Safety Leader's Discussion Guide 2001

Safety works! FOR YOU

The Ohio Bureau of Workers' Compensation

Table of contents

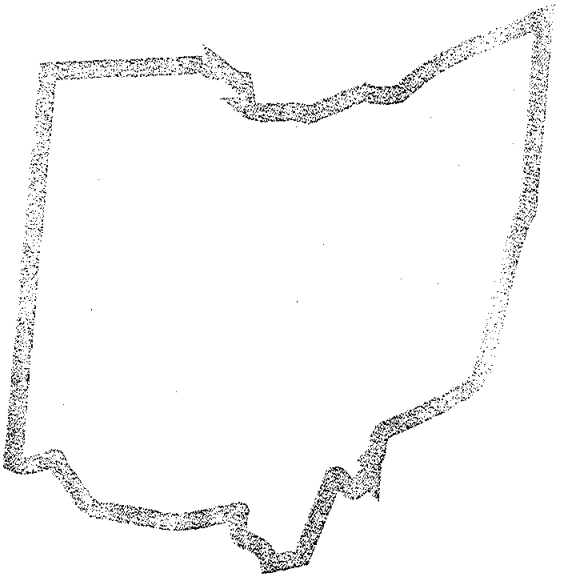
January	Safety: Who's responsible?	4
February	Violence in the work place	6
March	Preventing heat/cold stress	8
April	Confined space awareness	10
May	Respiratory protection	12
June	Proactive safety	14
July	Emergency response	16
August	Cumulative trauma disorders	18
September	Safety colors and markings	22
October	Safety signs and labels	24
November	Holiday safety	26
December	Forklift safety	28
Extra	Four steps to portable ladder safety	30
Extra	Office ergonomics	32

Contributors

BWC's Division of Safety & Hygiene thanks the following individuals for contributing to the *Safety Leader's Discussion Guide*.

Warren K. Brown
Dan Gleghorn
Tim Govenor
Arnold Larson
Arne Larson
Mark J. Mullins
Andrew M. Pawuk
Bruce Rinehart
Rick Snodgrass
Amy Stewart
Joe Thatcher
John Waller
Bill Whetstone
Paul Whittaker

Safety works! FOR YOU
The Ohio Bureau of Workers' Compensation



Dear Safety Leader:

Safety Works for You and your employees. You can reduce your workers' compensation costs by improving safety and preventing accidents. And the Ohio Bureau of Workers' Compensation (BWC's) Division of Safety & Hygiene is here to help.

This discussion guide supplies you with the tools you need to improve safety awareness and performance. Designed to assist safety discussion leaders, this guide provides your employees with how-to information to help them perform their jobs safely. It offers **14 safety-meeting topics** you can tailor to address your company's safety issues. It also supplies you with a handout for your employees to reinforce the safety topic for that specific meeting.

Regular safety meetings will involve your employees and familiarize them with occupational injury- and illness-prevention techniques. Employee involvement will stimulate ideas, awareness and energies that will improve your company's safety record.

Back in the work place, involve employees in the company's efforts to maintain a safe and healthful work environment. Reinforce the benefits of safety policies, ask employees to share motivational ideas and encourage employees to report unsafe conditions.

Safety does work and it can work for you and your employees. Use this discussion guide to prevent work-place accidents and lower your workers' compensation costs.

Sincerely,

James Conrad
Administrator/CEO
Ohio Bureau of Workers' Compensation

Dave Spencer
Superintendent
BWC Division of Safety & Hygiene

p.s. Don't forget about the Ohio Safety Congress and Expo held in Columbus, April 2-5, 2001!

Using this discussion guide is easy.

1. Review the discussion leader notes prior to the meeting so that you are familiar with the topic.
2. Supplement your meeting with examples of safety issues specific to your work place.
3. Photocopy the handout located to the right of each month's safety topic. The handout contains safety tips to make safety work for your company.

Safety works! FOR YOU
The Ohio Bureau of Workers' Compensation

Safety: Who's responsible?

Note to discussion leader: The overall theme for the 2001 *Safety Leader's Discussion Guide* will focus on responsibility and accountability for safety in our work areas. Whether you use a specific monthly topic or one of the extras, make an effort to reinforce the principle that everyone is responsible and accountable for safety in his or her work area.

To help you get started, use January as the meeting to discuss and hopefully agree among your group the basic concept of responsibility and accountability for safety. Use a questioning approach to generate participation and discussion. Tailor your discussion for those safety concerns, procedures and situations that have an impact on your area. Also, consider the safety culture of your organization. Use a whiteboard, chalkboard, easel and paper or overhead projector to note key comments, etc.

Who is responsible for safety?

- Plant manager
- Plant superintendent
- Safety manager
- You (the supervisor or team leader)
- I am (each employee)
- We all are (this is really the answer you want)

Where does this responsibility begin and end?

Note to discussion leader: Use the preceding responses to formulate your questions.

- For the plant or site manager, this encompasses every operation, department and person in our facility, including employees, visitors and outside contractors. This also can extend to those employees who work away from the facility, such as truck drivers and outside sales personnel.
- For the superintendent, foreman or other manager, this includes all departments, operations and people under their control, including visitors and contractors working in their area.
- For the safety person, this will include direct-reports. Fundamentally, the safety pro is responsible and accountable for being a resource for everyone in the facility. Note to discussion leader: More on this later. This may be a philosophical challenge, depending on your organization.
- For me (supervisor or team leader), I'm responsible for each of us, our department or work area and anyone else who is in the area.
- For each of you, this means you, any coworker who may be helping you with a task, and any visitor in your immediate area.

How does this responsibility apply in our specific areas?

- Personal protective equipment (PPE). Each of us is responsible for using the PPE specified for our tasks, for making sure it's in good condition and that we are using it correctly. Note to discussion leader: Ask for some examples.
- Tools and equipment. Each of us needs to assure that our equipment and tools are safe, that they are proper for the task at hand, and that we are using them correctly.
- Procedures. We all are responsible for knowing and following the safe work procedures for our tasks. Note to discussion leader: Ask — what should you do if you're not sure of the correct procedure? Possible answers:
- Don't perform the task.
- Ask your supervisor or team leader for guidance.
- Refer to the job safety procedure or the standard operating procedure.
- Check with task trainer (if applicable).
- Our work spaces. Whether it's a specific position at a machine, a special operating area or an office cubicle, each of us is responsible for keeping it clean, neat and orderly (safe).

What does accountability for safety mean?

In simple terms, each of us must answer for how we'll accept these responsibilities. For example, when an incident occurs, the investigation will focus on how well the person or persons involved performed their responsibilities, i.e., was protective equipment worn, were tools used correctly, were procedures followed, etc.? Note: mention that while each person is individually accountable, others also are accountable for the performance of groups of employees. Example: the supervisor is accountable for every one of his or her employees.

Why can't the safety person be directly responsible and accountable for everyone?

The safety professional is usually a staff function, an adviser and resource. Our operations don't report directly to safety.

The safety of our operations is our responsibility, and we are accountable for how we perform. This isn't something we can send down to the safety department.

Note to discussion leader: In closing, ask for any further questions or comments. Review any key points you wish to make about the topic of responsibility.

Safety: Who's responsible?

Where does responsibility for safety begin and end?
Responsibility for safety begins and ends with all of us.

How does this responsibility apply in our specific areas?
We all are responsible for knowing and following the safe work procedures for our tasks. For example, each of us is responsible for using the correct personal protective equipment specified for our tasks, for making sure it's in good condition and that we are using it correctly. Each of us needs to assure that our equipment and tools are safe, that they are proper for the task at hand, and that we use them correctly.

What does accountability for safety mean?
In simple terms, it means that each of us must answer for how we'll we accept these responsibilities. However, while each person is individually accountable, others also are accountable for the performance of groups of employees. For example, if you are a supervisor, you are accountable for every one of your employees.

Why can't the safety person be directly responsible and accountable for everyone?
The safety person cannot be directly responsible and accountable for everyone because he/she is an adviser and resource. Our operations don't report directly to safety. The safety of our operations is our responsibility, and we are accountable for how we perform. This isn't something we can send down to the safety department.

Safety Works for *January*

Safety works! FOR YOU
The Ohio Bureau of Workers' Compensation

Photocopy this page for each attendee

Violence in the work place

Note to discussion leader: In preparation for this presentation, be sure to know your company's policy regarding violence in the work place. Know tolerance levels from top management and consequences of violence between employees or third parties. Have knowledge and documentation that weapons are not allowed anywhere on the premises, including vehicles parked on company property. It will be advantageous to contact security, human resources and any staff legal representatives who may guide your knowledge of your environment's history and suggest available Employee Assistance Programs.

Today's topic affects all of us and is the leading cause of death for women in the work place, and the second leading cause of death in the work place overall. Our purpose today is to clarify what we may do to prevent that situation, as we are all dedicated to working in a safe and healthy environment. Our topic today is Violence in the Work Place and although we may not solve the world's problems in one safety meeting, let us take a closer look at our involvement, from word usage to identifying a problem before it is out of control.

Before we can solve a situation, we must first:

- Identify the problem;
- Brainstorm alternatives;
- Examine alternatives;
- Offer solutions.

For example, let's first identify the problem of violence in our society at large. Give examples: war, human nature, television, guns, road rage, jealousy, injuries and death.

We agree we cannot solve the world's problems here today, but how can we control and prevent violence in this work place?

Resources we can use to control and prevent violence in this work place include human resources, security, company policies, management, disciplinary policy, consequences, enforcement, concern for coworkers and communication.

Form small groups to discuss the following questions. Select a spokesperson for each group to offer the results of the discussion to the large group:

Group One: What words do we use in our every-day language that indicate violence that we can re-word to be less threatening. Examples: A kill switch could be an engine cut-off switch and "I want to choke her" could become a less-threatening statement.

Group Two: What violent incidents have occurred to your knowledge in a work-place situation? What could have been done to prevent them? Example: going postal, Columbine High School.

Group Three: What violent episodes have occurred in this work place to your knowledge? How were they managed? If nothing has happened to your knowledge, what would be the most likely situation to occur and how might it be prevented?

Group Four: On your drive to or from work or in your work this past month, what type of road rage or aggression was displayed? Did any of it occur on company property? Do you consider this violence in the work place? What should be done about it? What do you do about it?

Group Five: Have any of you taken a stress management, controlling anger or relaxation course? Why have these become so popular and what are the main messages in each?

Group Six: What improvements might be done in this work place to ensure a non-threatening environment?

Note to discussion leader: As you ask each group to present, repeat and summarize what was discussed for each question. Lead the group with gravity and the seriousness of the situation, knowing that words may be all we have to discover what is really happening. Share your findings with the appropriate top management in your company for support and to dissolve any fears of communication before the fact. Encourage workers to keep each other's language in check to prevent words from becoming actions.

Quiz

True or false

1. _____ Violence is the leading cause of death for women in the work place.
2. _____ I can make a difference in my work place regarding violence.
3. _____ The words I speak can indicate a degree of violence.
4. _____ Threats should be taken seriously.
5. _____ I know someone who has been affected by violence.
6. _____ There is someone with this company I can go to with my concerns.
7. _____ Sometimes it's better to disengage to keep situations from escalating.
8. _____ I have a way to deal with stress that is not harmful.
9. _____ There are ways to deal with anger without injury or death.
10. _____ Violence affects all of us, and I have an obligation to share information about a potentially violent situation to prevent it.

Note: All answers are true.

Employee Name: Printed _____

Signed _____ Date _____

Violence in the work place

Safety Works for *February*

Violence in the work place affects all of us. It is the leading cause of death for women in the work place and the second leading cause of death in the work place overall. It has the potential to be emotional, and our purpose today is to clarify what we may do to prevent that situation, as we are all dedicated to working in a safe and healthy environment.

Resources we can control and prevent violence in this work place include: human resources, security, company policies, management, disciplinary policy, consequences, enforcement, concern for coworkers and communication.

Although we may not solve the world's problems in one safety meeting, let's take a closer look at our involvement, from word usage to identifying a problem before it is out of control. We can help to prevent violence by keeping each other's language in check to prevent words from becoming actions. Be proactive with each other!

Think about the words we use in our every-day language that indicate violence. For example: A kill switch could be an engine cut-off switch and "I want to choke her" could become a less threatening statement.

Think about what violent incidents have occurred to your knowledge in a work-place situation as well as in this work place.

What could you have done to prevent them? How were they managed? If nothing has happened to your knowledge, what would be the most likely situation to occur and how might it be prevented?

On your drive to or from work or in your work this past month, what type of road rage or aggression was displayed? Did any of it occur on company property? Do you consider this violence in the work place? What should be done about it? What can you do about it?

Have any of you taken a stress management, controlling anger or relaxation course?
Why have these become so popular and what are the main messages in each?
What improvements might be done in this work place to ensure a non-threatening environment?

Quiz

True or false

1. _____ Violence is the leading cause of death for women in the work place.
2. _____ I can make a difference in my work place regarding violence.
3. _____ The words I speak can indicate a degree of violence.
4. _____ Threats should be taken seriously.
5. _____ I know someone who has been affected by violence.
6. _____ There is someone with this company I can go to with my concerns.
7. _____ Sometimes it's better to disengage to keep situations from escalating.
8. _____ I have a way to deal with stress that is not harmful.
9. _____ There are ways to deal with anger without injury or death.
10. _____ Violence affects all of us, and I have an obligation to share information about a potentially violent situation to prevent it.

Answers: 1 - T; 2 - T; 3 - T; 4 - T; 5 - T; 6 - T; 7 - T; 8 - T; 9 - T; 10 - T

Safety Works! FOR YOU
The Ohio Bureau of Workers' Compensation

Photocopy this page for each attendee

Preventing heat/cold stress

Note to discussion leader: Prior to the meeting, obtain:

- A list of jobs in your facility that potentially expose employees to heat or cold;
- A copy of heat/cold stress procedures, if available;
- Any incident reports that occurred due to heat or cold stress;
- A few pieces of PPE used to protect the employee from possible overexposures to heat or cold.

Use a question-and-answer format requesting the participants to drive the discussion and suggest improvements to your system.

Exposure to temperature extremes can occur when working outdoors at home or at work in the summer or winter. Heat stress can occur in any job. Taking proper precautions will reduce the potential for injury.

First discuss heat stress, then cold stress. Use a flip chart to identify specific jobs at your facility that may expose employees to hot and/or cold environments. Once you identify the jobs, list the PPE used to reduce potential exposures. This discussion may help you to update your PPE procedures.

What is heat stress?

When your body temperature rises even a few degrees above normal (which is about 98.6 degrees F), you can experience muscle cramps, become disoriented, weak and even dangerously ill. Disorders include heat exhaustion, heat cramps and heat stroke.

What jobs at your facility can expose you to heat?

Have employees discuss jobs at your facility that can expose them to heat. Then identify and discuss the PPE required for facility-specific jobs.

What are ways to control heat stress?

- Adapt to the heat. Expose yourself gradually to extremely hot environments. Work a couple of hours and increase that exposure over the next couple of days to get acclimated.
- Drink water frequently. Sweating cools your body down, but in the process you lose fluids. You need to replace the fluid loss. Drink at least eight ounces of water every 20 to 30 minutes when working in hot environments.
- Wear PPE, including breathable work clothing and cool vests. Use cooled air-supplied respirators or specially-designed work suits that are cooled by air. Check with your supervisor to find out what PPE equipment is available.
- Use engineering controls, such as fans, ventilators and exhaust systems, if available, to help reduce heat buildup.
- Take frequent breaks in air-conditioned areas.
- Above all, keep cool. If you or someone you work show signs of heat stress, get immediate medical attention.

What is cold stress?

When your body temperature drops a few degrees below normal, you may start to shiver, become weak, drowsy, disoriented, unconscious and death may result. Another term for this condition is hypothermia. Frostbite occurs when the tissue reaches or drops below the freezing point and tissue damage results.

What jobs can expose you to cold stress?

Have employee discuss jobs at your facility that can expose them to cold. Identify and discuss the PPE that is required for facility-specific jobs.

What are ways that you can control cold stress?

- Dress appropriately. Layer your clothes to allow you to adjust what you wear to suit the temperature conditions. In cold weather, wear lightweight wool, silk or polypropylene. For outdoor activities, choose outer clothing made of waterproof, wind resistant fabrics. Always wear a hat for added protection.
- Keep dry. Water chills your body far more rapidly than air or wind. Always take along a set of dry clothing when working/playing outdoors. Wear waterproof boots in damp or snowy weather.

Hypothermia can be gradual and go unnoticed until it is too late. If you are outside for an extended period, either work in pairs or notify your supervisor so he or she can periodically check on you. If you are checking on someone else, look for slurred speech, shivering, mental confusion, drowsiness or weakness. If any of these signs exist, get the person indoors to warm up and seek medical attention, as necessary.

Quiz

True or false

1. _____ Heat cramps, becoming disoriented and feeling weak are signs of heat stress.
2. _____ Working in protective suits and respirators can cause heat stress.
3. _____ You can get frostbite when working with compressed gases.

Multiple Choice

4. _____ Ways to control heat stress are:
   a. Drink plenty of fluids
   b. Wear PPE
   c. Adapt to the heat or a hot environment gradually
   d. All of the above
5. _____ Ways to control cold stress are:
   a. Keep dry
   b. Layer your clothing
   c. Drink plenty of fluids
   d. A and B above

Answers: 1-T; 2-T; 3-T; 4-d; 5-d

Preventing heat/cold stress

Safety Works for *March*

Exposure to temperature extremes can occur when working outdoors at home or at work in the summer or winter. Heat stress can occur in any job. Taking proper precautions, reduces the potential for injury.

Heat stress

Heat stress can occur when your body temperature rises a few degrees above normal (about 98.6 degrees F). You can experience muscle cramps, become disoriented, weak and even dangerously ill. Disorders include heat exhaustion, heat cramps and heat stroke.

You can control heat stress by:

- Adapting to the heat or a hot environment gradually;
- Drinking plenty of water frequently;
- Wearing PPE and using cooled air-supplied respirators;
- Using engineering controls, such as fans, to reduce heat buildup in your work area;
- Taking frequent breaks in air-conditioned areas;
- Keeping cool.

Cold stress

When your body temperature drops even a few degrees below normal, you may start to shiver, become weak, drowsy, disoriented, unconscious and death may result. Frostbite occurs when the tissue reaches or drops below the freezing point and tissue damage results.

You can control cold stress by:

- Layering your clothing. In cold weather, wear lightweight wool, silk or polypropylene. For outdoor activities, choose waterproof, wind resistant fabrics. Always wear a hat.
- Keeping dry. Water chills your body faster than air or wind. Take a set of dry clothing when working/playing outdoors. Wear waterproof boots in damp or snowy weather.

Quiz

True or false

1. _____ Heat cramps, becoming disoriented and feeling weak are signs of heat stress.
2. _____ Working in protective suits and respirators can cause heat stress.
3. _____ You can get frostbite when working with compressed gases.

Multiple Choice

4. _____ Some ways to control heat stress are:
   a. Drink plenty of fluids
   b. Wear PPE
   c. Adapt to the heat or a hot environment gradually
   d. All of the above
5. _____ Some ways to control cold stress are:
   a. Keep dry
   b. Layer your clothing
   c. Drink plenty of fluids
   d. A and B above

Answers: 1-T; 2-T; 3-T; 4-d; 5-d

Safety Works! FOR YOU
The Ohio Bureau of Workers' Compensation

Photocopy this page for each attendee

Confined space awareness

Note to discussion leader: Be aware of the work-place's confined space program and confined space locations. Review your company's confined space entry program. Have examples of confined space signs and entry permits available.

Confined spaces in the work place present unique hazards to employees who must enter them. Their function, design and restricted access present characteristics that can increase hazardous exposures. If you are required to work in confined spaces, you must be aware of the programs developed to identify confined spaces and limit their access to trained, authorized employees.

What is a confined space?

For a space to be classified as a confined space, it must:

- Be large enough for a person to bodily enter;
- Have restricted access;
- Not be designed for continuous human occupancy.

What confined spaces are present in our work area?

Have employees discuss confined space at your facility. Use your confined space inventory to stimulate discussion.

What makes a permit-required confined space?

It has one of the following additional conditions:

- Has a potential to contain a hazardous atmosphere;
- Has a material that could engulf an entrant;
- Has an internal configuration, such as a sloping floor or converging walls that can trap or asphyxiate an entrant;
- Contains any other recognized safety or health hazard.

What are the atmospheric hazards?

- Oxygen level — too high (greater than 23.5 percent) or too low (less than 19.5 percent).
- Flammables — greater than 10 percent lower explosive level.
- Potential exposure to toxic contaminants that may be immediately dangerous to life and health or which may result in exposures greater than the threshold limit value*.

Threshhold value is the atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Subpart G, Occupational Health and Environmental Control, or in Subpart Z, Toxic and Hazardous Substances, of this part, and which could result in employee exposure in excess of its dose or permissible exposure limit.

How can a confined space be safely entered with the hazards present?

Permit status ensures necessary precautions are taken to protect employees when they enter a confined space where the atmospheric and/or physical hazards are still present. A permit will identify hazards present in the space and document that each hazard is addressed.

What does the permit require?

It requires trained employees who are knowledgeable of the hazards, symptoms of exposure and duties required to successfully complete the job in the confined space.

How does a worker know when a permit is needed?

- All confined spaces are considered permit-required until the company determines otherwise.
- All confined spaces need to be identified in the work place and evaluated for hazards.
- All confined spaces need to be identified with signs. If the work place contains permit required confined spaces, the employer shall inform exposed employees, by posting danger signs or by any other equally effective means, of the existence and location of and the danger posed by the permit spaces.

How do we issue a permit?

A permit is completed prior to the entry. It contains the time, date, purpose, length of entry and employees who will perform the entry and attendant activities. It states the condition of the atmosphere and steps taken to control physical hazards. The work crew or the supervisor completes the permit. If the work crew completes it the supervisor must review it.

How long is our permit valid?

A permit is issued for the length of time for one crew to perform the task. NOTE: If the crew exits for lunch, the permit is not valid unless space is evaluated again.

Quiz

Circle the correct answer

1. What are the characteristics of a permit-required confined space?
   a. It is large enough to bodily enter.
   b. It is difficult to enter or exit.
   c. It is not designed for continuous human occupancy.
   d. All of the above.
2. A lack of oxygen is an atmospheric hazard.
   True or False
3. Only trained individuals may enter a confined space.
   True or False
4. Entry permits need to be reviewed by the entry supervisor.
   True or False
5. The permit identifies the work to be performed.
   True or False

Answers: 1. -d; 2. - T; 3. - T; 4. - T; 5. - T

Confined space awareness

Safety Works for April

Confined spaces in the work place present unique hazards to employees who must enter them. Their function, design and restricted access have present characteristics that can increase hazardous exposures. If you are required to work in confined spaces, you must be aware of the programs developed to identify confined spaces and limit their access to trained authorized employees.

For a space to be classified as a confined space, it must:

- Be large enough for a person to bodily enter;
- Have restricted access;
- Not be designed for continuous human occupancy.

A permit-required confined space has one of the following additional conditions:

- Has a potential to contain a hazardous atmosphere;
- Has a material that has the potential for engulfing an entrant;
- Has an internal configuration, such as a sloping floor or converging walls that can trap or asphyxiate an entrant;
- Contains any other recognized serious safety or health hazard.

Atmospheric hazards include, but are not limited to an oxygen level that's too high (greater than 23.5 percent) or too low (less than 19.5 percent); flammables that are greater than 10 percent lower explosive level.

Permit status ensures necessary precautions are taken to protect employees when they enter a confined space where the atmospheric and/or physical hazards are still present. A permit will identify hazards present in the space and document that each hazard is addressed. It requires trained employees who are knowledgeable of the hazards, symtoms of exposure and duties required to successfully complete the job in the confined space.

A permit is completed prior to the entry. It contains the time, date, purpose, length of entry and employees who will perform the entry and attendant activities. It states the condition of the atmosphere and steps taken to control physical hazards. The work crew or the supervisor completes the permit. If the work crew completes it the supervisor must review it.

A permit is issued for the length of time for one crew to perform the task. If the crew exits for lunch, the permit is not valid unless space is evaluated again.

Quiz

Circle the correct answer

1. What are the characteristics of a permit-required confined space?
   a. It is large enough to bodily enter.
   b. It has is difficult to enter or exit.
   c. It is not designed for continuous human occupancy.
   d. All of the above.
2. A lack of oxygen is an atmospheric hazard. True or False
3. Only trained individuals may enter a confined space. True or False
4. Entry permits need to be reviewed by the entry supervisor. True or False
5. The permit identifies the work to be performed. True or False

Answers: 1. - d; 2. - T; 3. - T; 4. - T; 5. - T

Safety works! FOR YOU
The Ohio Bureau of Workers' Compensation

Photocopy this page for each attendee

Respiratory protection

It was a hot, humid day; the type of day when the air does not move and the smog hangs heavy on the horizon.

Fred, a general laborer for the MCS Co., headed for the bulk chemical transfer loading dock, where he routinely unloaded acetonitrile from a tanker truck into 55-gallon drums. He gathered his protective clothing to guard him from splashes, but could not locate his air-purifying respirator. He found it on the floor between two adjacent drums. Pleased that the respirator was not lost, he picked it up, but felt a sharp edge. Upon examination, he noted that one of the hard plastic purification cartridges was cracked and broken.

Fred went to the tool crib where replacement cartridges were stored, but found the cartridge box empty.

At that moment the tanker truck driver hollered to Fred, "Hey, you gonna unload this truck or what? If this truck isn't moving, I'm not making money!" Then, Fred remembered there was a cartridge in the trash can by the vending machines that he pitched there the day before. He retrieved the cartridge from the trash, replaced the cracked cartridge and went to work. An hour later, Fred was found unconscious and rushed to the emergency room.

Why did this happen and what was the cause of the incident?

Fred was overcome by the vapors of methyl cyanide, a toxic substance by inhalation.

What are the basic components of a respiratory protection program?

- Written respirator program — documentation of how your company addresses all the components.
- Hazard assessment — documentation of the hazard and that the proper level of protection is provided.
- Selection of type of protection — use of proper respirator for the hazard.
- Medical evaluation — examination to ensure that the employee is medically able to wear respiratory protection.
- Fit-testing — procedure to ensure that the respirator provides an adequate seal on the face.
- Training — knowledge that ensures that the employee understands the reason for respiratory use, the limitations of the respirator, and proper care, maintenance and storage of the respirator.
- Respirator use — proper way to inspect and don before use and selection.
- Cleaning and maintenance — inspection repair and storage.
- Program evaluation — audit of all components for completeness and effectiveness.
- Record keeping — medical clearance, training and fit testing records.

Read the following to the group and continue with the following question.

An incident investigation found that all of the components for implementing the program were included in the company's written respiratory program dated in 1998, but there was no documentation of program evaluation. Obviously, things went wrong.

Based on this story, what went wrong, what program component was deficient, and who was responsible and accountable for what went wrong?

Causal factors that contributed to the accident include:

- The respirator was not properly stored;
- Cartridges were not available;
- A spent cartridge was reused;
- Fred did not understand the importance of getting fresh cartridges on frequency recommended by the manufacturer based on intensity and duration of chemical exposure.

In addition, the respirator program area was deficient in training, cleaning and maintenance. The company also hadn't re-evaluated respirator use, training and record keeping.

Fred contributed to the accident by:

- Not following procedures for storage;
- Proceeding with the job;
- Not using a fresh cartridge.

Fred's employer contributed to the accident by:

- Not evaluating the effectiveness of the training;
- Not ensuring that procedures were followed;
- Not documentating the program effectiveness;
- Not maintaining adequate stock;
- Not providing effective training on this subject;
- Not providing annual training. An examination of records revealed that Fred was overdue for refresher training.

What lessons can be learned from this incident?

The best written program policy or procedure is worthless if it is not implemented and maintained. Employers and employees must cooperate, be responsible and be accountable for their individual roles in program implementation and maintaining safe work procedures. Safety isn't a matter of chance; it's a matter of choice!

Respiratory protection

Safety Works for *May*

It was a hot, humid day; the type of day when the air does not move and the smog hangs heavy on the horizon.

Fred, a general laborer for the MCS Co., headed for the bulk chemical transfer loading dock, where he routinely unloaded acetonitrile from a tanker truck into 55-gallon drums. He gathered his protective clothing to guard him from splashes, but could not locate his air-purifying respirator. After a quick look around, he found it on the floor between two adjacent drums. Pleased that the respirator was not lost, he picked it up but felt a sharp edge. Upon examination, he noted that one of the hard plastic purification cartridges was cracked and broken.

Fred went to the tool crib where replacement cartridges were stored, but found the cartridge box empty. At that moment the tanker truck driver hollered to Fred, "Hey, you gonna unload this truck or what? If this truck isn't moving, I'm not making money!" Then, Fred remembered there was a cartridge in the trash can by the vending machines that he pitched there the day before. He retrieved the cartridge from the trash, replaced the cracked cartridge and went to work. An hour later, Fred was found unconscious and rushed to the emergency room.

An incident investigation found that all of the components for implementing the program were included in the company's written respiratory program dated in 1998, but there was no documentation of program evaluation.

Based on this story, factors that may have contributed to the accident include:

- Causal factors;
- Respirator program area deficiency;
- Program evaluation;
- Employee responsibility;
- Employer responsibility;
- Fred may have felt pressured by the truck driver to empty the tanker;
- The hot, humid air may have affected the cartridge's effectiveness;
- Fred may have ignored cartridge breakthrough odors that would warn him that the cartridges could not absorb any more vapors;
- Fred may have thought he did not have the authority to refuse to empty the truck without fresh cartridges.

What lessons can be learned from this incident?

The best written program policy or procedure is worthless if it is not implemented and maintained. Employers and employees must cooperate, be responsible and be accountable for their individual roles in program implementation and maintaining safe work procedures. Safety isn't a matter of chance; it's a matter of choice!

Safety works! FOR YOU
The Ohio Bureau of Workers' Compensation

Proactive safety

Note to discussion leader: This discussion's goal is to increase the effectiveness of the employee's acceptance of the zero-accident mentality through motivation by positive reinforcement and personal recognition of desired behaviors. Obtain copies of the last four incident reports in which there was a personal injury. Review them with the group, analyzing them for inappropriate attitudes or poor behaviors. Remember that attitude is an individual's mindset and the behavior is the task performance. Discuss in each case what proactive safety measures could have been taken in each to prevent the accident.

Proactive safety is an attitude. Zero-accident mentality is the basic assumption that all incidents don't have to happen. How is this possible? By always looking out for potential problems that could turn into accidents, and being willing to take responsibility and act to prevent accidents before being asked.

What attitudes are recognized in each of the four accident reports?

- Carefree attitude – Can't happen to me.
- Repetitive mindset – I've done it this way for 20 years.
- Failing or refusing to follow safe work practices.
- Failing or refusing to use PPE.
- Lack of knowledge or skill level of training.

How does a poor attitude also affect others, i.e. family, coworkers, etc.? Did lack of effective communication cause anger or stressful attitudes that prevented the desired behavior?

Note: Emphasize that in a proactive safety program, appropriate communication does not focus on blame, but gives facts to prevent reoccurrence and achieve zero incidents.

Ask the group to review how appearance of blame can destroy a proactive safety program. Examples:

- Not reporting near-misses results in lack of communication of potential problems and proper corrective action.
- Failure to report injuries because of an incentive-based safety program destroys important communication and corrective actions.

Let's relate successes and failures of our safety program. Remember, "our" designates ownership.

Note: Now is the time for the group to come together as one in putting forth positive ideas that will reinforce your company's safety program.

Proactive safety won't work where there is no safety process. You must have a working safety process that you can build upon. Changing the safety process to match attitudes and behaviors is only treating a symptom of the underlying problem.

Note: Now seek ideas from the group relating to job enrichment and positive attitudes toward the work and the safety of each person. Key discussion points for your group are:

- Organizing the job to give the worker a more satisfying environment;
- Maintaining a constant challenge for each employee's skill level;
- Allowing workers to perform tasks that provide a unique contribution;
- Increasing the worker's authority;
- Eliminating unnecessary controls;
- Requiring increased accountability;
- Providing direct feedback in a timely manner.

There are three critical states of job characteristics today: meaningful work; responsibility for outcomes; and knowledge of results. Each component directly applies with the integration of safety.

Note: Ask for positive statements from your group to help set the proactive/positive mental attitude for the safety program. Remember, these are simple statements that employees can use in daily discussions to maintain a positive mental attitude toward the safety program. Examples:

- Good morning!
- Good afternoon!
- Good evening!
- How's it going for you?
- Great!
- What can I do to help you?
- I'll give that a try.
- I don't know, but I'll find out now.
- Let's work this through together.
- What's your idea on how we should make this better and safer?

Note: These are ideas on how to take your safety process to a proactive, and not a reactive, level. Emphasize that an incident report is reactive, but that incident prevention is proactive. Your group will probably have great specific ideas. Copy them down and implement them in your safety program.

Quiz

True or false

1. _____ The idea of zero accidents in the work place is a vision that can become reality.
2. _____ To prevent accidents, each and every person in the work place must become proactive.
3. _____ In companies where proactive safety is a reality, people are encouraged to participate in the program and share workable ideas.
4. _____ One of the most important elements of a proactive program is open communication.
5. _____ If the attitude does not fit the safety program, the company should change the program.

Answers: 1.-T; 2.-T; 3.-T; 4.-T; 5.-F

Proactive safety

Safety Works for *June*

Proactive safety is an attitude. Zero-accident mentality is the basic assumption that all incidents don't have to happen. How is this possible? By always being on the lookout for potential problems that could turn into accidents, and being willing to take responsibility and act to prevent accidents before being asked.

Let's look at our four most recent accident reports.
The four accident reports reflect:

- Carefree attitude - Can't happen to me
- Repetitive mindset - I've done it this way for 20 years
- Failing or refusing to follow safe work practices
- Failing or refusing to use PPE
- Lack of knowledge or skill level of training

How does a poor attitude also affect others, i.e. family, coworkers, etc.? Did lack of effective communication cause anger or stressful attitudes that prevented the desired behavior?

In a proactive safety program, appropriate communication does not focus on blame, but gives facts to prevent reoccurrence and achieve zero incidents. Let's relate successes and failures of our safety program, and put forth positive ideas that will reinforce our company's safety program. Proactive safety won't work where there is no safety process. We must have a working safety process that we can build upon. Changing the safety process to match attitudes and behaviors only treats a symptom of the underlying problem.

Let's share ideas relating to job enrichment and positive attitudes toward the work and the safety of each person. An incident report is reactive, but incident prevention is proactive.

There are three critical states of job characteristics today: meaningful work; responsibility for outcomes; and knowledge of results. Each component directly applies with the integration of safety. Please share with us positive statements to help set the proactive/positive mental attitude for the safety program. These can be simple statements, that you can use in daily discussions and coworker communications to maintain a positive mental attitude toward the safety program, such as:

- Good morning!
- How's it going for you?
- What can I do to help you?
- I don't know, but I'll find out now.
- Let's work this through together.

Quiz

True or false

1. _____The idea of zero accidents in the work place is a vision that can become reality.
2. _____To prevent accidents, each and every person in the work place must become proactive.
3. _____ In companies where proactive safety is a reality, people are encouraged to participate in the program and share workable ideas.
4. _____ One of the most important elements of a proactive program is open communication.
5. _____ If the attitude does not fit the safety program, the company should change the program.

Answers: 1.-T; 2.-T; 3.-T; 4.-T; 5.-F

Safety works! FOR YOU
The Ohio Bureau of Workers' Compensation

Photocopy this page for each attendee

Emergency response

Note to discussion leader:The talk's goal is to increase the effectiveness of the employees' awareness of the emergency response within the facility through motivation and understanding of the critical importance related to their actions when presented with these situations.

Obtain a copy of your facility emergency and evacuation procedures — if the document is not available or is not in writing, this may be a good time to review and draft the verbal information into a written policy. Review this document with the group, analyzing it for types of potential emergencies and responses by personnel. Identify the structure for handling these emergencies, who is to be contacted, what alarms apply and who is in charge until outside assistance arrives.

What emergencies can happen within our facility?

- Fire
- Medical emergency
- Chemical spills/exposures (if applicable)
- Weather
- Work-place violence, bomb threats, etc.

How can these events be classified?

- Acts of personnel or associated with accidents
- Uncontrolled events like weather or equipment failure

What action will you take in each of the above emergencies? Who will you report to?

Examples include:

1. Calling an alarm into _____ ;
2. Closing doors and windows;
3. Fighting a fire with an extinguisher;
4. Helping evacuate personnel;
5. Accounting for personnel in an assigned assembly area.

Who is in charge and what information does he/she need to be effective and communicate with other personnel?

Responses will vary according to your company's policies.

Note: Now emphasize that in an emergency, time is critical and response can be delayed due to unnecessary or inaccurate information and response by the first personnel on site.

Review with the group how time delays can cause added problems, and how the importance of knowing what to do is the key to proper response in any emergency. For example:

1. Improper reporting reduces the effectiveness of communication and increases the potential for delayed, poor or wrong responses from outside agencies.
2. Properly communicated address and directions increases responses and assistance.
3. Critical information regarding the specifics of the problem to any dispatcher paints the picture as to what is occurring and what public agencies need to respond effective.

Note: Be prepared to discuss past emergencies or emergencies from similar facilities, with both positive and negative outcomes.

Let's review past emergencies in our facility. Remember, "our" designates ownership.

Note: Now is the time for the group to come together as one and explain the application of the emergency response for the areas in which they work.

Think about how you react when an alarm sounds, or when you are informed that there is a problem within the facility.

1. What alarm will you expect to hear?
2. What action do you take?
3. Where do you have assembly?
4. Do you just ignore the alarm?

Note: Now seek ideas from group members relating to their understanding of the facility emergency response plan and how their personal involvement during an emergency can make a difference. Key points for discussion in your group are:

1. Who do you report emergencies to?
2. What immediate response do you need to provide?
3. Who is in charge of the emergency until assistance arrives?
4. Where do you have assembly?
5. What are the alarms and what do they mean?
6. Who can use a fire extinguisher?
7. Where do I seek shelter in weather emergencies?

Note: At this time, review the company policy related to in-plant/facility emergencies and the alerting system used to inform personnel. Re-emphasize the time importance for notifying internal emergency systems and outside help responses. Remember that emergencies cannot be planned, but proper learning from past incidents will give direction to how we respond the next time that it happens. Copy down your group's and implement them in your emergency response program.

Quiz

True or false

1. _____ A written policy is required for facility emergencies.
2. _____ Most emergencies happen as a result of personnel acts or accidents and uncontrolled natural acts like weather.
3. _____ First actions to take include sounding alarms, closing doors and windows, and accounting for people.
4. _____ Time is a critical factor to the outcome of any emergency.
5. _____ Poor or inadequate directions to outside emergency help is of no concern because of computer tracking.

Answers: 1.-T; 2.-T; 3.-T; 4.-T; 5.F

Emergency response

Some of the emergencies that can happen in our facility include:

- Fire;
- Medical;
- Chemical spills/exposures (if applicable);
- Weather;
- Work-place violence, bomb threats, etc.

We can classify these events as acts of personnel or associated with accidents or uncontrolled events like weather or equipment failure.

What action will you take in each of the above emergencies? Who will you report to? Who is in charge and what information does this person need to be effective and communicate with other personnel?

In an emergency, time is critical and response can be delayed due to unnecessary or inaccurate information, and response by the first personnel on site. Improper reporting reduces the effectiveness of communication and increases the potential for delayed, poor or wrong responses from outside agencies. Whereas, properly communicated address and directions into the facility increases responses and assistance.

Let's review past emergencies in our facility. Remember, "our" designates ownership, and let's explain the application of the emergency response for the areas in which you each work.

Think about how you react when an alarm sounds, or when you are informed that there is a problem within the facility. Please share with us ideas you have relating to your understanding of the facility emergency response plan and how your personal involvement during an emergency can make a difference.

Quiz

True or false

1. _____ A written policy is required for facility emergencies.
2. _____ Most emergencies happen as a result of personnel acts or accidents and uncontrolled natural acts like weather.
3. _____ First actions to take include sounding alarms, closing doors and windows, and accounting for people.
4. _____ Time is a critical factor to the outcome of any emergency.
5. _____ Poor or inadequate directions to outside emergency help is of no concern because of computer tracking.

Answers: 1.-T; 2.-T; 3.-T; 4.-T; 5.F

Safety Works! FOR YOU
The Ohio Bureau of Workers' Compensation

Cumulative trauma disorders

Note to discussion leader: Generally speaking, when we talk about cumulative trauma disorders (CTDs), we think of carpal tunnel syndrome (CTS) because these terms are interchangeable. There are, however, several other CTDs, such as:

- Back injuries resulting from exertion, static posture, or awkward posture or movements;
- Hand injuries caused by vibration, use of hands for a hammer or a clamp, or improper gloves.
- Arm injuries due to force or awkward reaches;
- Leg injuries as a result of awkward posture or muscle injury from contact with work surfaces.

Bring information on cumulative trauma injuries to your facility. The injury/incident investigations will give you information for your presentation. The job hazard analysis also should give you information concerning types of jobs and potential injuries. Consider organizing your discussion using questions and answers.

Consider bringing a chalkboard or flip chart to write the questions and answers.

What CTDs occur at this facility?

Note: You should expect answers like CTS, back injuries or pulled muscles. Have the group name four or five items, which you should write on the flip chart or board.

What are jobs that can cause CTDs at this facility?

There is no right answer, but it might be best to concentrate on the most common cause of injury, the most frequent injury or the items that the job hazard analysis has indicated might cause musculoskeletal disorders (MSDs). The answers might be: assembling parts, lifting, twisting, etc.

What is a job hazard analysis?

A job hazard analysis is a documented review of a job to determine the hazards of the job or task. The hazards that we are interested in for this topic are CTDs/MSDs, but there are other hazards, such as chemicals, pinching/crushing, ventilation, extremes of hot or cold, etc.

Note to discussion leader: Bring a copy of your company's Report of Injury. This report could be a blank report in the form of a transparency or a completed report. Review these incident reports and ask the group members to determine if the root causes were identified. Ask why the accident occurred? If you use a report that has been filled out, make sure you delete any reference to an employee from the report. If you do not have a company injury report, you might want to use the report from BWC or a copy of the report included in this presentation. Have the group members help fill out the spaces on the Accident/Injury Report. Completing an injury report will help class members understand the cause of injuries and the injury potential.

What are causes of accidents and injuries?

There are four categories of root causes for injuries:

1. Hazardous conditions or equipment — Discuss some conditions and equipment that might cause CTDs or MSDs.
2. Environment — Ask the group to give examples of situations where the equipment or material was not in the correct place and caused a person to be put in an awkward position.
3. People — Ask the group to give examples of situations where employees were not properly trained or places where employees take shortcuts that could cause injury.
4. Culture — Ask the group to discuss situations in which employees were allowed or asked to do things that could cause unnatural work positions which might cause CTDs.

Note: Cause analysis is a valuable tool in eliminating the true causes of accidents and injuries. Management must accept and support root cause analysis to have a positive result.

What are potential causes of injury on an assembly line when the worker has a part that he or she has to force into place, hold in place, install bolts and then move the assembly to a skid behind him or her?

- The worker might use his or her hands as a hammer instead of the proper tool.
- The worker might clamp the parts together with his or her fingers instead of a clamping device.
- The worker might use tools to tighten that are not designed for the job.
- The worker might not pull the assembly close to his or her body before lifting it, or the worker might twist at the waist, instead of moving his or her feet, to place the assembly on the skid.

Are records available to show job hazard analysis has been conducted on jobs and tasks in the facility?

Yes and no; bring a copy of the job hazard analysis form and make the form available to trainees.

Quiz

True or false

1. _____ Over-reaching to lift an object does not present a hazard for CTDs.
2. _____ An injury report must be filled out and corrective action taken to eliminate the CTD hazard.
3. _____ There are four root causes of accidents and injuries.
4. _____ Two causes of injuries are people and culture.

Short answer

5. Name the most frequent type of CTD/MSD injury at this facility. _____

Answers: 1. - F; 2. - T; 3. - T; 4. - T; 5. Company provides answer.

Cumulative trauma disorders

Generally speaking, when we talk about cumulative trauma disorders (CTDs), we think of carpal tunnel syndrome (CTS) because these terms are interchangeable. There are, however, several other CTDs, such as:

- Back injuries resulting from exertion, static posture, or awkward posture or movements;
- Hand injuries caused by vibration, use of hands for a hammer or a clamp, or improper gloves.
- Arm injuries due to force or awkward reaches;
- Leg injuries as a result of awkward posture or muscle injury from contact with work surfaces.

Name four or five CTDs that occur at this facility.

Name some jobs at this facility that can cause CTDs. Concentrate on the most common cause of injury that might cause musculoskeletal disorders (MSDs). Your answers might be: assembling parts, lifting, twisting, etc.

What is a job hazard analysis?

A job hazard analysis is a documented review of a job to determine the hazards of the job or task. The hazards that we are interested in for this topic are CTDs/MSDs. Other hazards include chemicals, pinching/crushing, ventilation, extremes of hot or cold, etc.

There are four categories of root causes for accidents and injuries:

1. Hazardous conditions or equipment;
2. Environment;
3. People;
4. Culture.

Potential causes of injury on an assembly line when you have a part that you have to force into place, hold in place, install bolts and then move the assembly to a skid behind you include:

- Using your hands as a hammer instead of the proper tool;
- Clamping the parts together with your fingers instead of a clamping device;
- Using tools to tighten that are not designed for the job;
- Not pulling the assembly close to your body before lifting it, or you might twist at the waist, instead of moving your feet, to place the assembly on the skid.

Quiz

True or false

1. _____ Over-reaching to lift does not present a hazard for CTDs.
2. _____ An injury report must be filled out and corrective action taken to eliminate the CTD hazard.
3. _____ There are four root causes of accidents and injuries.
4. _____ Two causes of injuries are people and culture.

Short answer

5. Name the most frequent type of CTD/MSD injury at this facility.

_____

Answers: 1. - F; 2. - T; 3. - T; 4. - T; 5. Company provides answer.

Safety Works! FOR YOU
The Ohio Bureau of Workers' Compensation

Photocopy this page for each attendee

Report

Report of occupational injury or illness

Location of incident _____
Injured or ill employee _____ Social Security number _____-____-_____
Home address _____
Sex _____ Age _____ Occupation _____ Department _____

Employee's statement

Circle one

I _____ certify that on ___-___-___ at ___:___ (a.m./p.m.)

I sustained an injury to my (be specific) _____

which occurred as follows: _____

Witness: _____
(Attach signed and dated witness statements)

Name and address of physician and/or hospital: _____

Any previous accidents? _____ (Yes or no), If so when: _____

Employee signature _____ Date ___-___-___

Supervisor's statement

Name of supervisor _____

Knowledge of accident of exposure

Description of injury or illness (be specific to part of body) _____

Prepared by _____
(print)

Signature _____ Date ___-___-___

Action section

What caused the accident?

_____

_____

_____

What corrective action was taken?

_____

_____

_____

What preventive measures have been taken to ensure that all employees know what happened and what action is to be taken to eliminate repeat occurrences?

_____

_____

_____

_____

_____

Prepared by _____
(print)

Signature _____ Date ____–____–____

Report

Safety colors and markings

Colors and markings communicate important safety information to people both on and off the job. Most people encounter and recognize safety cues every day from colors and markings they routinely see. Unfortunately, some colors or markings are observed so often that they become part of the landscape. So, it is important to periodically reinforce just what these colors and markings mean and how they can help protect people from harm. This safety talk is intended to provide employees with that information and stimulate discussion regarding use of colors and markings at your facility.

Common safety colors

The American National Standards Institute (ANSI) has established rules that define what certain colors mean. This standardization helps people to easily recognize and understand what message the sign or equipment is communicating. Some colors are:

Red
- Fire protection equipment
- Danger, high risk of severe injury or death
- Emergency stops and alarms

Orange
- Hazard warnings
- Moderate risk of injury
- Guarding devices

Blue
- Notice of information
- No immediate hazard

Green
- Safety equipment or information
- First-aid equipment or location

Yellow
- Caution statements
- Minor risk of injury
- Material handling equipment

Vehicle or container placards

Trucks, rail cars and other containers must have placards attached in clear view to communicate the hazards of the contents. Placards also may have symbols used with the colors to convey the proper message:

Red — Combustible or flammable
Yellow — Oxidizers
White — Poison or toxic
Orange — Explosives
Green — Non-flammable gas
Red and white stripe — Flammable solid

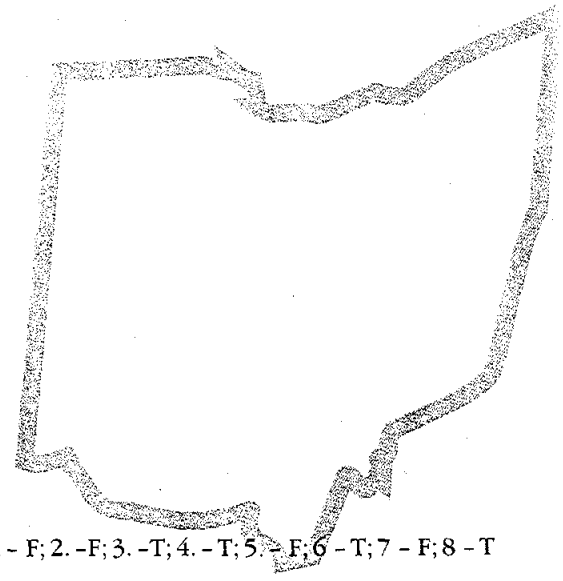
Other safety colors and markings

There are many other ways that colors and markings are used to communicate safety information. Please give us some examples. Possible ideas are:

Quiz

True or false

1. _____ A blue sign indicates danger ahead.
2. _____ Only trucks carrying chemicals need a placard.
3. _____ Fire protection equipment should be painted red.
4. _____ A red and white striped placard indicates a flammable solid is in the container or vehicle.
5. _____ The red part of the NFPA label refers to the health hazard.
6. _____ Safety equipment is usually painted green.
7. _____ Caution signs should be bright purple in color.
8. _____ White placards indicate poisons or toxins?



Answers: 1. - F; 2. -F; 3. -T; 4. - T; 5. - F; 6 - T; 7 - F; 8 - T

Safety colors and markings

Safety Works for *September*

Colors and markings communicate important safety information to people both on and off the job. Most people encounter and recognize safety cues every day from colors and markings they routinely see. Unfortunately, colors or markings are observed so often that they become part of the landscape. This safety talk is intended to reinforce what these colors mean and to stimulate discussion regarding use of colors and markings at our facility.

Common safety colors

The American National Standards Institute (ANSI) has established rules that define what certain colors mean. This standardization helps people to easily recognize and understand what message the sign or equipment is communicating. Some colors are:

Red
- Fire protection equipment
- Danger, high risk of severe injury or death
- Emergency stops and alarms

Orange
- Hazard warnings
- Moderate risk of injury
- Guarding devices

Blue
- Notice of information
- No immediate hazard

Green
- Safety equipment or information
- First-aid equipment or location

Yellow
- Caution statements
- Minor risk of injury
- Material handling equipment

Vehicle or container placards

Trucks, rail cars and other containers must have placards attached in clear view to communicate the hazards of the contents. Placards also may have symbols used with the colors to convey the proper message:

Red — Combustible or flammable
Yellow — Oxidizers
White — Poison or toxic
Orange — Explosives
Green — Non-flammable gas
Red and white stripe — Flammable solid

Quiz

True or false

1. _____ A blue sign indicates danger ahead.
2. _____ Only trucks carrying chemicals need a placard.
3. _____ Fire protection equipment should be painted red.
4. _____ A red and white striped placard indicates a flammable solid is in the container or vehicle.
5. _____ The red part of the NFPA label refers to the health hazard.
6. _____ Safety equipment is usually painted green.
7. _____ Caution signs should be bright purple in color.
8. _____ White placards indicate poisons or toxins.

Answers: 1. - F; 2. - F; 3. - T; 4. - T; 5. - F; 6 - T; 7 - F; 8 - T

Safety Works! FOR YOU
The Ohio Bureau of Workers' Compensation

Photocopy this page for each attendee

Safety signs and labels

Signs and labels have been and continue to be an important communication method for safety information.The objective is to reduce the number of loss-producing incidents to people and property by telling people where a potential hazard exists so they can avoid it.To ensure uniformity in signage, the ANSI has established rules to guide users of signs and labels to the most uniform and effective way of sign and label construction. The visual and colorful nature of signs and labels helps to warn non-English speaking employees and color-blind employees.

Note to discussion leader: In preparing for this safety talk, secure a variety of signs and labels used in your work environment to help in your visual presentation of the topic.You may want to use common signs and labels used in other work environments and in the public domain to help bring all of the components of the talk together.

Colors in the communication process:
Red identifies what types of concerns?
- Fire protection equipment
- Danger
- Emergency stops on equipment

Yellow identifies what types of concerns?
- Slipping or falling hazards
- Storage cabinets containing flammable liquid
- Material handling equipment

Green identifies what types of concerns?
- First-aid equipment
- Safety equipment

Orange identifies what types of concerns?
- Movable guards
- Power transmission guards

Black and white identifies what types of concerns?
- Housekeeping issues
- Traffic markings

Blue identifies what types of concerns?
- Non-safety information (generally, a notice heading)

Note to discussion leader: Take an example of the signs and labels, and explain the layout on the sign face, pointing out the signal words, symbols and message.

Danger sign
Indicates immediate danger and that special precautions are necessary.

Caution sign
Indicates a possible hazard against which proper precautions should be taken.

Safety instruction sign: (warning or notice)
Used to provide general instructions and suggestions relative to safety measures.

Pictorial signs and labels are gaining in recognition.They are used more frequently because they not only show the nature of the hazard, but also the consequences of being involved with the hazard.They also have a wide range of understanding, especially when used with written warnings.
Examples of pictorial signs and labels are:
- Mechanical hazards;
- Fire hazards;
- Chemical hazards;
- Explosion hazards;
- Electrical hazards.

Fire extinguisher labels are not only showing the ABC and D designations, but also pictorials and color to help the user choose the correct extinguisher for the type of fire being encountered.

Signs and labels may direct the flow of traffic; warn about hazardous machines, chemicals or environments; and provide other information to promote safe work practices.You, as an employee, should know where the signs and labels are located, what they mean and follow their guidance to ensure your time in the work environment is a safe one.

Quiz

True or false
1. _____ Red may indicate danger.
2. _____ Yellow could warn of a slipping hazard.
3. _____ The danger sign indicates immediate danger.
4. _____ The caution sign indicates a possible hazard to be dealt with.
5. _____ Pictorials are available to indicate fire hazards and fire extinguisher uses.
6. _____ You should understand and heed the signs and labels in your work environment.

Answers: All answer are true
Sources:
Accident Prevention Manual, National Safety Council, Itasca, IL
American National Standards Z53.1 and Z35.1, New York
"The Sign Maze," Bresnahan, Lhotka & Winchell, ASSE, Des Plaines, IL
OSHA Standard 1910.145
GRASP Handbook, UAW-Ford National Joint Committee on Health and Safety, Detroit, MI.

Safety signs and labels

Signs and labels reduce the number of people and property loss-producing incidents by notifying people where a potential hazard exists so they can avoid it. To ensure uniformity in signage, the ANSI established rules to guide users of signs and labels to the most uniform and effective way to construct signs and labels. The visual and colorful nature of signs and labels helps to warn non-English speaking employees and color-blind employees.

Red identifies:
- Fire protection equipment;
- Danger;
- Emergency stops on equipment.

Yellow identifies:
- Slipping or falling hazards;
- Storage cabinets containing flammable liquid;
- Material handling equipment.

Green identifies:
- First-aid equipment;
- Safety equipment.

Orange identifies:
- Movable guards;
- Power transmission guards.

Black and white identifies:
- Housekeeping issues;
- Traffic markings.

Blue identifies:
- Non—safety information (generally, a notice heading).

Danger sign—indicates immediate danger and that special precautions are necessary.
Caution sign—indicates a possible hazard against which proper precautions should be taken.
Safety instruction sign: (warning or notice)—used to provide general instructions and suggestions relative to safety measures.
Pictorial signs and labels are gaining in recognition. Examples include:
- Mechanical hazards;
- Fire hazards;
- Electrical hazards.

Fire extinguisher labels are not only show ABC and D designations, but also pictorials and color to help the user choose the correct extinguisher for the type of fire encountered. As an employee, you should know where the signs and labels are located, what they mean and follow their guidance to ensure your time in the work environment is a safe one.

Quiz

True or false

1. _____ Red may indicate danger.
2. _____ Yellow could warn of a slipping hazard.
3. _____ The danger sign indicates immediate danger.
4. _____ The caution sign indicates a possible hazard to be dealt with.
5. _____ Pictorials are available to indicate fire hazards and fire extinguisher uses.
6. _____ You should understand and heed the signs and labels in your work environment.

Answers: 1.-T; 2.-T; 3.-T; 4.-T; 5.-T; 6.-T

Safety Works for *October*

Safety works! FOR YOU
The Ohio Bureau of Workers' Compensation

Holiday safety

Note to discussion leader:The objective of this talk is to increase employees' awareness of the potential dangers to their health and safety that exist away from the work place. Many hazards exist outside the work place. Awareness of these hazards can greatly decrease a person's exposure to these hazards. Oftentimes, lessons learned at the work place can be applied away from work. It all boils down to safe behavior.

What are some hazards that exist outside the work place?

- Fires
- Vehicle accidents
- Electrical accidents
- Weather emergencies
- Toxic exposures.

Let's quickly review some of the hazards

Fires

December,January and February are the leading months for home fires and home fire deaths in the United States. On average, more than one-third of home fire deaths occur during the winter months.

Safer home heating

NFPA's latest report on home fire patterns indicates that heating equipment fires are the second-leading cause of fire deaths in American homes and the biggest fire culprit in December and January. An estimated 78,000 home heating fires in 1994 killed 487 people and injured just under 2,000 people. NFPA experts say that following simple safety precautions could prevent most home fires caused by heating equipment. Candles, with their soaring popularity, have become one of the leading fire hazards in the home. Candles cause an average of 6,700 home fires every year, with 87 associated deaths and 587 injuries. Nearly $59 million in property damage results from candle fires every year.

Vehicle accidents

Motor vehicle crashes are the leading cause of death among Americans between 1 and 34 years old.According to the Department of Transportation, the total societal cost of crashes exceeds $150 billion annually. Contributing to the death toll are alcohol, speed and various other driver behaviors, plus the types of vehicles driven and the roads on which they travel.The following facts are based on data analysis from the Department of Transportation's fatality analysis reporting system:

- 41,471 people died in motor vehicle crashes in 1998; 7 percent fewer than in 1975;
- These deaths occurred in 37,081 crashes involving 56,865 motor vehicles.

Electrical accidents

Every day, a person dies in an electrical accident. And every day, families lose their homes to electrical fires. In 1996, 482 people died from electrical accidents in the United States. Most electrical accidents are preventable. Careful inspection of electrical cords for cuts, abrasions, overloading or missing ground plugs, as well as use of ground fault circuit interrupters (GFCI), can significantly reduce electrical injuries, fatalities and fires. GFCI protection should be provided for outlets at kitchen counters, in bathrooms and at outdoor receptacles. Test GFCIs monthly. Make sure that fuses are the correct size for the circuit. Do not replace a fuse that has blown with a larger size fuse.This can present a serious fire hazard.

Weather emergencies

There are simple safety rules to always keep in mind, as the weather can change drastically within an hour or less.When severe weather threatens, the National Weather Service will keep you posted with severe weather watches and warnings. Knowing the difference between these designations and when to take cover could mean the difference between life and death. A "watch" means conditions are favorable for the development of storms such as thunderstorms, tornados or winter weather. If you are in the watch area, keep up to date on the latest weather information, as the watch may soon change to a warning. A "warning" means that conditions are imminent for severe weather in your area, and you should take proper precautions, or cover if necessary.

Toxic exposure

Exposure to toxic substances, while common at work sites, is still a cause of concern around the house. Many household cleaning solutions or agents used in home workshops carry warning labels to prevent their abuse. Read the labels carefully and follow the manufacturer's instructions for their proper use. Wear the appropriate PPE at home. Keep these chemicals, along with vitamins and drugs (prescription and nonprescription) out of children's reach.

Personal injuries off the job can occur in a variety of ways: Improper use of hand or power tools; slips, trips or falls; and chemical burns. These incidents are no less devastating than those resulting from work-place exposures.The difference is, you are solely responsible for your protection. Follow the same safety rules at home as you would at work.

Holiday safety

Many hazards exist outside the work place. Awareness of these hazards can greatly decrease a person's exposure to these hazards. Oftentimes, lessons learned at the work place can be applied away from work. It all boils down to safe behavior.

What are some hazards that exist outside the work place?

- Fires
- Vehicle accidents
- Electrical accidents
- Weather emergencies
- Toxic exposures

Fires

On average, more than one-third of home fire deaths occurs during the winter months. NFPA's latest report on home fire patterns indicates that heating equipment fires are the second-leading cause of fire deaths in American homes and the biggest fire culprit in December and January. NFPA experts say that following simple safety precautions could prevent most home fires caused by heating equipment. Candles, with their soaring popularity, have become one of the leading fire hazards in the home.

Vehicle accidents

Motor vehicle crashes are the leading cause of death among Americans between 1 and 34 years old. According to the U.S. Department of Transportation, the total societal cost of crashes exceeds $150 billion annually. Contributing to the death toll are alcohol, speed and various other driver behaviors, plus the types of vehicles driven and the roads on which they travel.

Electrical accidents

Every day, a person dies in an electrical accident. And every day, families lose their homes to electrical fires. Most electrical accidents are preventable. Careful inspection of electrical cords for cuts, abrasions, overloading, missing ground plugs, and use of ground fault circuit interrupters (GFCI), can significantly reduce electrical injuries, fatalities and fires. Test GFCIs monthly. Make sure that fuses are the correct size for the circuit.

Weather emergencies

When severe weather threatens, the National Weather Service will keep you posted with severe weather watches and warnings. Knowing the difference between these designations and when to take cover could mean the difference between life and death. A watch means conditions are favorable for the development of storms such as thunderstorms, or tornados. If you are in the watch area, keep up to date on the latest weather information. A warning means that conditions are imminent for severe weather in your area, and you should take proper precautions, or cover if necessary.

Toxic exposure

Exposure to toxic substances, while common at work sites, is still a cause of concern around the house. Many household cleaning solutions or agents used in home workshops carry warning labels to prevent their abuse. Read the labels carefully and follow the manufacturer's instructions for their proper use. Wear the appropriate PPE at home. Keep these chemicals, vitamins and drugs (prescription and nonprescription) out of children's reach.

Safety Works! FOR YOU
The Ohio Bureau of Workers' Compensation

Photocopy this page for each attendee

Forklift safety

Statistics show that more than 90,000 injuries and 100 fatalities occur every year as a result of incidents involving forklifts. The vast majority of these accidents could and should have been prevented. Everyone working around forklifts needs coworkers' to know the rules of the road to ensure their safety and their coworkers' safety.

This is why all employees operating forklifts as part of their work assignments require special training on the operation, inspection and prevailing plant rules regarding forklift trucks. According to recent revisions to 29 CFR 1910.178, operators must be trained, tested and certified before assignment to operating duties.

Can you provide examples of areas where forklifts endanger other employees passing on foot at your work site? Are there areas that pose hazards to the forklift operators?

Note to the discussion leader: Use data from accident/incident report(s) here. Record the ideas presented by the group under the *Opportunities for Improvement* section of Table 1, using a dry erase board or a flip chart.

What are specific hazards presented by forklifts?

- Changing the center of gravity with loading causes instability and possible tip-overs.
- Rear-wheel steering involves a wide swinging back end and loss of control if overloaded.
- Loosely or poorly stacked materials leads to the possibility of losing the load.
- Mast and loads obstruct operator vision, which could lead to collisions.
- Blind spots created by the loaded and unloaded mast also increase the chance of incidents.

Note: This list is not all-inclusive. Solicit feedback from meeting attendees. Match the hazards of Question 2 to the Opportunities from Question 1, where applicable. Each line of the table may have more than one hazard associated with it.

Rules of the road

Rules, such as allowing only trained and authorized personnel to operate a forklift, help assure that each person in the driver's seat has the knowledge and skills to handle the machinery safely.

What are standard rules to follow when operating a forklift?

- Perform daily inspections before use, according to company protocol.
- Allow no riders unless the forklift is specially-equipped for such use.
- Never allow anyone to stand under elevated parts or loads.
- Never approach pedestrians with a forklift.

Some rules regarding pedestrians come directly from the forklift standard: never ride on a forklift unless it is equipped for passengers, never stand under elevated parts of the forklift, and never pass between a forklift and a fixed object. Common-sense rules are: look and listen where vision is poor or obstructed, never stand close to a forklift with an elevated load and always get the operator's attention when entering an area where a forklift is in operation.

What are some other rules that pedestrians should follow?

Note: Examples of rules are not all-inclusive; solicit group input and record the data on a flip chart. Place the rules into the table, where applicable to each hazard.

From the discussion of hazards, hazardous areas and rules pertaining to forklift operations and pedestrians, we can generate corrective actions for the *Opportunities for Improvement* section of our table.

What improvements can we make to eliminate or diminish the conditions as noted in *the Opportunities for Improvement* section or Question 1?

- Additional training
- Improved signage
- Mirrors to see around corners

Quiz

Circle the best answer

1. In a work place where forklifts and pedestrians share walking/working areas, the pedestrians always have the right of-way. True or false
2. When approaching a blind corner, a forklift operator must:
   a. Slow down
   b. Sound the horn
   c. Look for pedestrians and oncoming traffic
   d. All of the above
3. Forklifts are similar to automobiles when they turn; the front wheels steer and the rear end stays in line with the rest of the vehicle. True or false
4. Which of the following is not a safety hazard posed to pedestrians by forklifts?
   a. Struck or pinched by a moving forklift
   b. Material falling from an elevated load
   c. Deafening noise of the forklift horn at intersections
   d. Struck or pinched by falling or lowering forks
5. Which employees may operate forklifts?
   a. Any full-time employee
   b. Individuals trained and certified by the employer
   c. Supervisory personnel only
   d. Anyone that has operated a forklift before

Individuals Answers: 1-T; 2-d; 3-F; 4-c; 5-b

Forklift safety

Statistics show that more than 90,000 injuries and 100 fatalities occur every year as a result of incidents involving forklifts. The vast majority of these accidents could and should have been prevented. Remember, however, it is not only the responsibility of the forklift operator or management to prevent incidents. Everyone working around forklifts needs to know the rules of the road to ensure their own safety and the safety of their coworkers.

All employees operating forklifts as part of their work assignments require special training on the operation, inspection and prevailing plant rules regarding forklift trucks. According to recent revisions to 29 CFR 1910.178, operators must be trained, tested and certified before assignment to operating duties.

Specific hazards presented by forklifts include:

- Changing the center of gravity with loading causes instability and possible tip-overs;
- Rear-wheel steering involves a wide swinging back end and loss of control if overloaded;
- Loosely or poorly stacked materials leads to the possibility of losing the load;
- Mast and loads obstruct operator vision, which could lead to collisions;
- Blind spots created by the loaded and unloaded mast also increase the chance of incidents.

The standard rules to follow when operating a forklift include:

- Perform daily inspections before use, according to company protocol;
- Allow no riders unless the forklift is specially-equipped for such use;
- Never allow anyone to stand under elevated parts or loads;
- Never approach pedestrians with a forklift.

Pedestrians should never ride on a forklift unless it is equipped for passengers, never stand under elevated parts of the forklift, and never pass between a forklift and a fixed object. They also should look and listen at blind corners or other areas where vision is poor or obstructed, ever stand close to a forklift with an elevated load, and always get the operator's attention when entering an area where a forklift is in operation.

Quiz

Circle the best answer

1. In a work place where forklifts and pedestrians share walking/working areas, the pedestrians always have the right-of-way. True or false
2. When approaching a blind corner, a forklift operator must:
   a. Slow down
   b. Sound the horn
   c. Look for pedestrians and oncoming traffic
   d. All of the above
3. Forklifts are similar to automobiles when they turn; the front wheels steer and the rear end stays in line with the rest of the vehicle. True or false
4. Which of the following is not a safety hazard posed to pedestrians by forklifts?
   a. Struck or pinched by a moving forklift
   b. Material falling from an elevated load
   c. Deafening noise of the forklift horn at intersections
   d. Struck or pinched by falling or lowering forks
5. Which employees may operate forklifts?
   a. Any full-time employee
   b. Individuals trained and certified by the employer
   c. Supervisory personnel only
   d. Anyone that has operated a forklift before

Individuals Answers: 1-T; 2-d; 3-F; 4-c; 5-b

Safety Works for *December*

Safety Works! FOR YOU
The Ohio Bureau of Workers' Compensation

Photocopy this page for each attendee

Four steps to portable ladder safety

Note to discussion leader: This topic is best discussed using a flip chart or board upon which to write the answers that the group gives to the questions. The questions guide the discussion. Write down the group's answers and add the recommended answers to the list. Separate the four steps — selection, inspection, use and storage — as you write down the answers.

What types of portable ladders do you use?

- Stepladders
- Extension ladders
- Wood, fiberglass or aluminum ladders

How do you select which type of ladder to use?

- Height of reach needed
- Area where the ladder is to be used
- Type of task to be performed

Where do you not want to use an aluminum ladder?

Where it can contact any electrical circuit.

What do you look for when inspecting the ladder you intend to use?

- Damage to the rungs, side rails or feet
- Damage to the extension locks
- Cracks in the wooden rungs or side rails

When setting up a ladder for use, what do you do to make it stable?

Set it on a solid base, make sure the angle of rise is correct, and for extension ladders, make sure the top is on a stable rest.

What extra steps can you take to make the ladder stable?

Tie off the top to a solid anchor, block the feet so they will not move and have a person hold the bottom to stabilize it.

What should you do to keep from falling off the ladder?

Hold on with at least one hand, do not reach too far from either side, do not carry things in your hands when climbing and do not stand on the top rungs of a stepladder.

What is the best angle of rise to set up an extension ladder?

The recommended rise is 4-to-1. For example, a 12-foot ladder base should be three feet out from the perpendicular to the upper support.

Where might you see additional hazards for ladder use?

- Near corners where people will not see the ladder as they approach
- In doorways
- In areas where high winds might affect the stability
- On slippery floors or on soft ground

How should ladders be stored?

Ladders should be stored where they will not become damaged, cause a trip hazard, fall over if vertical or fall off their racks if stored horizontally.

Note to discussion leader: Summarize the discussion by going over the answers to the questions. Point out the four steps included in the discussion. Ask if there is a topic that the group would like to discuss further.

If time allows, you may want to use the following short quiz to assure the topic was well covered.

Quiz

Circle the correct answer

1. Which of the following should you consider when selecting a ladder for a task?
   a. Size
   b. Type
   c. Construction
   d. All the above

2. When inspecting a ladder before use what do you look for?
   a. Damaged side rails, rungs and feet
   b. Its length
   c. Its composition
   d. The size of its feet

3. How far out at the base should a 12-foot extension ladder be set up?
   a. Two feet
   b. Four feet
   c. Three feet
   d. Five feet

4. You can lean out as far as you can reach from the side of a ladder if you hold on tight to the siderail.
   True False

5. If you set up a step ladder in a corner where people walk, you should make sure people turning the corner will know its there before they reach the corner.
   True False

6. You should not use a metal ladder near electrical lines.
   True False

Answers: 1.-d; 2.-a; 3.-c; 4.-F; 5.-T; 6.-T

Four steps to portable ladder safety

There are three types of portable ladders: stepladders, extension ladders and wood, fiberglass or aluminum ladders. When selecting a ladder, determine the height of reach needed, the area where you will use the ladder and the type of task to be performed. Never use an aluminum ladder where it can contact any electrical circuit.

When inspecting the ladder you intend to use, always check for damage to the rungs, side rails or feet; damage to the extension locks; and cracks in the wooden rungs or side rails.

When setting up a ladder, the recommended rise is 4-to-1. For example, a 12-foot ladder base should be three feet out from the perpendicular to the upper support. Once on the ladder, hold on with at least one hand, do not reach too far from either side, do not carry things in your hands when climbing and do not stand on the top rungs of a stepladder. To make a ladder stable, set it on a solid base, make sure the angle of rise is correct, and for extension ladders, make sure the top is on a stable rest. You also can tie off the top to a solid anchor, block the feet so they will not move and have a person hold the bottom to stabilize it, to increase stability.

You might you see additional hazards when using a ladder near corners where people will not see the ladder as they approach, in doorways, in areas where high winds might affect the stability and on slippery floors or on soft ground.

Store ladders where they will not become damaged, cause a trip hazard, fall over if vertical or fall off their racks if stored horizontally.

Quiz

Circle the correct answer

1. Which of the following should you consider when selecting a ladder for a task?
   a. Size
   b. Type
   c. Construction
   d. All the above
2. When inspecting a ladder before use what do you look for?
   a. Damaged side rails, rungs and feet
   b. Its length
   c. Its composition
   d. The size of its feet
3. How far out at the base should a 12-foot extension ladder be set up?
   a. Two feet
   b. Four feet
   c. Three feet
   d. Five feet
4. You can lean out as far as you can reach from the side of a ladder if you hold on tight to the siderail. True False
5. If you set up a step ladder in a corner where people walk, you should make sure people turning the corner will know its there before they reach the corner. True False
6. You should not use a metal ladder near electrical lines. True False

Answers: 1.-d; 2.-a; 3.-c; 4.-F; 5.-T; 6.-T

Safety Works for *Ladders*

Safety Works! FOR YOU
The Ohio Bureau of Workers' Compensation

Ergonomics

Office ergonomics

Derived from the Greek words *ergon* meaning work and *nomos* meaning natural laws, ergonomics is the science of arranging and adjusting the work environment to fit the person. By reviewing ergonomic principles and applying them to each individual's workstation, comfort and productivity may be improved, while physical stresses and potential injuries can be reduced. This training session will focus on the computer workstation and how you can modify it to achieve these goals.

Note to discussion leader: Office ergonomics for computer workstations is important information for anyone who regularly uses a computer. Your place of business also may have computers on the plant floor to help employees track production data, order parts or produce document records. Ask participants to identify the location of computer workstations in the facility. Use a flip chart to record responses.

Conduct an employee survey

The first step in the ergonomic process is assessing employee comfort. Asking simple questions regarding individual comfort at the computer workstation can determine if you need to make any changes or adjustments. On-site observation of computer operators also can help identify potential problems. Ask participants these questions and record responses on your flip chart.

- Are your eyes tired or irritated at the end of the day?
- Does your neck and shoulders feel stiff or sore?
- Do you feel pain or discomfort in your back?
- Do you ever feel tingling, numbness or pain in your forearms, wrists or hands?
- Do your legs become stiff and cramped, or do you have swelling and numbness in your ankles or feet?
- Have you been waking up in the middle of the night because of tingling in your hands?

Note: If any answers to the preceding questions are yes, there may be problems with the workstation set-up that needs changed. Review the following ergonomic recommendations with the class.

Ergonomic checkpoints

- Adjust chair height and back to have feet flat on floor, forearms and wrists straight at keyboard level. You may need a footrest due to height of chair/desk/keyboard arrangement.
- Place the top of the monitor at or below eye level — slightly lower for those wearing bifocals. The monitor should be 18 to 24 inches from the eyes (about arm's length).
- Locate the keyboard directly in front of the monitor at proper height to keep wrists straight and relaxed with a padded wrist rest in front of the keyboard and forearms parallel to floor.
- Place the document holder at the same height and distance as the monitor to reduce head movement and eyestrain.
- Use indirect lighting to avoid glare on the screen. Place the monitor at a right angle to a window or use shades to block sunlight; use a glare shield if all other glare-reducing options are exhausted.
- Place mouse next to keyboard to minimize reaching.
- Provide leg room under desk — allow room to stretch out and change leg positions.

Note: Most of the recommended changes are simple adjustments of existing equipment and work areas. A new or different chair may be required, but the investment will be worthwhile if you can avoid potential injuries. Adequate rest periods and exercise also are important factors regarding workstation comfort. Have the group practice the following suggested exercises.

Take breaks and exercise

- Take frequent mini-breaks; don't continue for hours at a time.
- Vary tasks.
- Readjust your posture and leg position often. Let your arms fall to your sides and gently shake arms and hands for 10 seconds. Repeat.
- Close your eyes, take a deep breath and hold for three seconds. Repeat.
- Perform several slow deep winks, then look away and focus on some object more than 10 feet away.
- Drop your head forward then rotate it slowly in a circle three times left, then three times right to relieve neck tightness.
- Hold your arms up at shoulder height and push your elbows back. Hold for a few seconds and repeat to relieve upper back tension.

Note: Based on the information presented here, you may decide to form an ergonomic review team to evaluate the workstations in your area. Ask for employee volunteers to form this team and conduct the evaluations.

Quiz

True or false

1. Chair height is not important when working at a computer.
2. The top of the monitor screen should be at about eye level.
3. If your feet aren't flat on the floor, you can use a footrest.
4. Direct sun provides the best light to view the screen.
5. Computer operators only need one break per day.
6. Sitting at arm's length from the screen is about right.
7. Nothing can be done to relieve the aches and pains of working at a computer all day.
8. It's good to periodically look away from the monitor and focus on something at least 10 feet away.

Answers: 1. - F; 2. - T; 3. - T; 4. - F; 5. - F; 6. - T; 7. - F; 8. - T

Office ergonomics

Ergonomics is the science of arranging and adjusting the work environment to fit the person. By reviewing ergonomic principles and applying them to each individual's workstation, comfort and productivity may be improved, while physical stresses and potential injuries can be reduced.This training session will focus on the computer workstation and how you can modify it to achieve these goals.

Ergonomic checkpoints

- Adjust chair height and back you may need to have feet flat on floor, forearms and wrists straight at keyboard level. a footrest due to height of chair/desk/keyboard arrangement.
- The top of the monitor should be at or below eye level — slightly lower for those wearing bifocals.The monitor should be 18 to 24 inches from the eyes..
- Locate the keyboard located directly in front of the monitor at proper height to keep wrists straight and relaxed with a padded wrist rest in front of the keyboard and forearms parallel to floor,.
- Place the document holder at the same height and distance as the monitor to reduce head movement and eyestrain.
- Indirect lighting used to avoid glare on the screen. Place the monitor at a right angle to a window or use shades to block sunlight; use a glare shield if all other glare-reducing options are exhausted.
- Place other equipment is within easy reach — mouse, phone, notepad, etc.
- Place mouse next to keyboard to minimize reaching.
- Provide leg room under desk — allow room to stretch out and change leg positions.

Take breaks and exercise

- Take frequent mini-breaks; don't continue for hours at a time.
- Vary tasks.
- Readjust your posture and leg position often. Let your arms fall to your sides and gently shake arms and hands for 10 seconds. Repeat.
- Close your eyes, take a deep breath and hold for three seconds. Repeat.
- Perform several slow deep winks, then look away and focus on some object more than 10 feet away.
- Drop your head forward then rotate it slowly in a circle three times left, then three times right to relieve neck tightness.
- Hold your arms up at shoulder height and push your elbows back. Hold for a few seconds and repeat to relieve upper back tension.

Quiz

True or false

1. Chair height is not important when working at a computer.
2. The top of the monitor screen should be at about eye level.
3. If your feet aren't flat on the floor, you can use a footrest.
4. Direct sun provides the best light to view the screen.
5. Computer operators only need one break per day.
6. Sitting at arm's length from the screen is about right.
7. Nothing can be done to relieve the aches and pains of working at a computer all day.
8. It's good to periodically look away from the monitor and focus on something at least 10 feet away.

Answers: 1. - F; 2. - T; 3. - T; 4. - F; 5. - F; 6. - T; 7. - F; 8. - T

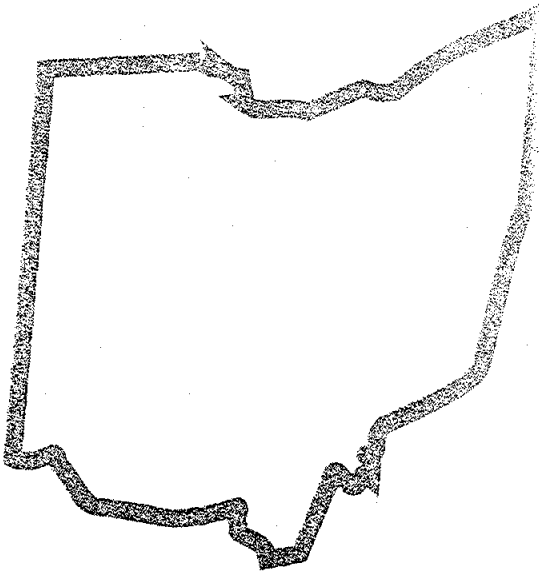
Safety Works for *Ergonomics*

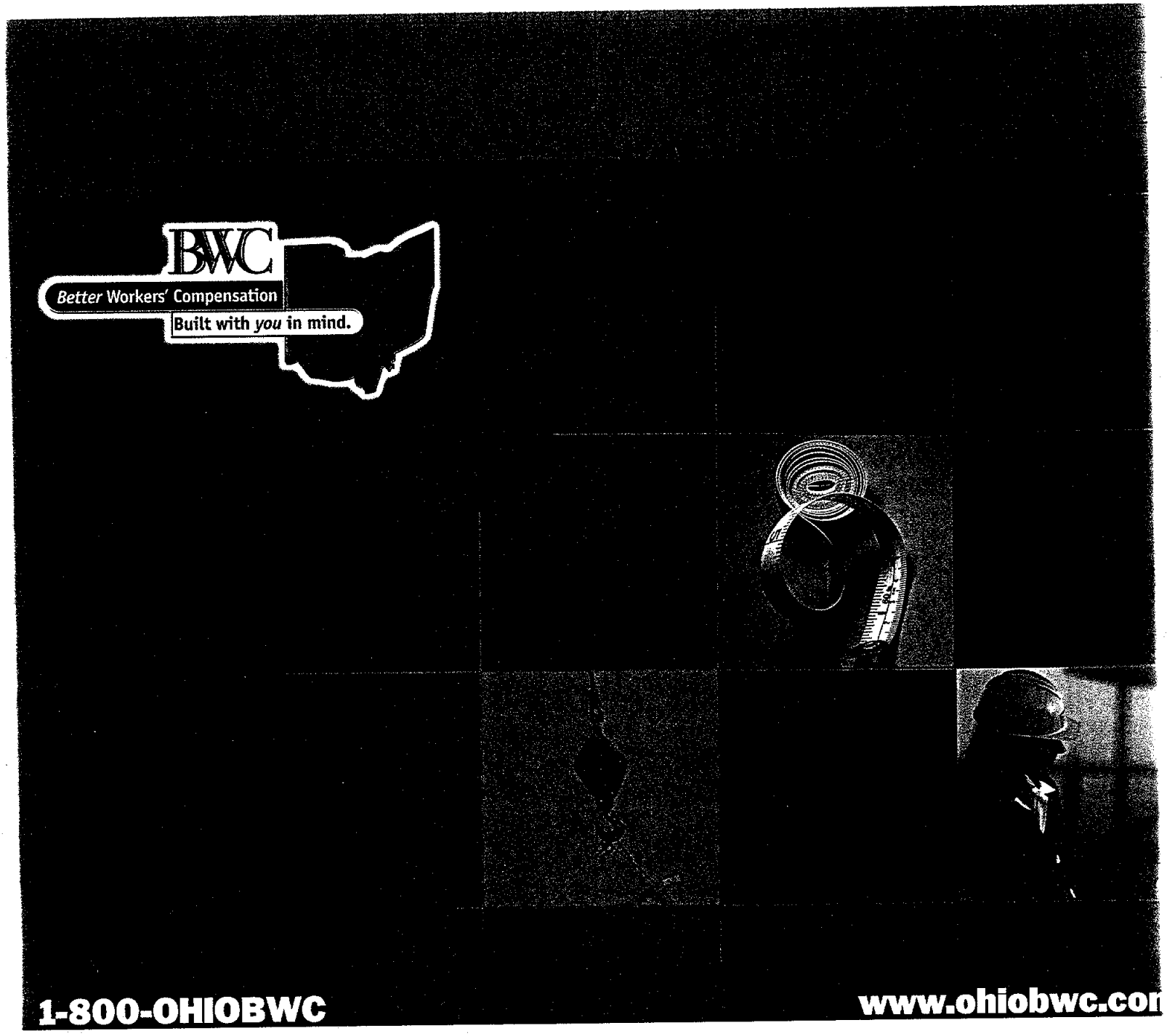
Safety works! FOR YOU
The Ohio Bureau of Workers' Compensation

Photocopy this page for each attendee

Safety Meeting Log

	Safety: Who's responsible?	Violence in the work place	Preventing heat/cold stress	Confined space awareness	Respiratory protection	Proactive safety	Emergency response	Cumulative trauma disorders	Safety colors and markings	Safety signs and labels	Holiday safety	Forklift safety	Four steps to portable ladder safety	Office ergonomics
Meeting date:														
Employee name	(initial squares below to indicate attendance at meetings)													





For subscription maintenance only (800) 237-7914
c/o Butler Mailing Services Inc.
9072 Sutton Place
Hamilton, Ohio 45011

Change Service Requested

PRSRT STD
U.S. Postage
Paid
Butler Mailing Services