Third Edition



Workplace Health and Safety Manual

Western North Carolina Workers' Center

www.wncworkerscenter.org

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OSHA

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It is not possible to include discussion of everything necessary to ensure a health and safe working environment in a manual of this nature. Thus, this information must be understood as a tool for addressing workplace hazards, rather than an exhaustive statement of an employer's legal obligations, which are defined by statute, regulations, and standards. Likewise, to the extent that this information references practices or procedures that may enhance health or safety, but which are not required by a statute, regulation, or standard, it cannot, and does not, create additional legal obligations.

Finally over time, OSHA rules and interpretations may be modified in light of new technology, information, or circumstances; to keep apprised of such developments, or to review information on a wide range of occupational safety and health topics, visit OSHA's website at <u>www.osha.gov</u>.

The Small Group Activity Method

The purpose of this manual is to provide worker leaders with basic tools and information for facilitating health and safety trainings for worker peers.

Each module contains the objectives of that module. The modules also include instructions for activities that facilitate learning the material. Adults learn best through active participation in the learning process, and not by passively listening to information. The modules are designed to encourage discussion and participation.

Many of the activities in this manual are based on the Small Group Activity Method (SGAM.) The structure consists of having worker participates complete the activities in small groups, report their findings back to the larger group, and having the facilitators summarize the reports and highlight key points to the class.

WELCOME

Trainer opens the training by welcoming the participants to the training and explaining that the training will be led by a team of worker leader facilitators.

INTRODUCTION OF FACILITATORS AND PARTICIPANTS

The team of worker leader facilitators introduce themselves and afterwards asks participants to introduces themselves.

Good afternoon. My name is xxxx and I am from Guatemala and live in Morganton and work at Case Farms. I, along with by friends you see here, are part of the worker leadership group and today we are gathered today to talk about health and safety in the workplace. I would like to give an opportunity for the rest of the worker leadership team to introduce themselves.

Facilitator's Notes

Facilitator's Notes	F	acil	itat	tor'	's	No	tes
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My name is xxxx. I live in Morganton, NC and I am from Guatemala. I work at the Case Farms poultry plant.

Now we would like everyone else to introduce themselves by stating your name, where you are from, and where you work.

Give all the participants an opportunity to introduce themselves one by one.

Facilitator's Notes

Thank you for introducing yourselves. Since we will be working together this afternoon as a group, I would like to come up with some group agreements to help guide our time together.

What do you think our group agreements should be?

Write the agreements that the group comes up with on flip chart paper. Some examples of group agreements include:

- → Confidentiality
- → Respect
- \rightarrow Do not interpret
- \rightarrow There are no incorrect answers
- → Actively participate

Facilitator's Notes

Thank you for coming up with some agreements so that we can function effectively as a group today.

The structure of today's training is based on a variety of activities where we will work in small groups. Your experiences and your voices are an important component of the structure of today's training. As adults, we learn best from each other. This training is structured to allow us, as workers, to exchange our experiences as workers and learn from them. We, as today's facilitators, do not have all the answers, but with everyone's participating, we can all learn together today on how we can better protect ourselves and our co-workers at work.



How does the illustration you see here represent the structure of our training today?

Have the illustration below posted in front of the room.



Facilitator's Notes	Before we start we would like to invite everyone to complete the pre-assessment
	that is in you folder. Please take five
	minutes to answer the questions and do
	not worry if you do not know the answers.
	You do not have to put your name on it.

If the participants completed the pre-assessment before the training started, then skip this section.

Allow several minutes for the participates to complement the pre-assessment, collecting them as the participates finish.

OSHA Rights and Responsibilities

Objective	Duration	Materials Needed
To learn about worker/ employer rights and responsibilities under OSHA	60 minutes	 Flip chart paper and markers for facilitators Box of markers, pens and pencils at each group's table Lamented flip charts for facilitators Student workbook

Facilitator's Notes

In this module we will learn what is OSHA and about workers rights and responsibilities under OSHA.

To begin, let's talk about what is OSHA.

Have the flip charts that explains What is OSHA; What OSHA Does, and Who Is Covered for everyone to see.



OSHA is the Occupational Safety and Health Administration, a federal agency of the United States government, part of the Department of Labor.

OSHA is responsible for workplace health and safety in the United States. OSHA's mission is to ensure employees are provided a safe and healthy workplace.

Facilitator's Notes

OSHA's functions include:

→ Developing rules on workplace health and safety and enforcing these rules through workplace inspections.

→ Tracking workplace fatalities.

- → Giving training on workplace health and safety.
- → Whistleblower protection.
- → North Carolina has it own health and safety program. OSHA approves North Carolina's health and safety program. North Carolina's health and safety program must be at least as protective as the federal OSHA.

All workers who work in the private sector have rights under OSHA regardless of immigration status. Even if you do not have papers, you have rights under OSHA.

Facilitator's Notes

Now, we are going to read aloud the following story about Maria. You can find the Maria's story in your folder. Give the participates a couple of seconds to find the story in their folders.

Do I have a volunteer that would like to read the first paragraph?

Maria recently arrived to the US to find a better life for her and her children. She found work at a local poultry plant cutting chicken wings. Maria, a single mother from Guatemala, only speaks a few words of English and does not have "papers." She needs the job in order to support her two young children. She is happy that she has a steady job and a paycheck every week.

After several months of working at the poultry plant, her hands began to swell and her arms hurt up to her shoulders. The pain was too much and she could not control it. Maria did not tell anyone about this and would push herself to continue working at the poultry plant.

Maria continued experiencing pain and was worried. At her home, her hands were in so much pain that it was difficult for her to prepare dinner or to carry her baby.

Maria's co-worker, Victoria, who recently complained to human resources about a chemical that was being used to clean the chickens as they came through the line and that was giving Maria's co-worker, Victoria, an allergic reaction. After Victoria complained, the poultry plant changed Victoria's work hours. Instead of working the day shift, she now works the night shift.

Maria is afraid to tell her boss because she does not want the same that that happened to Victoria to happen to her. She remained silent.

Facilitator's Notes

In your groups, take ten minutes and talk
about the questions related to Maria's
story.

- U Why do you think Maria doesn't want to say anything to her employer?
- Do you think that the pain in her hands is related to the work she does?
- What might happen if Maria doesn't get proper medical care for her injury?
- □ What would you advise Maria?
- Does it make a difference if Victoria has papers?
- □ What would you do in this situation?

After ten minutes, have each group report back their answers.

Facilitator's Notes

Without a doubt, Maria has certain rights and responsibilities under OSHA. But what are those rights and responsibilities? Let's take a look a them now.

Have the flip chart paper with OSHA Rights and Responsibilities up for everyone to see.

The 5 Basic Worker Rights Under OSHA

Facilitator's Notes

Workers have five basic rights under OSHA. These rights are:

- 1. Right to a health and safe workplace.
- 2. Right to receive information.
- 3. Right to receive training.
- 4. Right to request that a dangerous situation be changed, to file complaints, and to participate in the process.
- 5. Right to be protected against retaliation.

Now let's talk about each of these rights individually.

The Right to a Health and Safe Workplace

Facilitator's Notes

The first right is a right to a healthy and safe workplace.

Under OSHA, employers must provide their employees with a workplace that is free of known hazards that can cause death or serious physical harm to their employees.

This is called the general duty clause. If OSHA does not have a specific rule for a particular workplace hazard, the employer is still required to provide a healthy and safe workplace under the general duty clause.

The Right to Receive Information

Facilitator's Notes The second to receive employer → Employer you

The second right under OSHA is the right to receive information from your employer.

 → Employers are required to inform you about your rights as a worker.
 Employers are required to have a copy of the OSHA poster that explains your rights as a worker.

→ This is the OSHA poster that your employer should post in viable area for workers to see. Usually, employers put the OSHA poster in places like the workplace cafeteria or break room."

Have the OSHA poster below in front of the room.



Job Safety and Health IT'S THE LAW!

All workers have the right to:

- A safe workplace.
- Raise a safety or health concern with your employer or OSHA, or report a workrelated injury or illness, without being retaliated against.
- Receive information and training on job hazards, including all hazardous substances in your workplace.
- Request an OSHA inspection of your workplace if you believe there are unsafe or unhealthy conditions. OSHA will keep your name confidential. You have the right to have a representative contact OSHA on your behalf.
- Participate (or have your representative participate) in an OSHA inspection and speak in private to the inspector.
- File a complaint with OSHA within 30 days (by phone, online or by mail) if you have been retaliated against for using your rights.
- See any OSHA citations issued to your employer.
- Request copies of your medical records, tests that measure hazards in the workplace, and the workplace injury and illness log.

This poster is available free from OSHA

Contact OSHA. We can help.

Employers must:

- Provide employees a workplace free from recognized hazards. It is illegal to retaliate against an employee for using any of their rights under the law, including raising a health and safety concern with you or with OSHA, or reporting a work-related injury or illness.
- Comply with all applicable OSHA standards.
- Report to OSHA all work-related fatalities within 8 hours, and all inpatient hospitalizations, amputations and losses of an eye within 24 hours.
- Provide required training to all workers in a language and vocabulary they can understand.
- Prominently display this poster in the workplace.
- Post OSHA citations at or near the place of the alleged violations.

FREE ASSISTANCE to identify and correct hazards is available to small and mediumsized employers, without citation or penalty, through OSHA-supported consultation programs in every state.



1-800-321-OSHA (6742) • TTY 1-877-889-5627 • www.osha.gov

→ As a worker you have a right to receive information about injuries and illnesses in your workplace.

OSHA requires employers with more than 10 employees to keep a log of injuries and illnesses in their workplace. This log is called the OSHA 300 log. The OSHA 300 log has to contain every injury and illness that resulted in lost workdays, restricted work, transfer to another job, and any other incident that required more than just basic medical care.

You have the right to review this log and all logs kept by your employer for the last five years.

→ As a worker you have a right to receive information from medical records and toxic exposure records.

You have the right to examine and copy medical records and toxic exposure records. OSHA requires that your employer measure the level of exposure to harmful substances. Workers have the right to observe this and examine the results.

→ Finally, as a worker you have a right to receive information about toxic chemicals.

Employers are required to provide information about dangerous chemicals in writing.

The Right to Receive Training

Facilitator's Notes

The third right under OSHA is the the right to receive training from your employer on OSHA rules. These trainings can be about different topics, such as fall prevention, how to use personal protective equipment, and training workers about chemical hazards.

The Right to Request that a Dangerous Situation Be Changed, To File Complaints, and To Participate in the Process

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The fourth right under OSHA is the right to request that a dangerous situation be changed, to file complaints, and to participate in the process. Let's look at each of these individually.

→ In the case of dangerous situations on the job, you have a right to ask that your employer fix the dangerous conditions.

If you complain to your employer about your workplace conditions, OSHA says that your employer CANNOT

- Transfer you to another position
- Deny you a raise
- **A** Reduce your hours
- 🗇 Fire you
- Penalize you in some other way as long as your complaint was made in "good faith." This means that you really believed there was a violation and did not complain only to bother or harass your employer.

→ As a worker, you have a right to file a complaint with OSHA.

You can file a complaint with OSHA if you believe that there has been a violation of an OSHA regulation or if you believe you are in imminent danger at your workplace. If you provide your name when you file a claim, you have the right to know what actions OSHA decided to take on your claim.

→ As a worker, you have a right to participate in an OSHA inspection.

If OSHA inspects your workplace, you have these rights:

- A right to have a representative accompany the inspector during the inspection.
- A right to talk to the inspector privately. You can show the inspector hazards, injuries, or ask any questions you may have about health and safety.

→ As a worker you have a right to ask for the results of the investigation and what OSHA told your employer to do to correct the problem. OSHA requires the employer to post the results of the inspection and penalties. If the citation is not posted by the employer, the employee should contact OSHA.

The Right To Be Protected Against Retaliation

Facilitator's Notes

Facilitator's Notes

The fifth and last right under OSHA is the right to be protected against retaliation. An employer cannot penalize or discriminate against workers for asserting their rights.

→ IF YOU THINK YOU HAVE BEEN
 PENALIZED FOR ASSERTING YOUR
 RIGHTS, YOU NEED TO CONTACT
 OSHA WITHIN 30 DAYS OF THE
 RETALIATION.

So these are the five basic rights that we, as workers, have under OSHA. Now let's take a look at responsibilities that both our employer and we, as workers, have under OSHA.

What Are Your Employer's Responsibilities Under OSHA?

Facilitator's Notes

So what are the responsibilities that your employer has under OSHA?

- 1. Your employer has to provide a workplace that is free of known hazards and comply with OSHA regulations.
- 2. Your employer also has to provide training as required by OSHA. Many OSHA standards require your employer to train workers on certain health and safety topics issues in their workplaces.
- 3. Your employer has to keep records of injuries and illnesses. Employers with 11 or more employees are required to keep records of workplace injuries and illnesses. They are required to:
 - Report every workplace death
 - Report any incident that cause three or more people to go to the hospital
 - Keep records of injuries and illnesses
 - Explain to workers how to report an injury or illness to the employer
 - Make this data available to workers
 - Post an annual summary of workplace injuries and illnesses.
- 4. Your employer must provide medical exams when required by OSHA regulations and provide workers access to medical and exposure records.

- 5. Your employer cannot discriminate against workers who assert their rights under the OSH act.
- 6. Your employer must post OSHA citations and inform workers what they have done to fix the problem.
- 7. Your employer has to provide and pay for personal protective equipment (PPE.)

What Are Workers' Responsibilities?

Facilitator's Notes

So what are our responsibilities, as workers, under OSHA. Workers shall follow all health and safety rules, attend trainings, and shall use the employer provided personal protective equipment when they are working.

Workers have the right to a healthy and safe workplace and they also have the responsibility of following safety rules. OSHA cannot cite workers as individuals for violations.

Facilitator's Notes

In your groups find the worksheet about Juan. Take 10 minutes and read the situations Juan is facing and match the rights and responsibilities under OSHA that correspond the each situation. We will talk about them together after 10 minutes.

Juan is an immigrant that has been working at the local poultry plant for two months. Help Juan solve a few problems he has encountered at work by identifying his rights and responsibilities under OSHA.

Obstacle	Rights and Responsibilities Under OSHA
For a couple of weeks, Juan has been asked to clean the chicken as it comes through the line using a strong chemical that makes his eyes burn. He does not know what the chemical is.	
Juan has been given a pair of safety gloves by his employer to use to protect against the use of the new chemicals being used. His supervisor tells him that if he rips the gloves he has to pay for a new pair.	
Over the past several weeks, the plant's floor has been wet. Juan has noticed several of his co-workers almost slip and fall.	
Juan asks his supervisor if the plant will fix the issue with the wet floors.	

After Juan ask his supervisor about fixing the wet floors, his supervisor tells him that the wet floors should not concern him and that if mentions it again he would be transferred to another section of the plant.	
Juan has began working with a new machine in the plant. Before he started working with the new machine, the plant gave him a training on the machine and how to use it safely.	
Juan has been given a pair of safety gloves to use on the line. He does not like to use because it slows down his work.	



To close out this module, let's take a look at the following image. How does the image represent workers' rights under OSHA? Take three minutes to talk about the image in your groups.

Have the illustration below posted in front of the room. After three minutes of discussion, have each group report back.



Hazard Mapping

Objective

 To analyze areas in the workplace where the risks of accidents and injuries are the greatest

Duration

60 minutes

Materials Needed

- Flip chart paper and markers for facilitators
- Markers, colored stickers, pen and pencils for participates at each table
- Laminated presentation flip charts, participant workbooks

Facilitator's Notes

In this module we are going to analyze areas in your workplace where the risks of accidents and injuries are the greatest.

To begin, let's talk about what are some different hazards that can exist in your workplace. What hazards do you see in the illustration? What are some other hazards that you can think of in your workplace? Have the illustration below post so that everyone can see. On a piece of flipchart paper, write down the different hazards that training participants come up with.



Facilitator's Notes

In order to analyze these and other potential hazards in your workplace, we are going to do an activity called hazard mapping. Have the illustration below posted in front of the room.



After two minutes, have two or three groups report back to the whole group.



Facilitator's Notes

In the illustration that we just looked at, the workers are conducting a hazard mapping activity. Hazard mapping is a visual representation of the workplace that identifies where there are hazards that could cause injuries.

The point of hazards mapping is to gather knowledge about hazards from you and your co-workers so you can work together to eliminate and/or reduce the risks of accidents and injuries.

Hazard mapping respects the vast array of skill, experience and knowledge that workers have about their jobs. Hazard mapping requires working together to identify, prioritize and solve problems.

So now we are going to do our own hazard mapping activity. Because hazard mapping draws on what workers know from on-the-job experience, the hazard mapping approach works best when conducted by a small group of workers from the same industry, workplace, or department of work area. So right now, we need to rearrange our groups by different industries represented among us. At this time, have the participants rearrange their groups according the industries in which they work. For example, construction workers will be at one group at one table, hotel housekeeping can be another group at another table, poultry workers can be another group at another table and so on.



For the next 30 minutes, in your groups, you are going to make a drawing on the sheet of paper that shows the basic layout of your workplace. Be sure to use the entire sheet of paper. Then you are going to identify the hazards in each area of your workplace using the hazard code key like the one you see here and like the one everyone has in their folder.

Have the flip chart of colored hazard code key below for everyone to see.

Hazard Code Key

Blue	Electrical Hazards
Green	Chemical Hazards
Orange	Physical Hazards (heath, noise, air quality, slippery floors, poor lighting, poorly designed work stations, etc)
Purple	Flammable/Explosive Hazards
Black	Other Hazards (specify)

Facilitator's Notes

With the colored stickers that you have in your box on your table, we are going to identify the hazards in your workplace. Blue is going to represent electrical hazards in your workplace.

So once you have the basic layout of your workplace drawn, you are going to put a blue sticker in the places where there are or could potentially be electrical hazards. You are going to use a green sticker to identify on your map where chemical hazards are or could be present. Orange is going to represent physical hazards. Physical hazards can be things like noise, air quality, slippery floors, poor lighting, poorly designed work stations, or repetitive motions. Purple will represent flammable or explosive hazards. And black will represent any other hazard in your workplace. As you place the stickers on your map, use a marker to label each hazard with a name or brief description.

Once you have identified the hazards in your workplace you are going to rate each hazard on a scale of 1 to 4 using the level of hazard table you see here and have in your folder.

Have the flip chart of hazard scale below for everyone to see.

Level of Hazard

1	Low Hazard
2	Medium Hazard
3	High Hazard
4	Very High Hazard
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For example, label a hazard one if you think it is a low hazard, a two if you think it is a medium hazard, a three if you think it is a high hazard, or four if you think it is a very high hazard.

After 30 minutes, each group will present their map to everyone.

After 30 minutes, have each group present their map.



Thank you for sharing your maps. As you can see, hazard mapping is a great way for us, as workers, to analyze areas in the workplace where the risks of accidents and injuries are the greatest.

To close this module, it is important for us to understand that the point of hazard mapping is to gather the knowledge about hazards from so you can, along with your co-workers, can work together to eliminate and/or reduce the risks of accidents and injuries. We encourage you to continue participating in the activities and meetings so that we can collective address these hazards and problems in the workplace.

Body Mapping

Objective

• To analyze the injuries, illnesses, and stresses that you have suffered on the job.

Materials Needed

- Flip chart paper and markers for facilitators
- Markers, colored stickers, pen and pencils for participates at each table
- Laminated presentation flip charts, participant workbooks

Facilitator's Notes	In this module we are going to analyze the
	injuries, illnesses, and stresses that you
	have suffered on the job.
	To begin, let's brainstorm around injuries,
	illnesses, and stresses that you might have

suffered on the job.

Duration

60 minutes

On a piece of flipchart paper, write down the different injuries, illnesses, and stresses that training participants come up with.

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In order to analyze these and other potential injuries, illnesses, and stresses you experience on the job, we are going to do an activity called body mapping.

Have the illustration below posted in front of the room.

Facilitator's Notes



In your groups, take two minutes and talk about what is going on in the illustration below. Think about who is in the illustration and why is it important that they are there.

After two minutes, have two or three groups report back to the whole group.



In the illustration that we just looked at workers are conducting a body mapping activity. Body mapping can help you identify illnesses, injuries, and stresses that you suffer on the job.

A body map is a picture that shows what parts of your body are getting hurt, sick or stressed by your job. A body map also helps to identify illnesses, injuries, and stresses that workers have in common. Each injury, illness, and stress identified during the body mapping process is caused by a hazard or problem in the workplace that needs to be fixed.

So now we are going to do our own body mapping activity. Because body mapping draws on what workers know from on-the-job experience, the body mapping approach works best when conducted by a small group of workers from the same industry, workplace, or department of work area. So right now we need to rearrange our groups by different industries represented among us.

At this time, have the participants rearrange their groups according the industries in which they work. For example, construction workers will be at one group at one table, hotel housekeeping can be another group at another table, poultry workers can be another group at another table and so on.

Facilitator's NotesFor the next 30 minutes in your groups,
you are going to use the large sheet of
paper with the outlines of a body on them
and identify the injuries, illnesses, and
stresses that you have suffered as a result
of your work hazards using the
colored-coded key that you see here and
that you have in your folders.

Have the flip chart of color coded key for everyone to see.

Color Code Key

Red	Use this color if you have had contact with blood of another person or with any other bodily fluid of another person
Orange	Use this color if you have injured your back or another part of the body from repetitive motions in your work.
Purple	If you have had stress or become sick from stress.
Dark Blue	Use this color if you have suffered from a physical or emotional injury from violence in your workplace.
Green	Use this color if you have had contact with dangerous chemicals or have become sick from them.
Black	Use this color for all other injuries, such has bruising, broken bones, electric shocks.
Yellow	Use this color for all other health problems; such has skin allergies, asthma, or loss of sight.

With the colored stickers that you have in your box on your table, you are going to identify the parts of the body that have suffered injuries, illnesses, and stresses as a result of your work. If you have had contact with blood of another person or with any other bodily fluid of another person, use the red sticker.

If you have injured your back or another part of the body from repetitive motions in your work, use an orange sticker. Use a purple sticker if you have had stress or have become sick from stress. If you have suffered from physical or emotional injury from violence in your workplace, use the blue sticker. Use the green sticker if you have had contact with dangerous chemicals or have become sick from them. Use the black stickers for all other injuries, such has bruising, broken bones, electric shocks. And finally use the yellow sticker, for all other health problems; such has skin allergies, asthma, or loss of sight. As you place the stickers on your map, use a marker to label each sticker with a name or brief description.

Once you have identified the injuries, illnesses, and stresses, talk in your groups about the ones that concern you the most and why these are a concern for your group.

After 30 minutes, each group will present their body map to everyone.

After 30 minutes, have each group present their body map.

 Thank you for sharing your maps. As you can see, body mapping is a great way for us, as workers, to identify illnesses, injuries, and stresses that you suffer on the job. To close this module, it is important for us to understand that each injury, illness, and stress identified during the body mapping process is caused by a hazard or problem in the workplace that needs to be fixed.

We encourage you to continue participating in the activities and meetings so that we can collective address these hazards and problems in the workplace.

Personal Protective Equipment

Objective	Duration	Materials Needed
• To learn about the different levels of controls employers can use to reduce and eliminate hazards in the workplace and to evaluate the importance, use and limits of personal protective equipment in preventing injuries and illnesses on the job.	60 minutes	 Flip chart paper and markers for facilitators Markers, colored stickers, pen and pencils for participates at each table Laminated presentation flip charts, participant workbooks

Facilitator's Notes



In this module we are going to talk about the different levels of control that our employers can use to reduce and eliminate hazards in the workplace. We are also going to evaluate the importance, use and limits of personal protective equipment (PPE) in preventing injuries and exposures on the job.

To begin, let's talk about what is going on in the illustration that you see here. Have the illustration below posted in front of the room.





In your groups, take two minutes and talk about what is going on in the illustration below.

After two minutes, have two or three groups report back to the whole group.



Thank you for sharing your thoughts on
this illustration. Let's talk now about
something called the hierarchy of controls.
What is the hierarchy of controls? The
hierarchy of controls is a systemic way for
employers to reduce or eliminate hazards
in the workplace. Let's look at the
following illustration to get a better
understanding of the hierarchy of
controls.

Have the illustration below posted in front of the room.



OSHA requires employers use the higher-level of controls to eliminate or reduce hazards in the workplace. The higher levels of control on the hierarchy are elimination, substitution, and engineering. Employers must apply these higher-level controls before resorting to the use of lower level controls.

Lower-levels of control on the hierarchy are administrative controls, and personal protective equipment. It is important to recognize that personal protective equipment is the least effective way to control a hazard. Now let's look at each level of control on the hierarchy individually. In your groups find the worksheet on the hierarchy of controls. Take 10 minutes and match each level of control on the hierarchy with the description that corresponds to that level. We will talk about them together after 10 minutes.

Hierarchy of Controls

More Effective (Best)	Elimination	Elimination : The best way to control a hazard. Best to do this as early as possible. An example of elimination would be to use an electric forklift truck rather than a gas operated forklift truck to eliminate carbon monoxide in a warehouse.
	Substitution	Substitution: Used when a hazard cannot be eliminated completely. The idea is to substitute chemicals, equipment, or hazardous materials with ones that are less hazardous. An example of this would be using paint that does not contain lead-based pigments. A potential problem is when the product being used as a substitute is as dangerous as the original. For this reason, it is important to find out if the product is truly less hazardous than the original.
	Engineering	Engineering : Using technology to change the work environment, a machine, or some equipment in order to reduce the hazard. For example, machine guards, backup alarms, guardrails, covers, slip resistant surfaces, and using machines to move heavy objects instead of carrying them.
	Administrative	Administrative Controls: Changing the way and the structure of how work is done. Example: Instead of one employee exposed to a particular hazard for eight hours a day, the employer could assign four workers to work for two hours each. This could be used for repetitive tasks or for any exposure to a chemical hazard.
Less Effective (Worst)	Personal Protective Equipment (PPE)	Personal protective equipment (PPE): The least efficient way to protect workers because it does not get rid of the hazard. If equipment fails, workers are still exposed to the risk. Examples include protective wear for the eyes, ears, and face, gloves, and protective clothes.

We now understand the different levels of controls that our employers can use to eliminate or reduce hazards in the workplace. We also now understand that personal protective equipment is the least effective way to control a hazard. However, the fact is that personal protective equipment is the one control that we as workers are most engaged in because we use this equipment.

In your groups, observe and read the descriptions of the pieces of personal protective equipment that is in the box for your group. Working together in groups and using your own experience, fill out the following chart by choosing the type of personal protective equipment could protect you from the corresponding hazard. You will also indicate if the hazard is a problem or concern for you at your workplace. Then, choose a worker from the group and dress the worker with the personal protective equipment from the box. After 15 minutes we will talk about each hazard in the chart and the personal protective equipment that corresponds to each hazard.

Personal Protective Equipment Hazard Worksheet

Hazards	What types of personal protective equipment could be used to protect	Is this hazard a problem or concern at your workplace?		
	you from this hazard?	Yes	No	

Flying particles such as dust or powders; chemical gases or vapors, or a combination of these.

Molten metal, liquid chemicals, acids or caustic liquids that could splash.

Falling objects from above; the possibility of accidental head contact with electrical hazards; exposed pipes or beams that you could bump with your head.

Handling, moving, mixing or applying hazardous chemicals to surfaces and equipment.

Noise that is so loud that you have difficulty hearing normal speech in the work area and/or you have to shout to make yourself heard more than arm's length away.

Heavy equipment; heavy falling or rolling objects; sharp objects such as nails or spikes on walking surfaces, exposure to hot substances, slippery surfaces, corrosive or poisonous materials, or exposure to electrical hazards. After 15 minutes have each group report back their answers for each hazard.

Each group will have a box of personal protective equipment items with a description for each. The following are the descriptions that correspond to each personal protective equipment item.

Eye Protection

Eye protection (including safety glasses, goggles, or full face shields) must be provided where there is a potential for injury to the eyes or face from flying particles, molten metal, liquids chemicals, acids or caustic liquids, chemical gasses or vapor, or a combination of these. Protective eye equipment should:

- Provide adequate protection against the particular hazard
- Be comfortable to wear under the existing work conditions
- Fit snugly without interfering with a person's movement or vision
- Be durable
- Be capable of being disinfected
- Be kept clear and in good repair

For eye protection, it is important that the protective equipment properly fit the person without interfering with their ability to move or see.

Hand Protection

There are many types of gloves available to protect against a wide variety of hazards. It is extremely important that you use gloves that are designed for the hazards and tasks of the job you are doing. Gloves made for protection against one hazard may not protect against another hazards even though they may appear to be protecting your hands.

In general, gloves fall into four groups:

Leather, canvas or metal mesh provide protection from cuts, burns, or heat.Fabric and coated fabric gloves provide protection from dirt and abrasions.Chemical and liquid-resistant gloves provide protection from burns, irritation and dermatitis.

Insulating rubber gloves provide protections from cuts, lacerations, and abrasions.

Hearing Protection

Overexposure to noise can lead to permanent hearing loss. If you are experiencing any of the symptoms listed below then you may be overexposed to noise.

- Difficulty hearing normal speech in the work area
- Shouting to make oneself heard more than an arm's length away
- Ringing in the ears after leaving the work area
- After work, dulled or muffled hearing that disappears after 14 hours (It's hard to hear normal conversation, TV, radio, etc.)
- Headaches, dizziness or other health conditions related to stress (for example: high blood pressure, fatigue, etc.)
- Co-workers who are hard of hearing

Types of Hearing Protection

The basic types of hearing protection include:

Single-use earplugs made of waxed cotton, foam, silicone rubber or fiberglass wool. They are self-forming and, when properly inserted, they work as well as most molded earplugs.

Pre-formed or molded earplugs must be individually fitted by a professional and can be disposable or reusable. Disposables should be used only once and then discarded. Reusable plugs should be cleaned after each use.

Earmuffs require a perfect seal around the ear. Glasses, facial hair, long fair or facial movements such as chewing may reduce the protective value of earmuffs.

Foot/Leg Protection

If you face possible foot or leg injuries from falling or rolling objects, crushing or penetrating materials, exposure to hot substances, corrosive or poisonous materials, or exposure to electrical hazards then you will need and leg protection.

When to Wear Foot or Leg Protection

- ✓ When heavy objects might roll onto or fall on the feet.
- Working with sharp objects that could pierce soles or uppers of ordinary shoes.
- Exposure to molten metal that might splash on feet or legs.
- ✓ Working on or around hot, wet or slippery surfaces.
- ✓ Working when electrical hazards are present.

Foot and leg protection choices include the following:

- **Leggings** protect the lower legs and feet from heat hazards such as molten metal or welding sparks.
- Metatarsal guards protect the instep area from impact and compression
- **Toe guards** fit over the toes of regular shoes to protect the toes from impact and compression hazards
- **Combination foot and shin guards** protect the lower legs and feet, and may be used in combination with toe guards when greater protection is needed.

• Safety shoes have impact-resistant toes and heat-resistant soles that protect the feet against hot work surfaces common in roofing, paving and hot metal industries. The metal insoles of some safety shoes protect against puncture wounds. Safety shoes may also be designed to be electrically conductive to prevent the buildup of static electricity in areas with the potential for explosive atmospheres or nonconductive to protect workers from workplace electrical hazards.

Head Protection

Serious head injuries can kill or impair you for life. Wearing a properly fitted safety helmet or hard hat is one of the easiest ways to protect your head from injury. Hard hats can protect you from impact and penetration hazards as well as from electrical shock and burns.

If you are working on a job where objects might fall from above or there is a possibility of accidental head contact with electrical hazards, or you could bump your head against fixed objects (e.g. exposed pipes or beams) then you should be wearing a hard hat. Whenever you are working below others who are using tools or working under a conveyor belt, you should be wearing a hard hat.

Types of Hard Hats (The information should be listed on the hat)

Class A:

- General service (building construction, shipbuilding, lumbering)
- Good impact protection but limited voltage protection

Class B:

- Electrical/Utility work
- Protects against falling objects and high-voltage shock and burns

Class C:

- Designed for comfort, offers limited protection
- Protects against bumps from fixed objects, but does not protect against objects or electrical shock

To close this module, we have seen that employers must use the hierarchy of controls to eliminate or reduce workplace hazards. We saw that elimination, substitution and the use of engineering are higher level of control that must be used before resorting to personal protective equipment as personal protective equipment is important to use correctly but is the least effect way to control a hazard on the job.

Musculoskeletal Disorders and Ergonomics

Objective	Duration	Materials Needed
• To learn about the signs, symptoms, and workplace-specific conditions that are linked to musculoskeletal disorders (MSDs) and what we can do to reduce the risks of getting injured.	60 minutes	 Materials Needed: Flip chart paper and markers for facilitators Box of markers, pens and pencils at each group's table Lamented flip charts for facilitators Student workbook

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In this module we are going to learn about the signs, symptoms, and workplace-specific conditions that are linked to musculoskeletal disorders and what we can do to reduce the risks of getting injured.

But first let's talk about what are musculoskeletal disorders. Musculoskeletal disorders are disorders of the muscles, nerves, tendons, ligaments, joints, cartilage, or spinal disks. Musculoskeletal disorders symptoms can range from mild aches to disabling pain. Symptoms often appear gradually and become more severe over time. Generally symptoms progress through three stages. Stage one symptoms may appear during periods of activity and may disappear during periods of rest. Symptoms are relatively mild. Early symptoms of musculoskeletal disorders often are mistaken for muscle fatigue. Stage two symptoms are most persistent. They do not disappear completely during periods of rest. Increasingly severe symptoms may interfere with performance of usual work activities. Stage three symptoms are constant. Sleep is often disturbed. Sever pain, limited mobility, loss of sensation or muscle weakness makes it impossible to perform most job tasks. Specific symptoms that can be found in all three stages are soreness, burning sensation, numbness, weakness, tenderness, swelling, tingling, aching, stiffness.

But how are musculoskeletal disorders caused on the job? Let's look at what is going in the picture that you see here. What is wrong with the worker in the illustration? What are the job tasks in the illustration? What job tasks do you do that can cause musculoskeletal disorders? Have the illustration below post so that everyone can see. On a piece of flipchart paper, write down the different job tasks that training participants come up with.



There are several workplace-specific conditions, especially for poultry processing workers, that can cause musculoskeletal disorders. As poultry workers, we are required to "fit the job." We are asked to stand in one place all day long, use awkward postures, and do repetitive tasks.

These job demands and other workplace factors can cause discomfort, fatigue, pains and aches in different parts of the body such as the back, neck, shoulders, forearms, elbows, hands and wrist.

Repetition of job tasks such as performing the same motion or series of motions continually of frequently is one cause of musculoskeletal disorders.

Another cause of musculoskeletal disorder is forceful exertion which is the amount of physical effort to perform a demanding task or to maintain control of equipment or tools

Awkward and static postures associated with job tasks can contribute to musculoskeletal disorders. Awkward and static postures include assuming positions that place stress on the body, such as reaching above shoulder height, kneeling, squatting, leaning over a worktable, twisting, the torso while lifting, maintaining a sustained posture for a long period of time, as well as holding or using tools in a non-neutral or fixed position. Vibration associated with job tasks can cause musculoskeletal disorders. Using vibrating hand-held power tools can increase the stress on the hands and arms.

Cold temperatures in the workplace can also contribute to musculoskeletal disorders.

So how can employers address these workplace specific conditions that can lead to musculoskeletal disorders? One answer is through ergonomics. Ergonomics is the science of fitting workplace conditions and job demands to the capabilities of the working population.

Using ergonomic principles, properly designed jobs, tasks, equipment and tools as well as good job organization can help to fit the job to the workers.

Ergonomics includes:

- \rightarrow Designing equipment that is easy to use
- \rightarrow Investing new equipment that will take the strain out of the job
- → Organizing work in different ways
- \rightarrow Changing how tasks are done

Now let's see how our employer can apply ergonomic principles to workplace conditions in an effort to reduce or eliminate musculoskeletal disorders. To do this, in your groups, you are going to match the job or working conditions with both the risk factor for the job or working condition and ergonomic techniques we can use to reduce or eliminate the risk factor connected to the job or working condition.

Job/Working Conditions	Musculoskeletal Disorder Risk Factor	Ergonomic Technique to Reduce Risk Factor
	Standing for a long time	Use sit/stand stools, which allow employees to lean and have their weight supported while still remaining in an upright posture.
Standing for	reduces blood flow to the legs, forces isolated muscles to work for an	Rotate to tasks that do not require prolonged standing.
a long time	extended time, and increases risk of fatigue and varicose veins.	Use shoe insoles that cushion the feet and spread foot pressure over a larger surface.
		Use a footrest in front of employees so they can lift one foot, allowing them to continually shift their posture.
		Keep knives sharp and in good condition.
	The cutting motion may entail some bending of the wrist. Factors such as	Remove damaged knives from service.
Use of	poorly fitting gloves, slick handles, inappropriately sized handles, or dull	Use knives appropriate for the task.
knives	knives increase the force	Provide properly sized gloves.
	that must be used. Finger force and bending of the wrist are recognized risk factors for the development	Tilt work surfaces towards employees to reduce wrist deviation.
	of many hand injuries.	Divide the task into specific units and provide an appropriate cutting tool so the

Use of traditional scissors forces the fingers to repeatedly open and close the blade, which can stress tendons, increasing the risk of tenosynovitis and carpal tunnel. Contact trauma to sides of fingers can damage nerves, which can cause numbness and tingling in the tips of the fingers and thumb.

Use of scissors

Employees repeatedly reach to the bird on the cone to perform cutting tasks and may need to reach to a bin or a tub to deposit removed item. Repetitive reaching stresses the shoulder and upper back.

Reaching

task can be performed with a neutral wrist and body posture.

Provide pneumatic scissors; these scissors can be activated by employees with little finger force and with the wrist in a neutral posture. A cut proof glove should be used on non-cutting hand.

Provide spring activated scissors; these scissors open automatically after each cutting motion.

Rotate to those tasks that do not require scissor use.

Use diverter bars to push the product closer to the employee.

Reduce width of supply conveyor so the product is presented closer to the employee.

Position cones and other work fixtures so all activities of the task can be performed with the elbows in close to the torso.

Use height-adjustable stands, where appropriate, to place employee in proper orientation to the work surface. Reaching up, forward or to the side to access the shackle

Employees may bend to lift chickens from the supply conveyor and then reach out and away, sometimes above shoulder height, to place them on multi-cut machines or shackle conveyors. Injuries to the shoulder, back, and neck are common due to awkward postures and high repetition. Employees at the line. beginning of the line often work faster than those near the end of the line because there is always a full supply of birds and all positions are open.

Minimize forward reaches by moving the shackle conveyor towards the worker.

Minimize vertical distance between the shackles and the belt conveyor to minimize bending and elevated reaches.

Rotate up and down hanging line.

Install height-adjustable stands so employees can properly position themselves.

To close this module, we have seen musculoskeletal disorders refer to injuries of the muscles, joints, tendons, nerves or other tissues caused by repetitive motions, forceful exertions, vibrations, or awkward body positioning. Musculoskeletal disorders symptoms can range from mild aches to disabling pain.

Symptoms generally progress through three stages, becoming more and more severe. Early reporting of symptoms is critical for proper medical treatment. Musculoskeletal disorders result from job tasks or job conditions such as repetitive motion, overexertion, standing for too long, vibrations, and cold temperatures. Using proper ergonomic techniques for using knives, scissors, reaching, and standing for long periods of time can reduce the risks of musculoskeletal disorders.

Safety For Poultry Sanitation Workers

Objective

Duration

60 minutes

 To evaluate the potential hazardous situations in doing poultry sanitation work and possible solutions for addressing these hazardous situations.

Materials Needed

- Flip chart paper and markers for facilitators
- Box of markers, pens and pencils at each group's table
- Lamented flip charts for facilitators
- Student workbook

In this module we are going to talk about potential hazardous situations in doing poultry sanitation work and possible solutions for addressing these hazardous situations.

The job of a poultry sanitation worker is one of the most hazardous jobs in the poultry processing industry. Poultry sanitation workers may work a regular production shift, or they may be part of a special sanitation or cleaning crew.

The focus of sanitation workers who work a regular production shift is cleaning the machinery and floors. They move product to allow cleaning and use high pressure water hoses and squeegees to clean the floors.

The daily sanitation or clean-up crew has the responsibility of cleaning all product contact surfaces throughout the plant to comply with requirements of the Food Safety and Inspection Service (FSIS), U.S. Department of Agriculture. If the clean-up crew has not done a satisfactory job, the FSIS inspector will not allow the plant to begin a production shift.

To begin, let's talk about what are some different hazards that can exist in your work as poultry sanitation workers. What hazards do you see in the illustration? What are some other hazards that you can think of in your workplace as poultry sanitation workers? Have the illustration below post so that everyone can see. On a piece of flipchart paper, write down the different hazards that training participants come up with.



Before we talk about each of these hazards individually and possible solutions for each, we are going to talk about an important procedure called lockout/tagout.

Many times, when poultry sanitation workers remove guards or components to effectively clean processing equipment they are exposed to hazardous energy from the machines.

In order to isolate the machine or equipment from its energy sources, it is important to use lockout/tagout.

Lockout/tagout procedures help ensure that a machine or equipment is disconnected from its energy source and will not operate while a worker is cleaning the machine.

Before a worker begins to clean a machine or equipment, steps must be taken to ensure that the machine or equipment is completely disconnected from its energy source and locked our tagged out.

Sometime, the machine or equipment must be re-energized for a limited period of time for testing or repositioning purposes. During the testing or positioning period, it is important to make sure other workers are protected from the machine or equipment's hazardous energy. Once the machine or equipment has been positioned, the equipment or machine must be disconnected and locked or tagged out before cleaning continues.

How does the illustration you see here represent lockout/tagout procedures?

Have the illustration below post so that everyone can see. Allow several training participates to provide input around the illustration.



 Now let's take a look at each hazard that poultry sanitation workers can potentially face individually and talk about possible solutions to address each of these hazards.

Have the flip chart paper with hazards and solutions up for everyone to see.



Cuts, lacerations, and amputation are possible hazardous situations for poultry sanitation workers. As workers remove blades from cutting equipment, they may receive cuts or lacerations. Any cut not treated at once will normally become infected as a result of working with poultry.

In order to address possible solutions for cuts lacerations, and amputations, use equipment lockout/tagout procedures and use cut-resistant gloves to workers who remove blades from equipment. If you are cut while cleaning, it is important to disinfect all cuts immediately due to the high potential of infection from exposure to poultry.

Another possible for hazard for sanitation workers cleaning powered equipment is getting caught in the equipment if the motor is turned on. An example is getting caught in the paddles of chillers. Serious injury or death can result. There are several solutions to prevent from getting caught in equipment if the motor is turned on such as using energy control lockout/tagout procedures, using interlocked barrier guards/gates, using properly designed control switches or buttons that are placed in the open/off safe positions when the devices are under the exclusive control of the employee performing the task and knowing the location and use of the control circuit devices.

Falls from ladders or equipment is another hazard for poultry sanitation workers. Workers climb on ladders or equipment to adequately reach all surfaces for cleaning. Falls can result in fractures or concussions. To prevent falls from ladders or equipment make sure platforms or portable ladders are the appropriate size and height for the job and are in good condition. Also, it is important not to climb on equipment.

Poultry sanitation workers may experience electrical shock from water contacting electrical connections or switch boxes or from improper reassembly of electric connections after disassembly for cleaning. Possible solutions to eliminate or reduce electrical shocks are lockout and tag the electric circuit when it is possible to do so. Use and maintain proper wiring and grounding. Make sure all electrical boxes are covered. Use equipment approved for wet locations. Inspect for worn or improperly maintained electrical fixtures and equipment.

Chemical used in sanitation are other hazards for poultry sanitation workers. Workers use chemicals, such as cleaners, that can cause skin or eye irritation or burns. Chemicals can be liquids, powders, solids, or foams. Possible Solutions for chemical hazards are knowing the hazards of the cleaning chemicals used, using gloves, protective eyewear, and other protective equipment to prevent skin and eye contact.

Now that we have analyzed the potential hazards that exist for poultry sanitation workers and possible solutions, let's read aloud two case studies related to poultry sanitation workers. You can find the case studies in your folder.

Give the participates a couple of seconds to find the story in their folders.

Facilitator's Notes

Do I have a volunteer that would like to read the first paragraph?

Case Study 1

In preparation for the next day's work, a clean-up crew was using a high-pressure water hose to clean machines in a feather picking room. One of the two workers was preparing to wash down a feather-picking machine, and the other was washing down a scalder machine. The first employee cranked on his machine to get inside and wash out feathers that had lodged throughout the machine during the feather picking process. Electric cords were pinched between the metal crank and the metal frame of this machine, and the insulation on the cords was pierced. As a result, an energized conductor was contacting the metal frame of the machine. Because the machine was turned off at the time, the workers were unaware of the condition of the cord. The first employee then moved between the two machines to begin the wash down. When he contacted the energized machine frame, he was electrocuted and killed. His coworker received an electric shock when he tried to pull the first employee from the area. The second employee was hospitalized for his injury.

Case Study 2

A sanitation worker at a poultry plant was cleaning out a chiller. The motor that powers the paddles inside the chiller was accidentally turned on by a coworker who was cleaning a different chiller. Neither the main power control nor the chiller control box had been locked or tagged out. The employee was struck by and caught between the rotating paddle blades and the interior wall of the chiller. He died of severe chest injuries approximately 28 hours after the accident.

Facilitator's Notes

In your groups, take 15 minutes and talk about the questions related to the two case studies.

- 1. What was the main hazardous situation that caused the fatality in the two case studies above?
- 2. What are potential hazardous situations are present in the case studies above?
- 3. What could have been done to prevent the fatalities in the case studies above?
- 4. As poultry sanitation workers, are you familiar with your employers lockout/tagout procedures? Have you received training from your employer on these procedures?

After 15 minutes, have each group report back their answers.

Facilitator's Notes



To close this module, the potential hazards makes poultry sanitation worker is one of the most hazardous jobs in the poultry processing industry.

However, lockout/tagout procedures is an important procedure that can help ensure that a machine or equipment is disconnected from its energy source and will not operate while a worker is cleaning the machine. In fact, lockout/tagout procedures can help prevent a variety of injuries such as cuts, lacerations, amputations, electrical shock, getting stuck or caught in machinery or even death caused by hazardous situations.