style="list-style-type: none"> <li>fever</li> <li>malaise</li> <li>flu-like symptoms</li> <li>jaundice</li> </ul>	<ul style="list-style-type: none"> <li>rest</li> <li>fluids</li> <li>PPE</li> <li>antibiotics</li> </ul>
Psittacosis	Bacterial	<ul style="list-style-type: none"> <li>wild birds</li> <li>poultry</li> </ul>	5 - 19 days	<ul style="list-style-type: none"> <li>fever</li> <li>headache</li> <li>dry cough</li> <li>pneumonia-like symptoms</li> </ul>	<ul style="list-style-type: none"> <li>rest</li> <li>fluids</li> <li>antibiotics</li> <li>PPE</li> </ul>
Encephalitis	Viral	<ul style="list-style-type: none"> <li>various animals</li> <li>mosquito</li> <li>ticks</li> <li>rodents</li> </ul>	4 - 14 days	<ul style="list-style-type: none"> <li>headache</li> <li>flu-like symptoms</li> <li>restless</li> <li>agitation</li> </ul>	<ul style="list-style-type: none"> <li>PPE</li> <li>anti-inflammatories</li> <li>antivirals</li> <li>steroids</li> <li>rest</li> </ul>
Hanta Virus	Viral	Rodents	7 - 39 days	<ul style="list-style-type: none"> <li>fever</li> <li>dizziness</li> <li>nausea -vomiting</li> <li>pulmonary edema</li> </ul>	<ul style="list-style-type: none"> <li>PPE</li> <li>intense medical treatment</li> <li>support of cardiac &amp; pulmonary symptoms</li> </ul>
New Castle Disease	Viral	Poultry	2 - 15 days	<ul style="list-style-type: none"> <li>conjunctivitis</li> <li>rarely: flu-like symptoms</li> </ul>	<ul style="list-style-type: none"> <li>PPE</li> <li>eye drops</li> <li>avoid sunlight</li> </ul>

# Respiratory exposures

➤ Dust

➤ Mold

➤ Aerosols

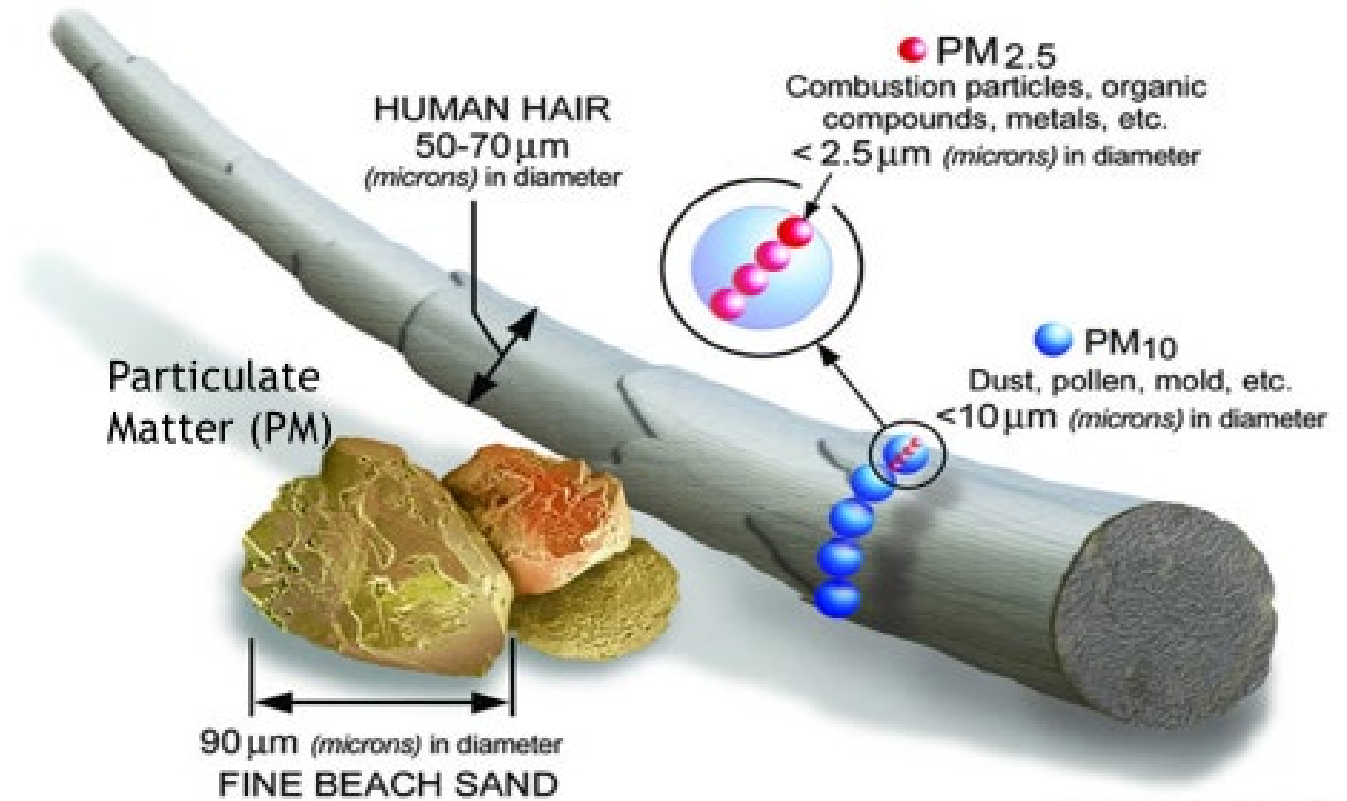


Image courtesy of the U.S. EPA

# Respiratory exposures



# Respirator vs face mask

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## RESPIRATOR

Intended to protect you from respiratory exposures from others.

Designed with filters that keep particles from filtering in towards your face and trap particles being released back into the ai



## CLOTH FACE COVER/SURGICAL MASK

Intended to protect others from you coughing, sneezing, or breathing near them.

Do not fit tight or create a seal



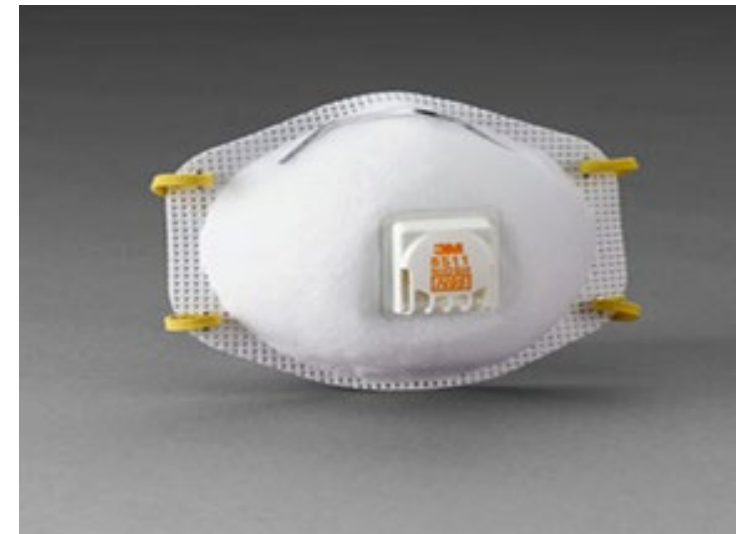
# Common respirators in agriculture

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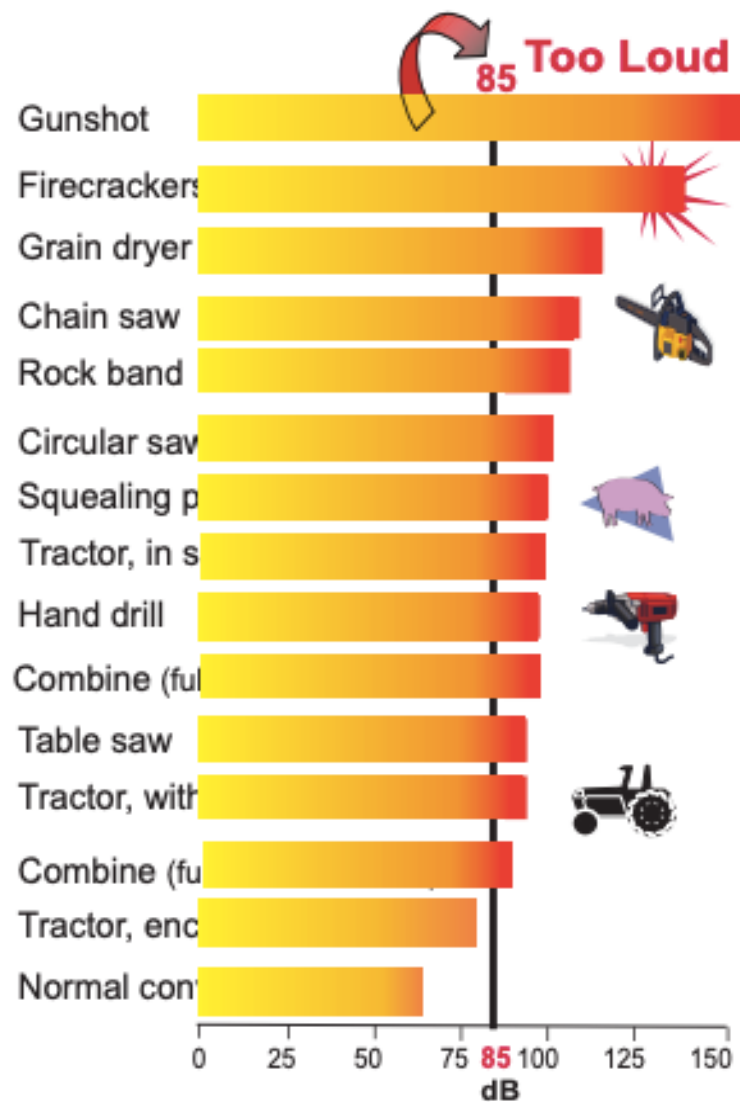
HALF FACE (HALF-MASK)  
RESPIRATOR



TWO STRAP DISPOSABLE FILTERING  
FACE RESPIRATOR/MASK



# Hearing Loss



A "decibel" is the unit used to measure the loudness of sound. Decibel levels for each item shown in the graph may vary.

## Loud equipment

- Tractors
- Combine, etc.

## Animals

- Pig squealing

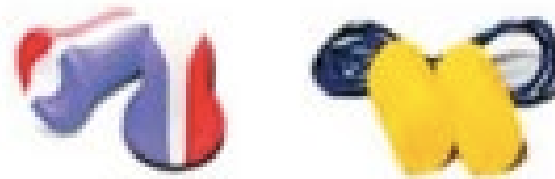


# Types of hearing protection

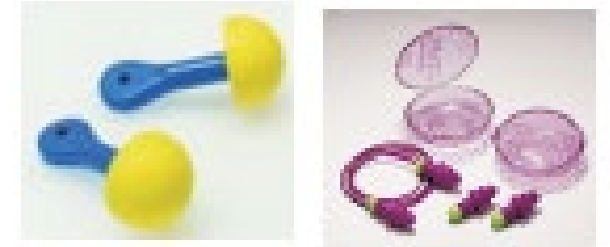
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**Formable Earplugs**



**Premolded Earplugs**



**Canal Caps**



**Earmuffs**



## Did You Know?



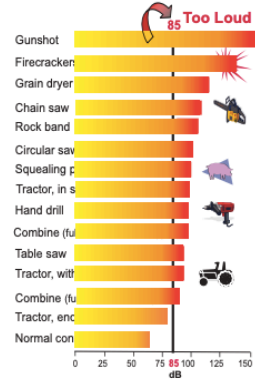
*It's not just your parent or your grandparent whose hearing may be slipping. A 25-year-old farmer can have the ears of a 50-year-old and not even know it!*

- Nothing can restore lost hearing. Once it's gone, it's gone!
- **BUT hearing loss caused by noise is preventable—and you can choose to prevent it.**
- Noise-induced hearing loss can result from working around farm noise - even hand drills - without hearing protection.
- If you're exposed to loud noise on the farm you may already be losing your hearing.
- Hearing protection can increase your ability to hear your equipment or others' voices because it cuts down on the background noise. Some earmuffs have amplification circuits that may help even hearing impaired workers communicate better in noisy backgrounds.
- You can buy protective earmuffs with built-in radios that allow you to listen safely to your favorite sports or music while working. They make nice gifts.
- People have found that protecting themselves from noise reduces their stress, anxiety and fatigue at the end of the day.
- The best way to avoid hearing loss is to reduce your exposure by using quieter equipment or staying away from noise.

## Sound Advice: Protect Your Ears from Damaging Noise

Exposure to noise above 85 decibels (dB) can cause permanent hearing loss.

It can even result from a single nearby shotgun blast, dynamite blast or other very loud noise.



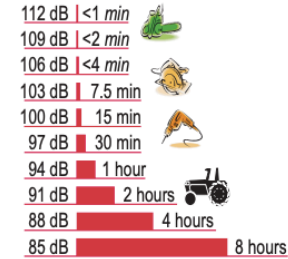
A "decibel" is the unit used to measure the loudness of sound. Decibel levels for each item shown in the graph may vary.

*If you need to raise your voice to be heard an arm's length away, the noise is probably loud enough to damage your hearing.*

## How Long Is Too Long?

The red bar below shows how long it takes for a particular sound level to become dangerous to the human ear. For example, a chain saw has a sound intensity of about 109 dB. Without proper hearing protection, running a chain saw for only 2 minutes can cause hearing loss!

### It only takes...



If you know someone with hearing loss, you know that conversation can be frustrating for both of you.

A good hearing aid can help, because it amplifies the sound. However it does not make sound clearer the way glasses make your vision sharp.

*Hearing aids do not correct hearing the way glasses correct vision.*

## What's That Ringing?

Have you ever driven an open cab tractor for several hours or gone to a loud concert, then heard a ringing in your ears for the next hour or two? How would you feel if that ringing never went away?

That's what happens to many people exposed to loud noise.

That ringing in the ears is called **tinnitus**, and while many people hear ringing, some hear hissing, roaring, whistling, chirping or clicking sounds. Tinnitus may show up before you even notice much hearing loss.



*"My little girl doesn't understand why I can't hear what she is whispering in my ear. She says... 'Mommy hears me when I whisper.'"*



*"I thought if I lost my hearing, it would be quiet. But that constant ringing keeps me awake at night and I can't hear my friends very well on my cell phone."*

## Hearing Protection Resources

Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Noise and Hearing Loss Prevention Resources include this brochure at: [www.cdc.gov/niosh/topics/noise](http://www.cdc.gov/niosh/topics/noise)

National Hearing Conservation Association: [www.hearingconservation.org](http://www.hearingconservation.org)

National Agricultural Safety Database Hearing Conservation: [www.cdc.gov/niosh/nasdb/menu/topic/hearing.html](http://www.cdc.gov/niosh/nasdb/menu/topic/hearing.html)

National Institutes of Health WISE EARS! Campaign Resources: [www.nidcd.nih.gov/health/wise/index.asp](http://www.nidcd.nih.gov/health/wise/index.asp)

Dangerous Decibels: [www.dangerousdecibels.org](http://www.dangerousdecibels.org)

University of Kentucky Agricultural Disability Awareness and Risk Education (AgDARE) NIHL Resources: [www.mc.uky.edu/scship/projects/agdare-2.htm](http://www.mc.uky.edu/scship/projects/agdare-2.htm)

American Tinnitus Association: [www.ata.org](http://www.ata.org)

Hearing Education and Awareness for Rockers (a non-profit group that educates young people about the dangers of exposure to loud music): [www.hearinet.com](http://www.hearinet.com)

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For additional copies, questions, or comments related to this brochure, e-mail [farm\\_noise@cdc.gov](mailto:farm_noise@cdc.gov)

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TTY: 1-888-232-6348

E-mail: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)

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DHHS-(NIOSH) Publication No. 2007-175

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

National Institute for Occupational Safety and Health

SAFER • HEALTHIER • PEOPLE™

## How Can I Protect My Hearing?

*You don't have to have the hearing of a 50 year old by the time you're 25. It's up to you to protect your hearing!*

- Identify noisy tasks around your farm and shop that may be harmful to your hearing.
- Wear hearing protection at all times whenever you are exposed to loud noise.
- Make hearing protection convenient. Stash earplugs in your pockets every morning when you grab your cell phone and keys. Hang canal caps or muffs on your tractor steering wheel, combine and lawn mower.
- Reduce equipment noise by replacing worn, loose or unbalanced machine parts. Keep equipment well lubricated and maintained. If you have been meaning to replace that loud tractor muffler, do it now.
- Limit your exposure to loud noise. Stay away from noisy equipment if you don't need to be near it. Keep cab doors and windows closed.
- Have your hearing tested by a health care provider if you or someone else suspects a problem. Your family or friends may be the first to notice that your hearing is slipping.
- Keep children away from noisy areas and equipment.

*The best protectors are the ones you will wear all the time you are around loud noise.*

### Formable Earplugs



### Premolded Earplugs



### Canal Caps



### Earmuffs



There are hundreds of different styles of hearing protectors to choose from today. Everyone can find one that is convenient, easy to use, comfortable and fits his or her budget. "Hunter's" or "shooter's" muffs may work well for you. Hearing protectors are available on the internet and in local home improvement and farm stores.

Only trust your ears to products designed as hearing protectors. Cotton balls and other makeshift protectors can let noise pass right through.

*"Getting used to wearing my earplugs was like getting used to my favorite boots—even after getting a good fit, it still took a little time."*

# They're your ears Protect them



## Hearing Loss Caused by Farm Noise is Preventable



# CDC/NIOSH "Can you hear me" Resource



# Eye Injury & Protection

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- Handling chemicals/pesticides can result in splashes in the eyes
- Wind can increase the likelihood of dust/particles getting into the eyes
- Projectiles such as wood splinters, nails, rocks



Occupational Safety and Health Administration (OSHA) - 29 CFR 1910.133

American National Standards Institute (ANSI) Z87.1-2015

# Protective Clothing

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## HEAD:

- As a general guideline, most manufacturers recommend replacing hard hats every five years regardless of outside appearance.
  - Many can become brittle due to exposure to constant light.
- Bump cap – worker generated impact
- Hard hat – object generated impact
- Important tip:
  - Keep long hair off neck and shoulders and secure

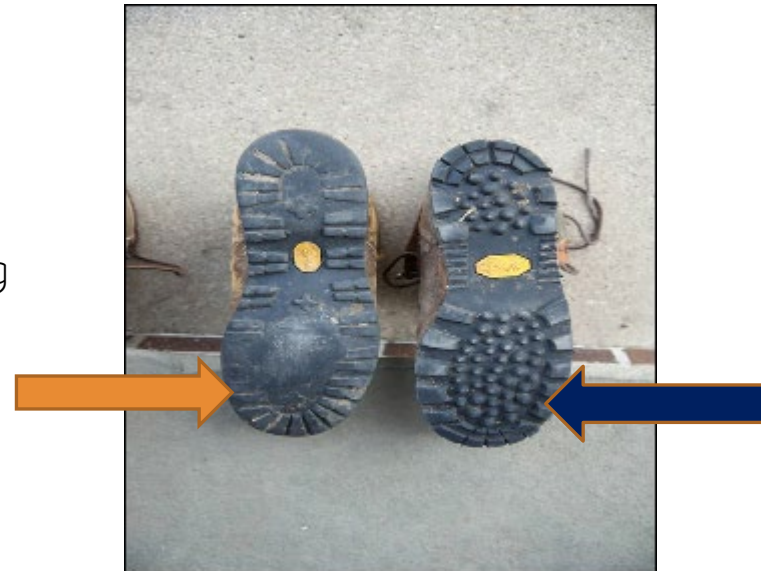


# More Prevention Strategies

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- Well worn footwear will not have necessary traction on damp or uneven surfaces – resulting in a variety of hazardous slipping injuries
- Nitrile rubber compound on soles of shoes
- Appropriate grooves to channel water
- Large flat soles
- No heel (with exception of riding and horse work boots)

Poor grip  
= slipping  
hazard



Much better  
grip on this  
shoe

# Chemical / Pesticide exposures

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Cleaning materials (dairy pipeline cleaner)

Solvents

Field sprays

Animal medications



# Young Women in Agriculture

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**Women using pesticides have 1.5 x increased odds of:**

- **Longer menstrual cycles**
- **Missing a period**
- **Irregular cycles with break through bleeding**
- **Safety education protective equipment is primarily geared toward men**
- **Tools and equipment are made more for men as well**



## Pitchforks & Spades



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Ergonomic issues

# What are the Issues?

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- Depression
- Anxiety
- Alcohol - culture
- Tobacco
- Opioids and other drugs
- Suicide - access



# Depression / Anxiety

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## Stress vs. Anxiety

- It's important to manage your stress.

### STRESS

- **Generally**, is a response to an *external* cause, such as taking a big test or arguing with a friend.
- Goes away once the situation is resolved.
- Can be positive or negative. For example, it may inspire you to meet a deadline, or it may cause you to lose sleep.

### BOTH STRESS AND ANXIETY

- Both stress and anxiety can affect your mind and body. You may experience symptoms such as:
  - Excessive worry
  - Uneasiness
  - Tension
  - Headaches or body pain
  - High blood pressure
  - Loss of sleep

### ANXIETY

- **Generally**, is *internal*, meaning it's your reaction to stress.
- Usually involves a persistent feeling of apprehension or dread that doesn't go away, and that interferes with how you live your life.
- Is constant, even if there is no immediate threat.



# Manifestations of Unmanageable Stress

## SUBSTANCE USE



alcohol, inhalants, and meth use:

- reported as higher in rural youth compared to urban youth

opioids – prescription drug dependence...easy to fall into & hard to break



## Suicide



suicide rates in rural communities are much higher than in urban areas – nearly double in the young male population

greater access to lethal means – firearms and farm chemicals

limited access to care

# Suicide Prevention

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## High rate in rural communities

According to the Centers for Disease Control and Prevention (CDC), farmers are more than five times as likely to commit suicide as the general population and are more likely to report substance abuse. Stress and depression also increase the probability of already above average work-related accidents and may also affect physical health factors.

## Kids affected

Children are also not immune to farm stressors. A study of Kansas farm families found that many parents were unwilling to talk with their children about the family's financial situation, which increased children's uncertainty and stress (Jurich and Russell). In fact, children tended to blame themselves for economic conditions well beyond their control

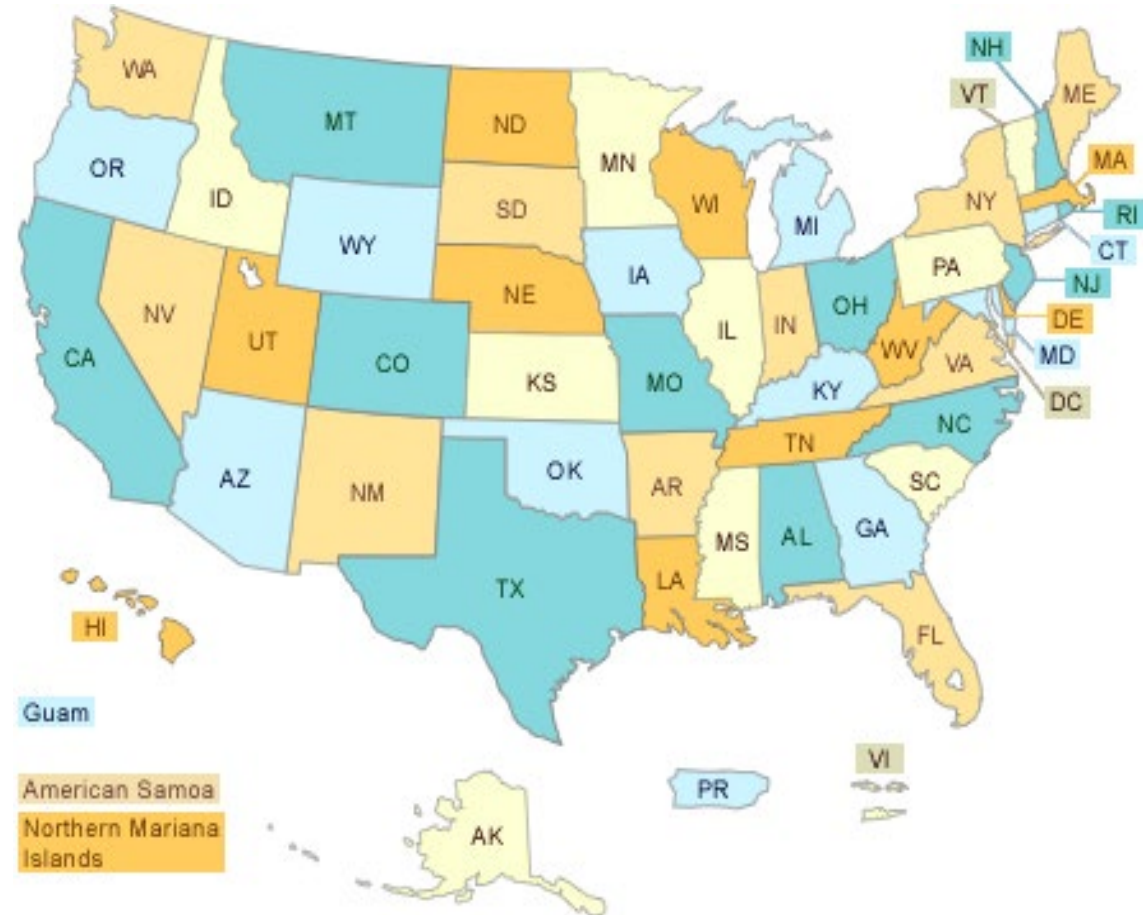
All states have rules regarding the employment of young workers.

In addition, **only some states have separate minimum wage requirements.**

When federal and state rules are different, the rules that provide the most protection will apply.

*Be sure to find out about the rules in your state.*

## State to State Standards





## Self-Paced, Online, and On-Demand

The AgriSafe Nurse Scholar Program is 20-hours of Continuing Nursing Education taught by experts in the field of agricultural safety and health. It is completely online, self-paced, and ANCC-accredited! Equip yourself with the tools and knowledge necessary to provide the best care for the unique healthcare needs of people living in rural communities.



For more information email [nursescholar@agrisafe.org](mailto:nursescholar@agrisafe.org)

Opportunities to Learn

AgriSafe Nurse Scholar

# 2022 AgriSafe Nurse Scholar Topics

- Emerging Issues Impacting Agriculture
- Health and Safety Issues of the Aging Farmer
- A Clinician's Guide to Pediatric Farm-Related
  - Prevention Strategies to Protect Women Working in
- Health and Well-Being of Immigrant and Migrant Farmworkers
- Integration of Behavioral Health for Rural
- Community Assessment and Interventions Addressing the Mental Health Gap in Rural Communities
- Sleepless in America

- Identification of Skin Diseases Common to the Agricultural
- Prevention of Heat Related Illnesses in
- The Opioid Crisis: Evolution, Impact on Workers, Mitigation Strategies
- Chemical/Pesticide Exposures and Health Effects in Agricultural
- Zoonoses: Infectious Diseases We Share with Animals in the Farm Environment
- Allergic and Non- Allergic Respiratory Disease in Farmers
  - Respiratory Health of Agricultural Producers in Clinical Practice
  - Increasing the Use of Hearing Protection Among Farmers: Best Practices
  - Musculoskeletal Disorders and Ergonomics: with Case
- Personal Protective Equipment Selection for Agricultural Producers

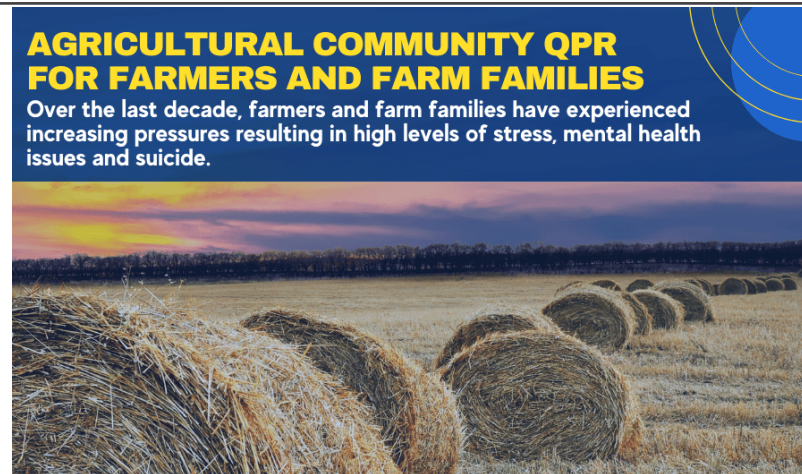


# Opportunities to Learn



## Farm Response for Healthcare Providers

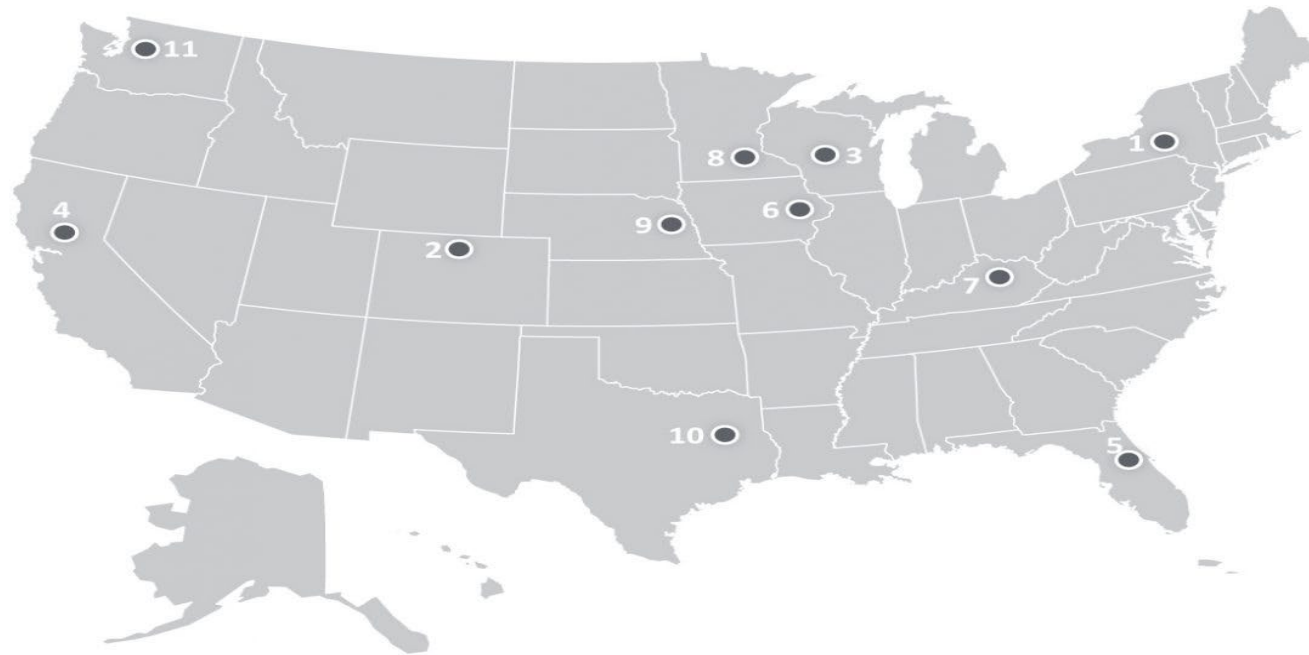
**FarmResponse<sup>SM</sup>** is a 3.5-hour continuing education course developed by national experts from the Agri Stress Response Network<sup>SM</sup>. AgriSafe's Farm Response course provides access to competencies necessary to support mental healthcare for agricultural producers and their families



## QPR for Farmers and Farm Families

**QPR training** teaches laypeople and professionals to recognize and respond to mental health crises using the approach of **Question, Persuade and Refer**. To attend this 1.5-hour training participants must be 18 years old or older.

## NIOSH Centers for Agricultural Safety and Health



1. Northeast Center for Occupational Health and Safety  
(Bassett Healthcare Network)
2. High Plains Intermountain Center for Agricultural Health and Safety  
(Colorado State University)
3. National Children's Center for Rural and Agricultural Health and Safety  
(National Farm Medicine Center)
4. Western Center for Agricultural Health and Safety  
(University of California, Davis)
5. Southeastern Coastal Center for Agricultural Health and Safety  
(University of Florida)
6. Great Plains Center for Agricultural Health  
(University of Iowa)
7. Southeast Center for Agricultural Health and Injury Prevention  
(University of Kentucky)
8. Upper Midwest Agricultural Safety and Health Center  
(University of Minnesota)
9. Central States Center for Agricultural Safety and Health  
(University of Nebraska Medical Center)
10. Southwest Center for Agricultural Health, Injury Prevention and Education  
(University of Texas Health Science Center at Tyler)
11. Pacific Northwest Agricultural Safety and Health Center  
(University of Washington)

# Opportunities to Learn

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<https://www.unmc.edu/cce/catalog/clinicmed/aghealth/index.html>



<https://gpcah.public-health.uiowa.edu/education/agricultural-safety-and-health-the-core-course/>



<https://www.bassett.org/research-institute/new-york-center-agricultural-medicine-and-health-nycamh>



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



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



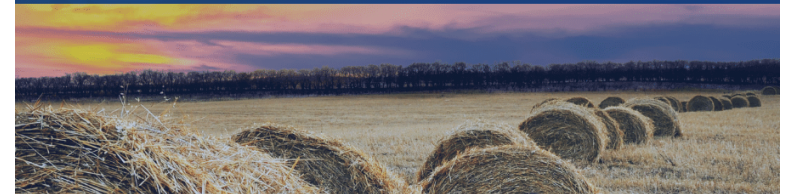


# Opportunities to Learn



## AGRICULTURAL COMMUNITY QPR FOR FARMERS AND FARM FAMILIES


Over the last decade, farmers and farm families have experienced increasing pressures resulting in high levels of stress, mental health issues and suicide.



# Recommended Resources

[www.agrisafe.org](http://www.agrisafe.org)

### Head to Toe Protection Pesticides



**Exposures**

- Liquids
- Solids
- Granular

**Head**

Chemical resistant hood or hat or no hat and worn hair and scalp other exposure

**Ears**

hearing protection plugs or muffs unless required to noise above 85 decibels (dB)

**Eyes**

Choose safety goggles or glasses based on the label. You must have ANSI Z87.1 NIOSH standard

**Feet**

Choose protection based on the label. This may include shoes and socks or shoe coverings such as Tyvek or chemical resistant shoe covers or PVC boots.


**Lungs**

Read the label. Choose a NIOSH approved air purifying device or container respirator based on label information.

**Body**

As indicated on the label. Chemical resistant gloves and may include Tyvek coveralls, custom coveralls, long sleeves and long pants.

### Head to Toe Protection Swine



**Exposures**

- Flying objects
- Grain Dust
- Noise
- Sun

**Head**

Worn exposed to impact from power-driven tools must be safety helmet or hard hat that fits snugly and is used with the ANSI standards (29 CFR 1910.136)

**Ears**

Hearing protection plugs or muffs unless required to noise above 85 decibels (dB)

**Eyes**

Safety glasses that meet ANSI Z87.1 and CSA Standard

**Lungs**

NIOSH approved air purifying 2 strap NIOSH or NIOSH approved or container respirator with NIOSH label. Read the label for exposure and for construction. When required to use cartridges, read the label for information on which canisters to use.

**Body**

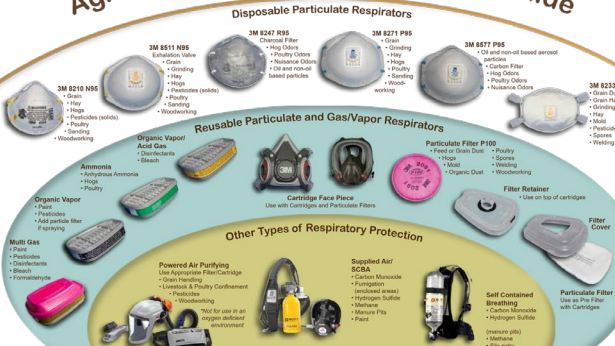
Long-sleeved clothing with UPF of at least 30 or use a chemical resistant (DVA/ADVA) sunscreen with an SPF of 30 or higher

**Feet**

Choose work shoes for the job and avoid bare feet. Read the OSHA 29 CFR 1910.136 and ASTM F 2413-2005 standards

### Agricultural Respirator Selection Guide

Use Only NIOSH Approved Respirators



**Disposable Particulate Respirators**


- 3M 8210 N95: Clean, Greasy, Oily, Fly, Haze, Particles (solid), Particulate (solid), Woodworking
- 3M 8211 N95: Clean, Greasy, Oily, Fly, Haze, Particles (solid), Particulate (solid), Woodworking
- 3M 8247 N95: Clean, Greasy, Oily, Fly, Haze, Particles (solid), Particulate (solid), Woodworking
- 3M 8221 P95: Clean, Greasy, Oily, Fly, Haze, Particles (solid), Particulate (solid), Woodworking
- 3M 8577 P95: Clean, Greasy, Oily, Fly, Haze, Particles (solid), Particulate (solid), Woodworking
- 3M 6225 N100: Clean, Greasy, Oily, Fly, Haze, Particles (solid), Particulate (solid), Woodworking

**Reusable Particulate and Gas/Vapor Respirators**

- Organic Vapor: Ammonia, Greasy Aerosols, Haze, Particulate
- Organic Vapor: Acid Gases, Ammonia, Greasy Aerosols, Haze, Particulate
- Multi-Gas: Particulate, Chlorinated Hydrocarbons, Formaldehyde
- Powered Air Purifying: Clean Handling, Leaking & Particulate Containment, Particulate
- Supplied Air SCBA: Carbon Monoxide, Fungus (mold), Hydrogen Sulfide, Methane, Mucous Pits, Paint
- Self-Contained Breathing: Carbon Monoxide, Hydrogen Sulfide, Mucous pits, Methane, Silo entry
- Particulate Filter P100: Particulate, Greasy Aerosols, Haze, Organic Dust
- Fiber Retainer: Particulate, Greasy Aerosols, Haze, Woodworking
- Fiber Cover: Particulate, Greasy Aerosols, Haze, Woodworking

**Other Types of Respiratory Protection**

### ZOOBOTIC DISEASE IN AGRICULTURE



Zoonotic Diseases are transmitted between farm animals and humans.

According to the World Health Organization, more than half of all human **pathogens** are **zoonotic** and have represented nearly all of all **emerging** pathogens during the past decade. Farmers and farm workers have higher levels of risk for contracting zoonotic diseases because of the frequency of their exposure to animals.


Prevention is the best defense. Understanding how the disease transmission process works, building a team and effectively communicating within that team are essential in preventing the spread of zoonotic disease.

<p><b>PROTECT YOURSELF:</b></p> <ul style="list-style-type: none"> <li>Choose and use appropriate personal protective equipment (PPE) <ul style="list-style-type: none"> <li>respiratory protection</li> <li>gloves</li> <li>safety glasses/goggles</li> <li>clothing: coveralls, aprons, etc.</li> <li>foot gear</li> </ul> </li> <li>Designate specific clothes for farm and ranch work <ul style="list-style-type: none"> <li>use laundry precautions - launder separate from other</li> </ul> </li> </ul>	<p><b>TERMS TO KNOW:</b></p> <p><b>PPE:</b> personal protective equipment</p> <p><b>Pathogen:</b> an agent that causes disease, especially a virus, bacterium or fungus</p> <p><b>Infectious disease:</b> a disease caused by bacteria, viruses, fungi, or parasites that can be transferred to humans</p>
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Autism (or Respiratory) hazards may result from either an oxygen deficient atmosphere or breathing air contaminated with toxic particles, vapors, gases, aerosols or mists. The proper selection and use of a respirator depend upon an initial determination of the concentration of the hazard or hazards present in the workplace, or the presence of an oxygen deficient atmosphere.

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Protecting the People Who Feed the World  
www.agrisafe.org

# Resources

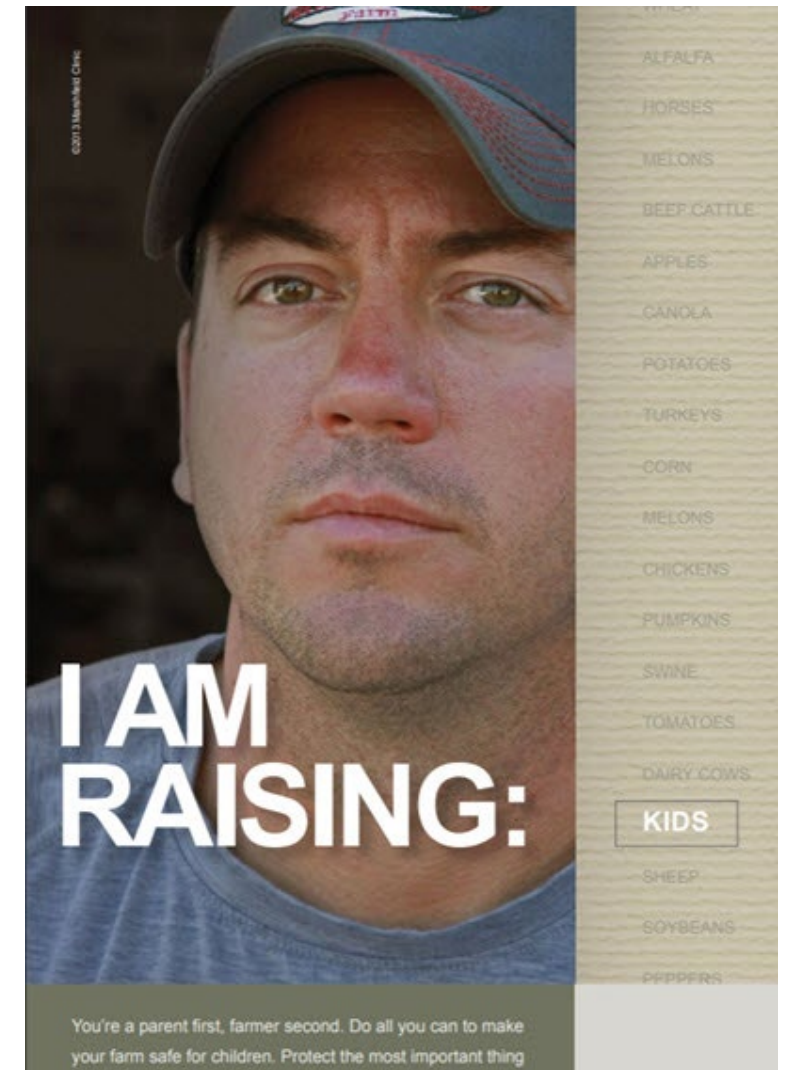
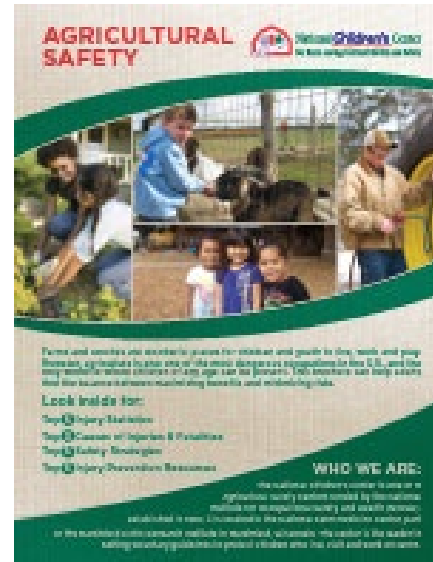
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National Children's Center for Rural and Agricultural Health and Safety

<https://www.marshfieldresearch.org/nccrahs>

Cultivate Safety

<https://cultivatesafety.org/work>





# Hats off to School Based Nurses!

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