Healthy Homes, Healthy Kids: How Farmworker Families Can Better Protect Their Home Environments from the Dangers of Pesticides and Lead

A Training Curriculum for Lay Health Educators

Objectives

This training curriculum provides a framework for organizations to prepare *promotores de salud* to provide peer education on the dangers of lead poisoning, and exposure to pesticides from residential use and occupational take-home exposures.

It reviews basic concepts related to the effects of pesticide and lead exposure on adults and children, how farmworkers can better protect their families and home environments from these dangers, and rights to a safe and healthy workplace. Part one focuses on pesticide exposures in the home and part two on lead exposures in the home.

This curriculum briefly covers what it means to be a promotor de salud and how to be an effective community educator. It also includes a component on workplace health and safety laws for farmworkers.

Training Information

Schedule:

There is sufficient material in this curriculum to be used over the course of a longer period, but the sample agenda provided at the beginning of this curriculum highlights material to be covered in two days. Variations in the schedule could include three to four day-long trainings, evening trainings that occur after *promotores* are finished with their daily work obligations, or a series of weekend trainings in which each topic would be covered separately. Facilitators should allow for significant preparation that should be done prior to the training.

Participants:

This training operates best with between six and 15 new and experienced *promotores de salud*. It can be done with a single organization or participants from a variety of organizations. Because these topics can be intensely personal, smaller groups are recommended so that all participants have ample time to share their experiences and process the new information being learned.

Adaptation:

The activities in this manual should be adapted to the needs of the community. For example, crops, pesticides, and dangers vary depending on region and season. This manual is highly adaptable and can be used with farmworkers nationwide.

Acknowledgements

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We extend our thanks to the participants in previous trainings whose input and suggestions have influenced and shaped our curriculum development.

Day 1

Units and modules	Page #	Duration (min)	Time
Arrival, registration, and welcome			8:30 am
Part 1: Preventing Residential and Take-home			
<u>resucide Exposures</u>			
Introductory ice breaker	4	20	9:00 am
Workshop norms		5	
Workshop objectives		5	
What does it mean to be a <i>promotor/a</i> ?		20	
What are reacticides?	0	15	0.50 am
what are pesticides?	8	15	9:50 am
Break		15	10:05 am
Pesticides and the Human Body	8	15	10:20 am
Pesticide Residues		15	
Pesticide Symptom Charades		10	
Children's Behavior and Pesticide Exposure	11	15	11:00 am
How are Children's Bodies Affected by Pesticide		30	
Exposure? Uselth Bisles for Children		20	
Health Risks for Children		30	
Lunch		60	12:15 pm
Pesticide Residues: Out of the Field and Into the Home	14	20	1:15 pm
Hazard Maps of the Home		30	
Prevention Themes		20	
What is Interactive Training all About?	17	20	2.25 nm
What is interactive Training an ribout.	17	20	2.25 pm
Break		15	2:45 pm
Teach Back to Your Community	19	90	3:00 pm
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Repollo Caliente	20	20	4:30 pm
Conclusion		10	
End time			5:00 pm

Day 2

Units and modules	Page #	Duration (min)	Time
Arrival and welcome			8:30 am
Part 2: Preventing Childhood Lead Poisoning			
Ice breaker		15	9:00 am
Workshop Objectives What is Lead?	21	5 10	9:15 am
Sources of Lead Routes of Exposure Follow-up activity: Risk of Lead	22	30 15 20	9:30 am
Break		15	10:35 am
Who is At-Risk of Lead Poisoning Health Effects of Lead Poisoning Testing for Lead Preventing Exposure to Lead	27	30 15 15 20	10:50 am
Lunch		60	12:10 am
Hazard Maps of the Home Diet and Nutrition	34	30 15	1:10 pm
Promoting Lead Education in the Community Teach Back to Your Community	35	45 90	1:55 pm
Break		15	4:10 pm
Making an Action Plan	37	30	4:25 pm
Conclusion and Evaluation	38	15	4:55 pm
End time			5:10 pm

Part One: Preventing Residential and Take-home Pesticide Exposures

Introductory Ice Breakers

Time: 20 Minutes

Objective: To introduce participants to one another and establish rapport.

Materials: Construction paper, markers (or already prepared quotation pieces)

- Give a brief welcome to the participants and introduce yourself. Canvas the group to get an idea of what languages are spoken in the room.
- Start the session off with an ice-breaker that will help you and the participants get to know each other.

Option One: Spanish "Dichos" Game

Materials: Collected Spanish 'dichos' or proverbs

- Preparation: Ahead of time, find a few Spanish proverbs. A few examples are below and you can find others online. Write each one on a large piece of paper, and then find a good place to divide each quote, cutting it in half.
 - Gorgojo, más chico que un piojo; así de chiquito produce enojo. (Even the weevil, smaller than a louse, can cause much ire.)
 - Agua que no has de beber, déjala correr. (If you don't have to drink the water, let it run; mind your own business.)
 - Al nopal sólo se le arriman cuando tiene tunas. (Cacti are approached only when they bear fruit.)
 - Matar pulgas a balazos. (Killing fleas with bullets. Overkill)
 - Árbol que nace torcido, jamás su tronco endereza. (The trunk of a crooked tree cannot be straightened; You can't teach an old dog new tricks)
 - El que a buen árbol se arrima, buena sombra le acobija. (If you lean on a good tree, you will be protected by a good shadow)
 - Más sabe el diablo por viejo, que por diablo. (The devil owes his wisdom to age, not his character)
 - El hombre pone, Dios dispone, llega el diablo y todo descompone. (Man gives, God decrees; the devil comes along and messes up all.)
 - El hábito no hace al monje. (The frock does not make the monk; Don't judge a book by its cover)
- On a flip chart, write down the information you want each person to share about him/herself. For example:
 - > Name
 - > Where he/she was born
 - > Where he/she lives now

- > What languages he/she speaks
- > Any experience he/she has had as a farmworker (or family members)
- > Why he/she is interested in participating in this project
- > How he/she identifies with their proverb
- Shuffle the proverb pieces and distribute a card to each participant.
- ✤ Ask the participants to get up from their chairs and circulate, looking for the person holding the other half of their proverb.
- When they find their partner have each person ask their partner the questions listed on the flipchart.
- Have participants return to the large group and introduce their partner using the information learned.

Option Two: The Hammer ("El Martillo")

Materials: None necessary

- ✤ Ask participants to stand in a circle.
- Explain that the first person will turn to their right and have the following exchange:
 - "I need a hammer." ("Necesito un martillo.")
 - "What for?" ("Para que?")
 - "For hammering." ("Para martillar.")
- At this point the neighbor pretends to hand the first participant a hammer, and the first participant makes the motion of hammering.
- Now, the neighbor asks his or her neighbor for a hammer. Thus the exchange continues until all participants around the circle are hammering.
- ✤ At this point a new exchange begins with the following:
 - "I need an iron." ("Necesito una plancha.")
 - "What for?" ("Para que?")
 - "For ironing." ("Para planchar.")
- Following the same example as with the hammer, the first participant turns to his or her neighbor, asks for the iron, and then begins the movement of ironing, while continuing the hammer motions with the other hand.
- ✤ Again, continue around the circle until all participants are ironing.
- At this point, the 3^{rd} exchange begins with the following:
 - "I need a blender." ("Necesito una licuadora.")
 - "What for?" ("Para que?")
 - "For blending." ("Para licuar.")
- Following the same examples as above with the hammer and iron, the first participant turns to his or her neighbor, asks for the blender, and then begins to swivel hips while continuing the movements of ironing and hammer motions simultaneously.

This icebreaker is guaranteed to have the participants laughing by the time you are finished!

Workshop Norms

Time: 5 Minutes

Objective: To agree upon basic rules to promote a positive learning environment.

Materials: Flip chart and markers

- Explain that you would like to have a positive and comfortable learning environment for all of the workshops. For instance, the group should feel free to actively participate in the learning process.
- Explain that it is helpful if everyone agrees on what this environment should be.
- Ask the participants to brainstorm with you the norms or ground rules for the workshop.
- ✤ For each idea have group vote and if they come to consensus write the idea on a flipchart.
- Try to encourage some of the following responses:
 - The responsibility of learning needs to be shared by everyone
 - Everyone should participate actively in all the activities of the sessions
 - The sessions should begin and finish on time
 - Respect the views of others
 - Learn from each other's experiences
 - Maintain the confidentially of any personal information shared by the participants
 - No cell phones or laptops
 - Wait for others to speak, if you have already participated.
- Remind the group that the only way the workshops will be successful is if they actively participate in the training. It is not the job of the facilitator to "teach" the participants. Instead everyone needs to share the responsibility of learning.
- ✤ Hang the flip chart on the wall after completing the exercise.
- ✤ Answer any questions.

Workshop Objectives

Time: 5 Minutes

Objective: To understand participants' expectations of what they will learn from the workshop.

Materials: Flipchart, markers, index cards, plastic bag

- First, ask all participants to write their ideas on what they hope to learn from the workshop on index cards. Explain that these ideas can be anonymous. When participants finish writing collect all index cards and put them aside in a plastic bag, hat, etc.
- On flipchart (ahead of time) write out workshop objectives.
 - To learn about pesticides; health risks, symptoms and ways to reduce or minimize exposure at home or at an agricultural work place.

- To learn how children are particularly susceptible to the dangers of pesticide exposure
- To learn about workers' rights; protections available under local, state, and federal law
- To explore ideas of what it means to be a *promotor de salud* and effective modes of community outreach
- To gain confidence in public speaking and creative presentations through small group practice
- Ask if there is a volunteer that would like to read the objectives aloud and then ask if there are any questions or objectives that they would like to cover that are not included on the list (and explain that you will visit the ideas in the hat at a later time).
- Tell the group that throughout the workshop they should feel free to ask questions whenever there is anything they don't understand, and that by the end of the day, you will try to answer all their questions as best you can.

What Does it Mean to be a *Promotor/a*?

Time: 20 Minutes

Objective: To establish a common ground for what it means to be a *promotor*, gauge the expectations of the participants, and provide a realistic view for what *promotores* might expect once they are engaged in their volunteer health outreach.

Materials: flipchart paper & markers

- Prepare four pieces of flipchart paper each with a different topic: "Why do you want to be a promotor/a", "Goals", "Challenges", "Characteristics of a successful promotor/a"
- Post the topics in different areas of the room.
- ♦ Ask the promotores to circulate and note ideas on each paper.
- Once all promotores have had time to record their ideas, gather them in a large group.
- Ask if there are some participants present that are already promotores. If there are, ask if there are three or four that would like to participate on a panel to talk about their experiences.
- Have the new promotores gather in a circle around the experienced promotores. As you go through each topic on the flipchart paper, ask both new and seasoned promotores for their ideas. This is a good moment to set a foundation for mentorship between the two groups.
- Record any additional ideas under the appropriate topic areas.

Make sure you draw out the ideas around volunteering in one's community -- why this is important and what this means.

What are Pesticides?

Time: 15 Minutes

Materials: flipchart paper, and markers

- Break people up into pairs or small groups. Give each group a piece of flipchart paper and a few markers. First, ask each pair to come up with a definition and short list of "pests." Then ask each pair to come up with a definition of "pesticide." After they accomplish this, have them come up with as many examples of pesticides as they can, drawing from their personal experience or general knowledge.
- ✤ Have them come back to the circle and present their ideas group by group.
- ✤ According to the EPA, a pesticide is any substance or mixture of substances intended for:
 - preventing
 - destroying
 - repelling or
 - mitigating any pest
 - The term pesticide also applies to herbicides, fungicides, and various other substances used to control pests.
- * Ask participants for examples of pests. Make sure they include the following:
 - o insects
 - mice and other animals
 - unwanted plants (weeds)
 - o fungi
 - microorganisms such as bacteria and viruses
- Ask participants for examples of pesticides. In addition to agricultural pesticides that they use in the field, mention some of the following:
 - Cockroach sprays
 - Insect repellents for personal use
 - Rat and other rodent poisons
 - Flea and tick sprays, powders, and pet collars
 - Kitchen, laundry, and bath disinfectants and sanitizers
 - Products that kill mold and mildew
 - Some lawn and garden products, such as weed killers

Pesticides and the Human Body

Time: 15 Minutes

Objective: To understand the dangers of pesticide exposure and how pesticides can affect the human body.

Materials: Flipchart paper to draw diagram of human body, markers, different colored sticky notes, Handout #1: Exposure to Pesticides

Method:

- Tape two pieces of flipchart paper together. Ask a volunteer to lie down on the paper while another outlines his/her body with a marker. Tape the body outline on the wall.
- Distribute colored sticky notes to participants. Ask them to write ways pesticides can enter the body on sticky notes (one route per sticky). Give them three minutes to complete this task.
- When they have finished, ask each participant to attach one sticky note to a part of the body where the pesticide might enter (for example, if they wrote down skin, they might put that on the hand).
- Review the routes of exposure and make sure everyone understands. Answer any questions.
- Tell the participants to start to think about how they might prevent exposure to these parts of the body. We will discuss these ideas later in the training.

Other Factors that Influence Toxicity or Harmfulness

- Ask participants what kinds of people might be more susceptible to the adverse effects of pesticides.
- Write their responses on a flipchart. It may be helpful to show photos or illustrations of people illustrating the following factors:
 - Age—Children and the elderly may be more vulnerable.
 - Sex—Some chemicals may affect sex organs or hormones (for example, male hormones or testicles).
 - Pregnancy—A fetus may be exposed to pesticides via the placenta.
 - Status of health (chronic illness, weak immune system, etc.)
 - Nutrition—lack of a proper nutrition may make someone weaker
 - Other chemical interactions (medication or drugs/alcohol)
 - Tolerance—Depends on the individual person
- Other factors that can determine if a person will be injured by a pesticide include the **quantity** of the substance to which a person is exposed, the **time period** of exposure, and the possibility of **repeated exposures** over time.
- ✤ Distribute Handout 1: Exposure to Pesticides.

Pesticide Residues

Time: 15 minutes

Objective: To understand how/where farmworkers encounter pesticide residues. This activity can be used whether teaching about dangers of residues in the fields or in the homes.

Materials: Photographs that illustrate farmworkers and their families coming into contact with pesticide residues, flipchart paper, markers

Method:

First, ask if any of the participants know the meaning of the term "pesticide residues." Collect ideas from the group, and after everyone has participated, write an agreed-upon definition in the front of the room.

Some important information to elicit from the participants includes: pesticide residues are the substance left over on plants, leaves, fruits, vegetables, and soil after a pesticide has been sprayed. You can't always see or smell residues but they can still affect you.

Separate the participants into pairs and distribute one photograph to each pair. Give participants about 10 minutes to discuss the following questions and record their thoughts on flipchart paper.

- What is happening in this photograph?
- Identify the risks that you see.
- Who is getting exposed and how?
- How are the workers/families in your photograph protecting themselves?
- What other precautions could the farmworkers/families take to better protect themselves?
- Once everyone is ready, ask each pair to come to the front of the room to present their photograph and observations about pesticide exposure.
- After each pair finishes, ask if anyone else has something to add that they noticed about the picture being presented.
- Once everyone is ready, ask each pair to come to front of room to present their photograph and discoveries about pesticide exposure. After each pair finishes ask if anyone else has something to add that they noticed about the picture being presented.

Pesticide Symptoms Charades

Time: 10 Minutes

Objective/Use: This activity can be used as an interactive, energizing format for participants to learn about the various symptoms related to pesticide exposure.

Materials: Symptoms cards, bag or hat, flipchart paper, markers, prizes

Use the symptoms cards or make your own. Symptoms include: nausea, vomiting, diarrhea, cramps, rashes, discomfort in throat, dizziness, shivers, muscle aches, headaches, shortness of breath, dilated or very small pupils, sweating, convulsions, coma, and death. Once these are prepared, fold each symptom individually and put them in an empty bag or hat.

Give a brief introduction to the activity by saying that you are now going to learn about symptoms of pesticide exposure.

Ask for a volunteer to come to the front, and explain that everyone will have a chance to participate. Have the volunteer draw a symptom from the bag or hat, and ask them not to show it to anyone. Once they've had a moment to think about their symptom allow them to act it out (charades) without using any verbal words. Once another participant guesses that symptom correctly, applaud, give small prize (especially for the first, brave participant!), and solicit a new volunteer.

- As each symptom is identified, record that on a flipchart under the categories "chronic" and "acute" so that you have a running list of symptoms-these can also be used as review later on in the course of the training.
- After all the symptoms have been acted out, ask participants if either they or anyone they know has ever experienced these symptoms. Allow time for participants to share their personal stories.
- If time permits after all the charades are done, participants can arrange the symptoms in "acute" (immediate and short-term effects) and "chronic" (long-term) categories.
- Tip: Pay attention to the reactions of participants as they are in front of their peers. If they need help, don't let them flounder-give them some ideas about how they can portray the symptom without allowing them to agonize for too long!

Children's Behavior and Pesticide Exposure

Time: 15 Minutes

Materials: flipchart and markers

Steps: Have participants raise their hands and keep them raised while asking the following questions: Ask if anyone in the room has children

- Does anyone in the room have children?
- ✤ Grandchildren?
- ✤ Nieces or nephews?

At this point ideally all hands should be raised, and you can state "Right. Every single person in this room has a hand raised. We can see that this is a topic that will in some way impact every one of us here today."

Then ask: How many of you have young children or are around young children a lot?

For the following questions write responses on flipchart, or ask a volunteer to do so.

- What are some things that kids love to do? (get answers like play, run, crawl, etc)
- Where do young children often play? (solicit answers like outside, on the ground)
- How do young children play? (solicit answers such as putting things in their mouths, trying new things
- What are some behaviors that might make children vulnerable to pesticide exposure? (again, hand to mouth behaviors, curiosity, trying new things-both tasting/exploring, etc)

How are Children's Bodies Affected by Pesticide Exposure?

Time: 30 Minutes

Objectives:

- ✤ To have parents recognize the importance of changing their harmful habits by understanding how this will have a beneficial effect on the health of their children.
- To understand how children's bodies are especially vulnerable to the harmful effects of pesticides and other environmental hazards.

Materials: Two dramatically different sized clear plastic bottles, food coloring (dark color works best), baby doll

✤ Fill both bottles with water

Explain that the group has to imagine that a parent and child are out in a field that has been recently sprayed. In this case, the large bottle represents the parent and the smaller one the child.

As you are doing this, add two drops of food coloring to each bottle explaining that the food coloring represents the pesticide they are breathing.

- Shake the bottles and then ask the group what the differences are between the two bottles (the smaller one should be dramatically darker than the larger one)
- Ask the group why they think this is and have them relate it to children and pesticides?
- Pick up the baby doll and ask them what the most obvious difference is between you and your baby (the size) and this means that smaller bodies can have larger concentrations of pesticide residues than adults' bodies
- Explain that young children take more breaths per minute than an adult so they are breathing in pesticide residues at a faster rate

- Children are younger-so if their exposure to pesticide residues begins at a younger age, they have more exposure that builds up in their bodies over time
- Behavior (review) that makes them more vulnerable
- More fragile skin (remind participants that skin is the most common entry point for pesticide residues)
- Still developing systems (see guide below)

Guide:

- Are there other reasons why children would be more affected by toxins than adults would be?
 - Children are more affected by poisons than adults because their bodies are still developing.
 - For a fetus developing in the mother's womb, the initial development of the limbs and organ systems occurs during the first three months. Therefore, a fetus is the most vulnerable if exposed to a poison during this time period.
 - There are other crucial moments of development when exposure to a toxic substance could result in lifelong damage.
 - At what life stage are people most susceptible to the harmful effects of chemicals?
 Generally, a fetus in the mother's womb is most susceptible.
 - How could the developing fetus be exposed to poisons?
 - If the mother is exposed to pesticides, lead or other harmful chemicals during pregnancy, the chemical can enter the mother's blood stream and cross over to the fetus through the placenta.
 - ✤ Are a baby's organs fully developed at birth?
 - No. There are organs that continue to develop after birth. This includes the brain (which continues to develop significantly until the child is approximately eight years old) and the liver.
 - ✤ Do you know what role the liver plays in the body?
 - \circ The liver plays an important role in detoxifying chemicals that enter the body.
 - If a baby is exposed to poisons before the liver is fully mature, she will not be as able to detoxify the substance and avoid its harmful effects, as an adult would be.
 - ✤ What is the immune system?
 - The immune system helps the body fight off exposures to harmful substances (e.g., germs and toxic chemicals). When a baby is born, its

immune system is also immature and doesn't help it fight off toxic exposures as effectively as would an adult's immune system.

- Are there ways in which children would be more exposed to harmful substances in the home than adults would be?
 - Babies and toddlers have more exposure because they crawl on the floor or the ground. Babies also have more exposure because they put their hands in their mouths and ingest the dust and dirt from the floor that may contain lead dust, pesticides, or other chemicals.
- Summarize the above points by explaining that infants and children are more susceptible to the harmful effects of exposure to toxins than are adults because:
 - \circ they are smaller;
 - their brain and liver are still developing;
 - their immune system is not fully mature; and,
 - they breathe more and eat more, pound for pound, than do adults.
- Alternatively break participants up into small groups and have each group discuss/present a different point illustrated above.

Health Risks for Children

Time: 30 Minutes

- ✤ Ask participants if they have heard about how pesticides can impact the health of children? (solicit answers like cancer-leukemia and brain tumors, asthma, allergies, birth defects-Carlitos, learning difficulties/developmental delays)
- ✤ Use a set of case studies to deepen the learning.
 - Break participants up into groups of three and give each group a case study (make sure at least one person is comfortable reading out loud).
 - Give groups about 15 minutes to read through their case study, discuss, and answer the questions listed on each.
 - Have each group come to the front and present.
 - After each group presents, ask the rest of the participants if they have other ideas or questions about each case study.
- Explain that because of the serious health risks for children it's really important to keep them away from the fields where they can be exposed to dangerous pesticide residues.

Pesticide Residues: Out of the Field and Into the Home

Time: 20 Minutes

Objective/Use: This guided visualization activity is used to encourage the participants to think about how they might be unwittingly transferring pesticide residues out of the field and into the home environment.

Materials: None necessary

- ✤ Ask participants to sit comfortably and explain that for this exercise they simply need to keep an open mind and try to picture the responses to the following questions.
- Imagine getting dressed in the morning. Where are your work clothes stored? Are you putting on clean clothes or using the same work clothes as the day before? What kinds of clothes are you wearing? Do you have work boots that you use in the field each day? Where do you put them on?
- Imagine who is in your house with you in the morning. Do you have a wife or a husband? Do you have any children? If you do have children are you helping them to get ready for their school or day care?
- As you're getting ready to leave your house, do you have a backpack that you take with you? What kinds of things do you have inside your backpack? Do you carry a hat, a sweatshirt perhaps? Do you bring your lunch to the fields? If so, what do you put your lunch in?
- Now let's think again about your children, if you have them. How do they get to their school or their daycare? Do they take a bus, or do you drop them off on your way to work?
- And what about you? How is it that you get to the fields? Do you take your own vehicle or does someone else pick you up?
- So now you are journeying out to the fields. What happens when you get there? If you are carrying a backpack or a lunch cooler where do you put these things while you are working?
- What kinds of clothes do you have on that are helping to protect you? Are you wearing a hat or bandana? Are you able to use gloves while you are working?
- What are the steps that you take when you go to the bathroom or when you eat lunch? Do you smoke or chew gum while you are working in the fields?
- Now the long work day has ended and you are getting ready to go home. How do you get there? What kinds of things do you take home from work with you? If you are driving your own vehicle, do you do on any errands on your way home? Do you pick up your children from their school or daycare?
- And finally, when you arrive home after a very long and exhausting day, what do you do when you get there?

- Bring the group back together by stating that this part of the activity is finished. And then ask the following questions:
 - What were some of the first things that you all did when you arrived home?
 - How do you think pesticide residues are coming into your home environment?
 - How are your children and family coming into contact with pesticide residues?
 - What kinds of measures are you and your family taking to avoid contact with pesticide residues?

Hazard Maps of the Home:

Time: 30 Minutes

Objective: To allow participants the opportunity to identify where dangers are lurking in their home environments and in a group format discuss practical ways that these dangers can be mitigated.

Materials: markers, flipchart paper, and other art supplies such as scissors, glue, stickers, colored paper

- Explain to participants that they are each going to draw (or other art form) a picture/representation of their home environment marking the areas where they feel their families could be coming into contact with pesticide residues. Encourage them to think about their responses to the previous activity when they were doing the guided visualization to help them come up with as many examples as possible.
- ✤ Allow participants to select the materials that they will need.
- Give participants about 15 minutes to create their pictures.
- Have each participant come to the front to present their picture if time permits. If not, ask them to share in small groups.
- While participants are presenting and after they've identified the hazards, ask them and the group at large what steps can be taken to lessen the risk of each identified hazard.
- Have them record these steps according to their individual drawings.
- See promotores' guide for list of possible solutions/recommendations.
- Explain that they will use their hazard maps again on day two of the training so either post them around the room, or have participants hold onto them.

Prevention Themes:

Time: 20 Minutes

Objective: To encourage participants to creatively express different ways that farmworkers can make their homes safer environments for their families. This activity can be used as foundation building for their community outreach.

Materials: index cards with themes prepared ahead of time, box of props-include sombreros, baseball hats, fake fruits and vegetables, powder, baby clothes, basket, work clothes (long-sleeved shirts, pants, boots, etc), toys (soccer balls, dolls, etc)

Method:

- Put prevention themes in hat (use examples from promotores' guide or ideas recorded by the participants in the previous activity)
- Break participants up into pairs or groups of three and have each group draw one card from the hat.
- Give groups 10 minutes to prepare their skit-remind them to use props and encourage them to be as creative as possible. Circulate while they are practicing and offer help as needed.
- ✤ Have each group come to the front to present their skit.
- ✤ After each skit is completed ask what the participants liked about the skit, what the message was, what they learned, and what other solutions they could offer.
- Prepare enough themes so that groups are able to perform twice.

Tip: Offer prizes after each group performs to help animate participants!

What is Interactive Training all About?

Time: 20 Minutes

Objective: To have participants recognize a variety of interactive training techniques that they've observed throughout the workshop and set the groundwork for using interactive modes in their future presentations

Materials: Flipchart & markers

Method:

✤ Ask for a volunteer to come to the front (to write group's ideas on flipchart). Then ask participants the following questions:

- ✤ Has this workshop been interesting to you? Why or why not?
- What have I done to make this workshop interactive for you? Solicit the following responses and ask for examples of each:
- Ask Questions: Draw the information out from the participants rather than standing in front and lecturing. Use simple lead-in questions to encourage participation and allow ample time for answers to emerge. Find out about particular problems or experiences that participants have had. This will also help you not to belabor points with which the participants are already familiar, and to spend more time on the areas which need more explanation/discussion.
- Demonstration: Instead of explaining concepts with only works use a more creative format to make your point. For example, use a simple bubble-blowing game to explore the idea of drift travelling from the field where a pesticide is applied and into the regions of a farmworker's house. And instead of talking about how work clothes should be separated from family clothes when doing the laundry, have two separate baskets ready to physically show how work clothing should be stored and washed separately.
- Visuals: Use props to help illustrate your points. Colorful signs, photos, and pieces of fruit, for example, can make a longer-lasting impact than words used alone. When appropriate, reinforce what you are saying with physical, concrete examples.
- Role Play: This is a great technique to use when you are looking for participants to come up with their own creative solutions to a particular issue. Have your participants act out scenarios that they might encounter in the fields, community arena, or at home, and use this as a starting point for discussion.
- Volunteers: Ask for participation from the audience. Use this volunteer to help you with a demonstration
- Story-telling/sharing: Use real-life examples to illustrate a point. Be sure to ask the participants if they have similar experiences to share at relevant points throughout your training.
- Humor: Inject humor when appropriate. This can be a great way to diffuse tension, and relax participants. Avoid sarcasm and make sure that the joke is "on you" and not on your participants. Be careful not to detract from the seriousness of your topic at hand, and always be sure to gauge the comfort levels of your audience.
- Song and Dance: Music and drama can be an effective way to captivate your audience. Bring a guitar with you (if you have one and know how to play!), and some objects that can be used as drums (you can often use what you find around you; pails, sticks, spoons, etc. can make great instruments). Time permitting, work with your participants to come up with a catchy way to deliver your messages-or bring the show on the road and deliver it to them!
- Review Questions: Ask review questions throughout your presentation to ensure that the information you are giving is clear for everyone. Use inventive forms like "repollo caliente" that you will see featured here. Play "Charades" or "Jeopardy" to make the review fun and enticing.
- Incentives: Offer small incentives throughout your presentation to reward participation. Prepare "gifts" ahead of time for each participant to offer after the presentation concludes; small bags filled with toiletries and first aid kits are just some of the ideas that you can use.

- Handouts: Handouts and brochures can be helpful. Remember, if you're not going to refer to these during the presentation wait until after you finish to hand them out so participants don't get distracted.
- Clear Language, Common Terms: Use language that everyone will understand. Identify important terms or concepts that you will discuss in your training and make sure that there is clear comprehension on these important topics for everyone.
- Personalize the training: Always strive to make your training as meaningful for each participant as possible. Gauge your participants' reactions as you are covering different topics, and make sure that the examples you are using are both relevant and impactful for everyone in the room. The more the information resonates with the participants, the more likely they are to take the information you are giving, share it with others, and enact positive change in their lives.
- Seating Arrangements: Arrive ahead of your scheduled training so that you are able to arrange the seating for your participants in a manner that will be most effective for optimum learning and sharing. Keep in mind the size of your group to determine the best possible arrangement. For example, if it's a small group (15 or less) you might want to arrange the seats in a circle to encourage the spirit of community.
- Participants respond best when there is an energized, enthusiastic, dedicated trainer present. Be flexible, willing to spend more time in certain areas depending on participants' needs while making sure that you are covering all of the information you are there to present. And of course, know your material. If you believe in the importance of the material you are presenting, the participants will be more likely to believe in it as well.

Teach Back to Your Community:

Time: Rest of time remaining in day (you want to make sure to set aside ideally one to two hours depending on the size of the group.

Objective: To allow participants time to practice how they want to share their messages with their community members. Additionally, this activity is used as a way to build confidence and garner experience in public speaking/presentations.

Materials: flipchart paper, markers, props (list mentioned above), promotores' presentation guideline

- Give each participant a promotores' presentation guideline
- Have them review it individually for about 10 minutes to familiarize themselves with the messages.

- Break participants up into pairs and assign one message to each pair (or have them choose)
- Give participants about 10 to15 minutes to practice how they would like to communicate that theme to the rest of the group. Encourage them to be creative in their presentation styles.
- Circulate while they are practicing to offer advice and feedback
- Have each pair come to the front of the room to present. Explain that you would like the rest of the group to give feedback after they are done.
- Ask group for feedback. What did they like? What could they do differently to strengthen their presentation?
- When all groups have presented, have them switch partners and do the activity again selecting a different theme.

Homework Assignment: Ask each participant to choose a theme that they haven't presented yet. Have them practice at home, and prepare a brief presentation for the next morning.

Review Game-"Repollo Caliente"

Time: 20 Minutes

Objective/Use: This activity is used to review information learned on the first day of the training. Because the game is active and involves movement, this can serve as an energizer as well, so it's an excellent activity to use early in the morning to help participants wake up. Although this activity is geared toward pesticides within this curriculum, it can easily be altered to fit whatever theme you might wish to review.

Materials: colored paper, markers, small prizes

- ✤ Generate a list of review questions that you would like to use.
- Write each question on a separate piece of paper (you can use green paper so that it looks like cabbage leaves, or tissue paper so that the leaves can be crumpled more easily). On every few leaves (or questions) write the word "premio." Alternatively, you can put pictures or symbols on each leaf of paper to capture a lower-literacy level audience.
- Crumple the first question written on paper into a small ball. With the next question crumple that around the first small ball, attempting to fold the paper as if each one is a leaf of cabbage. Continue doing this until you have used all the questions and created a head of cabbage.

- ♦ Ask all participants to stand up and create a circle.
- Throw the head of cabbage across the circle.
- ✤ Ask the person that catches the head of cabbage to take off the first leaf, and read the question out loud.
- ◆ They can respond to the question, or other participants can help if necessary.
- Continue until all of the leaves of the cabbage have been used.

Tip: Be generous with the prizes, especially in the first few leaves, to help motivate the participants!

Examples of questions:

- ✤ 3 alternativas a los pesticidas que usan en la casa.
- ✤ 3 enfermedades causadas por los pesticidas que afectan a los niños.
- Por qué son más vulnerables los niños a los pesticidas que los adultos?
- Un síntoma de estar expuesto a los pesticidas. Hay que actuarlo!
- Cuales son tres ejemplos de características de un buen promotor?
- ✤ Identifica tres pasos que uno puede hacer para proteger más a su hogar.
- En que le afecta a los niños expuestos a los pesticidas? (el comportamiento)

Part Two: Preventing Childhood Lead Poisoning

Workshop Objectives

Time: 5 Minutes

- Define lead
- Review the common sources of lead exposure
- Discuss the routes of entry into the body
- Review the symptoms of lead poisoning
- ◆ Understand the short-term and long-term health effects of lead poisoning
- ✤ Discuss the effects of lead exposure on children, adults and pregnant women
- Review ways to prevent or minimize lead exposure

What is Lead?

Time: 10 Minutes

Questions for discussion:

- ✤ What is lead?
- ✤ How has it been used?

Explain to the group that lead is a metal that has been used in paint, gasoline, water pipes, pottery, crystal and other places. But lead is a poison, especially to infants and young children. Because of the serious harm it can cause to people, it is not used as much anymore, but traces of lead can still be found in our air, water, soil, and many of our homes. The good news is that, over the past ten years, lead poisoning rates in children and adults have gone down. The bad news is that many children -- especially those living in poor neighborhoods, near factories, and close to major highways -- still end up with traces of lead in their brains, bones, muscles, and central nervous systems. In the United States, lead is one of the most serious environmental health hazards affecting children. That is why we are focusing on lead today.

Common Sources of Lead Exposure:

Explain to the participants that in the United States, lead was used in paint and gasoline and continues to be used in a host of products such as batteries, construction materials, etc. Even though the use of lead in paint and gasoline in the U.S. has ended, some lead remains in our environment. For example, the interiors of many homes were painted with lead-based paint before such paint was banned in 1978. But lead is still in our environment because many people live in homes that were built before 1978. Let's discuss how we can still be exposed to lead from paint and other sources.

Sources of Lead

Identifying the Sources

Time: 30 minutes

Materials: Pictures of lead sources, EPA Booklet: Protect Your Family from Lead in Your Home or other similar resource

Before the workshop, prepare pictures of the following sources of lead. These could be drawings, photographs, magazine cut-outs, or even small toys.

Divide the participants into small groups and give each group about four or five of the pictures of common lead sources. Give them five minutes to discuss among their groups why the items might contain lead. For example, if there is a picture of a car, then they would explain that most car batteries contain lead acid and that gasoline used to contain lead. Have each group prepare a five-minute presentation to explain their conclusions to the rest of the participants. Make sure that every person in each group plays a part in the presentation.

Paint

The most common source of lead exposure in and around the home is lead-based paint. Lead was added to paint because it made paint easy to apply and scrub clean, but a federal law banned its use in paint in the U.S. in 1978. Today, over 80 percent of all homes built before 1978 in the U.S. still contain lead-based paint. The older the house, the more likely it is to have lead-based paint and to have a greater amount of lead in the paint. Wood surfaces with high-gloss paint, such as windows, baseboards, trim, doors, kitchen and bathroom walls, and outside porches, are the surfaces most likely to have been painted with lead-based paint. Outside surfaces are even more likely than inside surfaces to contain lead-based paint, since paint used outside often had a higher led content than did paint used inside. Lead paint may still be used on houses and toys in some developing countries.

Children are at high risk of lead poisoning from eating paint that has chipped, peeled or cracked. They may also absorb lead from paint by eating or breathing in household dust containing lead. Lead dust can be created even if the paint is not chipping or peeling. Lead dust is created by friction on surfaces painted with lead-based paint, such as windows, doors, floors and stairs. Children can swallow lead if they crawl or play on contaminated floors and soil and then put their fingers, clothes, or toys in their mouths, or if they eat without first washing their hands. Children can also absorb lead by chewing on surfaces painted with lead paint, such as window sills, molding, knobs and handles.

Automobiles

Gas: For many years, gasoline contained high amounts of lead. Lead has been removed from gasoline in the U.S. and Mexico, but years of contaminated exhaust fumes have created lead deposits in soil, especially near highways and busy roads.

Lead-acid batteries: Most cars used in the US use batteries that contain lead. An average battery contains about 11 kg of lead. When these batteries are not properly disposed, they can leak lead into the environment. Most states require that these batteries be recycled, but some lead is released into the environment in the recycling process.

Other parts: The vehicle coating, wheel balancing weights in tires, electronic components, and other parts of the car interior also contain lead.

Dust and Soil

Soil is easily contaminated by paint chips containing lead and airborne lead particles from car exhaust pipes and industrial plants. Soils of lands used as orchards in the 1940s may also be contaminated with lead from pesticides used during that time. Dust inside homes may contain lead particles from lead-based paint or from soil tracked into the house from outside. This dust eventually makes its way onto pets, toys, carpets and floors, furniture, bedding, etc.

Drinking Water

Drinking water can become contaminated with lead as it passes through lead pipes or pipes joined with lead solder. Lead-lined tanks or containers can also contaminate water stored in them. Lead is no longer used in drinking water pipes or solder, but these pipes still exist in many older homes.

Food containers

Food containers that may contain lead include ceramic pots or water jugs with a lead-based glaze, cans with lead-soldered seams, candy wrappers decorated with leaded paint, and leaded crystal. Foods, especially acidic foods like beans, tomatoes and fruits that are cooked, served or stored in these containers can soak up lead. Cans with lead solder have a silver-gray metallic smear of solder along their seam and small dents along the seam. Lead-free cans have a thin, blue-black paint line along the seam or no seam at all. Such cans are rare in the US, but have been found in cans from Mexico. Lead has been found in ink on the plastic wrapping of tamarind candy and lollipops from Mexico (especially the Dulmex "Bolirindo" brand). Other tamarind and tejocote fruit candy products are packaged in stoneware or terra cotta ceramic jars that contain lead-based glaze. Lead on these jars and wrappers may leach onto the candy, and children might also ingest lead when they put the jars or wrappers in their mouths. Water or other drinks served or stored in leaded crystal will also absorb lead.

Imported foods

In Mexico, spices and other foods are sometimes dried using motors that run on leaded gasoline. Some people have been exposed to high amounts of lead by eating dried chilies or other food items imported from Mexico or India. Candies and snacks imported from Mexico sometimes contain powdered dried chilies.

Home Remedies

Some home remedies from Mexico contain high levels of lead. Examples include *greta* and *azarcon*, which are orange and yellow powders given to babies for indigestion or *empacho*. Other common names for these products are *liga*, *Maria Luisa*, *alarcon*, *coral* and *rueda*. These products are very dangerous if swallowed and should never be used.

Costume jewelry

Lead has been found in cheap metal jewelry coated with enamel. Children can eat and breath the lead by chewing or sucking on this jewelry.

Televisions and computers

Glass from computer monitors and cathode ray televisions contain lead, as do some computer circuit boards. Televisions or computer monitors that are intact do not pose a danger of lead exposure, but if they are broken, children can ingest lead particles. If these items are improperly discarded the lead can contaminated soil and ground water.

Industrial Pollution

Communities near industrial plants and mining activities that release lead (or released lead in the past) may have high levels of lead in the soil. These industrial include lead smelting or refining plants, lead mining, auto repair, battery recycling or manufacturing, glass and plastic manufacturing, and shipbuilding.

Work exposures

Some jobs expose adults to large amounts of lead. Auto mechanics or others who work recycling automotive lead-acid batteries have a high rate of exposure to lead. Other high-risk jobs include lead removal workers, carpenters, painters, plumbers and pipe fitters, and demolition workers. Adults who are exposed to lead through the workplace may also contaminate their cars and homes with lead dust that is on their clothes, shoes, hair, or skin. These residues could poison their families. There is an even greater risk of lead exposure to children if these jobs are performed at home and precautions are not taken to prevent contamination to children and other family members. For example, a person may work as an auto mechanic out of his own home garage and have spent car batteries sitting around the garage, yard or house.

Follow-up Question: Ask the participants if they know how they could find out whether there is lead in their homes. Tell the group that home test kits for lead are available at hardware and other stores, if they want to test for themselves. However, make sure they understand that such tests are not always accurate. There are also trained professionals who can check your home for lead hazards. Sometimes local health departments test homes for lead free of charge.

Routes of Exposure

Group Discussion

Time: 15 minutes

Materials: Flip chart and markers

How can lead enter our bodies?

Swallowing lead

The main way that lead gets into the body is by swallowing it. Toddlers are one age group at great risk because they are always crawling on the floor and putting everything into their mouths as part their normal activities. Exposure may occur in the following ways:

- playing where lead-contaminated dust or soil is present, touching it, then putting their fingers in their mouths;
- chewing on toys contaminated with lead dust; and
- eating flaking paint chips from peeling lead-based paint.

Paint chips with lead actually taste sweet. People can also be exposed to lead by eating or drinking.

How else can adults and children eat or drink substances containing lead?

- Taking folk remedies that contain lead. Examples: azarcon and greta, common remedies for colic, contain a very large amount of lead;
- * Eating food or drinking water that has been stored in pottery containing lead glaze
- Swallowing dust from peeling or damaged lead-based paint
- Drinking water that has traveled through lead pipes

Breathing Lead

Lead also enters the body by breathing (breathing it in). When lead is in the air, people breathe tiny particles into their lungs. Lead dust particles are easily breathed in. The lead particles travel quickly from the lungs and are absorbed into the bloodstream.

Follow-up Activity: Risks of Lead

Time: 20 Minutes

Objective/Use: To teach participants about how/where farmworkers encounter lead in their home environments.

Materials: Photographs that illustrate farmworkers and their families coming into contact with lead, flipchart paper, markers

Method:

First, ask if any of the participants have heard of lead. Collect ideas from the group, and after everyone has participated write an agreed-upon definition in the front of the room. Include general ideas of where and how lead is encountered.

Next, post the following questions in front of room. Read them aloud or have participants read them aloud to make sure that everyone understands.

- Identify the risks that you see.
- Who is getting exposed and how?
- How are the workers/families in your photograph protecting themselves or their environment?
- What other precautions could the farmworkers/families take to better protect themselves or their environment?
- Separate the participants into pairs and distribute one photograph to each pair. Give participants about 10 minutes to record their thoughts on flipchart paper.
- Once everyone is ready, ask each pair to come to front of room to present their photograph and discoveries lead exposure. After each pair finishes ask if anyone else has something to add that they noticed about the picture being presented.

Who is at Risk for Lead Poisoning?

Group Discussion

Time: 30 minutes

Materials: Flip chart, markers, Handout 2: Who is at High Risk?

Who can get lead poisoning?

- People of any age, race, geographic region, or income level can get lead poisoning. Anyone who is exposed to lead and who eats or breathes it in may develop an elevated blood-lead level.
- ✤ Lead is an especially big problem for children.
- Poor children, urban children and children living in older houses with peeling lead-based paint are at the highest risk.

Children

Why might children be more vulnerable to lead than adults?

- Children are at a greater risk from exposure to lead than adults for several reasons, including:
- Their bodies and nervous systems are still developing
- Frequent hand-to-mouth activity brings them into greater contact with lead in the environment, especially in lead dust and soil
- They absorb up to 50% of the lead they take in, and retain a larger proportion of the lead that enters their bodies.

In the United States about 4% of children under the age of six – about one million children -have high blood-lead levels. Blood lead levels are highest among one to two-year olds and among Mexican-American and African-American children. While blood lead levels remain high, the incidence of lead poisoning has actually gone down in recent years. The de-leading of gasoline and food containers in the United States was successful in reducing average blood-lead levels by 70 percent between 1970 and 1990.

Who else might be at a greater risk from exposure to lead?

Pregnant women and adults who work around lead

Pregnant Women

When a woman is pregnant, her body takes nutrients both for herself and the new baby. If she is exposed to lead, her body will absorb lead very quickly. A pregnant woman, like children, absorbs 50% of the lead that she takes in, while a non-pregnant woman absorbs only 10%. This can affect the unborn fetus as well as the mother-to-be.

Exposures During Work and Play

As mentioned earlier, some adults are exposed to large amounts of lead because of where they work or what they do for pleasure. In lead-related industries, workers may inhale lead dust and fumes, and may also eat, drink, and smoke in or near contaminated areas. If showers and changes of clothing are not provided, they can bring lead dust home on their skin, shoes, and clothing, and expose their families to the same hazards.

Who might be exposed to lead at work?

- ✤ Auto mechanics
- ✤ Lead removal workers
- Steel welders and cutters
- ✤ Carpenters
- ✤ Painters
- Plumbers and pipe fitters
- Demolition workers
- ✤ Cable splicers
- ✤ Ceramic glaze manufacturers
- ✤ Potters

What hobbies might expose us to lead?

- ✤ Home remodeling
- ✤ Glazed pottery making
- Target shooting at firing ranges
- Refinishing furniture
- Painting (some art paints have lead pigments)
- ✤ Making lead fishing sinkers or lures
- Stained-glass window making

Health Effects of Lead Poisoning

Group Discussion

Time: 15 minutes

Materials: Flip chart and markers

Signs and Symptoms of Lead Poisoning

Have you ever known anyone suffering from lead poisoning? How did they act?

In most cases, there are no visible symptoms of lead poisoning. Even children who seem <u>healthy can have high levels of lead in their blood</u>. Exposure to a small amount of lead, day after day, can make you sick over a long period of time.

The health effects of lead poisoning are often difficult to recognize. A child with lead poisoning may seem healthy while damage is being done in their bodies. Signs and symptoms don't develop until the condition is serious and sometimes the signs of lead poisoning come and go. The signs and symptoms for lead poisoning can easily be mistaken for a cold or the flu.

What are some of these symptoms?

*	Tiredness	*	Difficulty	*	Loss of appetite
*	Sleep problems		concentrating	*	Constipation
*	Dizziness	**	Depression	*	Metal taste in the
*	Irritability	*	Weakness		mouth
*	Nervousness	*	Wrist or foot drop	*	Problems having children
*	Hyperactivity (children)	*	Joint or muscle pain		
*	Headaches	*	Vomiting		

Long-term Health Effects

What are the health effects of lead poisoning in children?

- ✤ If not detected early, children with high levels of lead in their bodies can suffer from
 - Damage to the brain and nervous system
 - Behavior problems (such as hyperactivity)
 - Learning difficulties
 - Slowed growth
 - Hearing problems
 - Headaches
- Lead poisoning in children has effects that can last a lifetime. It can cause children to be less smart than they could have been. Studies have shown that lead-poisoned children have higher school drop-out rates and more behavioral problems than non-poisoned children.

What are the health effects of lead poisoning in adults?

- Difficulties during pregnancy and premature births
- Infertility and still-births
- High blood pressure
- Problems with digestion
- Nerve disorders
- Memory and concentration problems
- Muscle and joint pain

Pregnant Women and Fetuses

- Very small amounts of lead can hurt the fetus. The fetus is developing rapidly. Lead can cause brain damage and even death to the fetus. It can cause miscarriages and premature births. The woman is also at risk for lead poisoning since she absorbs 50% of the lead that enters her body. And since the fetus makes demands upon the calcium in the mother's bone structure, pregnancy can have the effect of discharging lead that was stored in her bones from prior environmental exposures.
- Lead poisoning is also very dangerous to the female reproductive system. It can make women less fertile. It causes abnormal menstrual cycles and affects menopause.

Testing for Lead: Group Discussion

Time: 15 minutes

Materials: Flip chart and markers

How can we know if a child has a high level of lead in her body?

The easiest way to know if a child is being exposed to too much lead is to get a blood test.

How can you know if there is a high level of lead in your home?

- The best way to find out if there are high levels of lead in your home is to test your home for lead.
- A blood test is one of the only ways to find out how much lead is in a child's blood. Blood can easily be tested at the child's next medical check-up. The amount of lead in the body is called the blood lead level. The blood test measures the amount of lead in a person's blood. It shows how much lead the person has been exposed to in the last six to eight weeks. Blood lead levels are measured in micrograms per deciliter of blood (µg/dl). A microgram is a measure of weight. Imagine half of a penny broken up into one million pieces - each one of the pieces is a microgram. The current acceptable lead level in the blood is 10 µg/dl. However, recent studies have shown that even lower levels of lead in the blood may cause problems.
- Because the test shows the exposure in the previous two months, it will miss a large onetime exposure that occurred more than two months earlier. For instance, exposure to lead from an herbal remedy such as *azarcon* or *greta* (which may be used for colic in a three-month old) would not show-up if the child were tested at one year of age.

- All one- and two-year olds should be tested for lead. The Federal government requires testing at the ages of 12 and 24 months for all children enrolled in Medicaid, or for any child between three and six years who has no record of prior screening. The need for testing and how often to repeat it depends on previous blood-lead test results and whether the child is at high or low risk for exposure to lead.
- Generally, the most important treatment for lead poisoning is to stop the exposure. If your child has elevated blood lead levels the best approach is to minimize exposure to lead by removing the lead from the environment. This will help to ensure a decline in blood lead levels.
- When blood lead levels are very high, doctors may prescribe medications to lower blood lead levels in a treatment known as chelation therapy. Chelation therapy is a treatment for lead poisoning, not a cure. The longer a person is exposed to lead, the greater the likelihood that damage to health will result. Some effects of lead poisoning are permanent and some are not. Therefore, it is extremely important to take steps to prevent any exposure to lead and to test a child's blood to determine if any poisoning has already occurred.

Preventing Exposure to Lead: Prevention Themes

Time: 20 Minutes

Objective: To encourage participants to creatively express different ways that farmworkers can make their homes safer environments for their families. This activity can be used as foundation building for their community outreach.

Materials: index cards with themes prepared ahead of time, box of props-include water bottle, baby bottle, pot, fake plants/flowers, sombreros, baseball hats, plastic bucket with the word "paint," toys (soccer balls, dolls, etc), mop, bucket, etc.

- Put prevention themes in hat (use examples from promotores' guide or ideas recorded by the participants in the previous activity)
- Break participants up into pairs or groups of three and have each group draw one card from the hat.
- Give groups 10 minutes to prepare their skit-remind them to use props and encourage them to be as creative as possible. Circulate while they are practicing and offer help as needed.

- ✤ Have each group come to the front to present their skit.
- ✤ After each skit is completed ask what the participants liked about the skit, what the message was, what they learned, and what other solutions they could offer.
- Prepare enough themes so that groups are able to perform twice.

Tip: Offer prizes after each group performs to help animate participants!

Preventive Measures-alternate activity Group Discussion

Time: 30 minutes

Materials: Pictures of lead sources

Method: Have the participants reassemble into their small groups. They will discuss the same lead sources as before, but this time, they will discuss what simple steps they could take to prevent exposure to lead from those sources. Have them prepare a presentation to the rest of the participants. Here are some ideas of prevention techniques.

Paint and dust

- If you rent, notify your landlord of peeling or chipping paint.
- Clean up paint chips immediately. Painting over the lead-based paint with non-lead-based paint does not eliminate the danger and removing old lead paint by sanding, scraping or burning can actually increase the hazard to your family by spreading poisonous lead dust around the house. To permanently remove a lead hazard, it must be treated by a professional trained in lead removal.
- * Keep children from chewing on window sills or other painted surfaces.

Soil and dust

- ✤ Wash children's hands often, especially before they eat and before nap time and bed time.
- ★ Keep play areas clean. Wash bottles, pacifiers, toys, and stuffed animals regularly.
- Clean floors, window frames, window sills, and other surfaces weekly. Use a mop or sponge with warm water and a detergent (like Spic N Span, dish or dishwasher detergent, or laundry soap). Anti-bacterial (like Lysol, Pinesol, bleach or ammonia) are not detergents. Use paper towels or set aside a sponge used only for lead cleaning.
- Clean or remove shoes before entering your home to avoid tracking in lead from soil.
- Do not let children play in bare soil. Cover bare soil with grass, plants, or gravel.

Automobiles

Lead emitted from car tailpipes before the 1980s is still present in soil, especially in areas of heavy traffic. Do not let children play in bare soil near busy roads.

- Do not plant vegetable gardens in soil that could be contaminated.
- Don't leave old car batteries lying around the house or yard. Take old batteries to a car parts store or car garage, where they will be disposed of appropriately. Or ask your local government recycling or waste disposal department how to dispose of them.

Drinking water

- Use only cold water for drinking, cooking, and making baby formula. Boiling will not remove lead from water.
- If water has been sitting in pipes overnight or for several hours, let the water run for about a minute to flush lead out of the pipes. The water has run long enough when it changes temperature – usually gets colder.

Food containers

- Do not cook serve, or store food in ceramics containing lead.
- Do not eat food in cans with lead-soldered seams. Lead-soldered seams are wide and folded, and have dents or solder smears. If there is a thin blue or black line on the seam, it has no lead and is safe to use. (Bring in a lead-free can to show.)
- ✤ Do not buy tamarind candy from Mexico or candy in brightly colored ceramic pots.

Home remedies

Do not use greta or azarcon. Do not use any home remedy unless you are sure what is in it.

Costume jewelry

- ✤ Do not buy metal jewelry for small children.
- Do not allow children to suck or chew on metal jewelry.

Televisions and computers

- ✤ Donate these items to organizations that will reuse or recycle them
- Do not discard them in the trash. Ask your local government recycling or waste disposal department how to dispose of them.

Work Exposures

- Wear protective equipment and clothing on the job. If you must take work clothes or shoes home, tie them up in a plastic bag.
- Try to bathe and change clothes before touching your children. If you can't shower at work, wash your hands, arms, face and neck completely before leaving.
- Change or remove shoes before entering your home to avoid tracking in lead.
- Clean washable work clothes separately from other clothing. Run the rinse cycle once before using the washer again.
- Don't leave dangerous items, like car batteries, around the house. Ask your local government recycling or waste disposal department how to dispose of them.

Hazard Maps of the Home:

Time: 30 Minutes

Objective: To allow participants the opportunity to identify where dangers are lurking in their home environments and in a group format discuss practical ways that these dangers can be mitigated.

Materials: markers, flipchart paper, and other art supplies such as scissors, glue, stickers, colored paper

Method:

- Explain to participants that they are each going to draw (or other art form) a picture/representation of their home environment marking the areas where they feel their families could be coming into contact with lead.
- ✤ Allow participants to select the materials that they will need.
- Give participants about 15 minutes to create their pictures.
- Have each participant come to the front to present their picture if time permits. If not, ask them to share in small groups.
- While participants are presenting and after they've identified the hazards, ask them and the group at large what steps can be taken to lessen the risk of each identified hazard.
- ✤ Have them record these steps according to their individual drawings.
- See promotores' guide for list of possible solutions/recommendations.

Diet and Nutrition: Group Discussion

Time: 15 minutes

Materials: Flip chart, markers, Handout 3: Good Nutrition

What foods should children eat to reduce their absorption of lead?

- What a child eats can't make the lead leave his or her body any faster, but a healthy diet will help prevent any more lead from being absorbed by his or her body. Make sure a child eats regularly and has healthy meals with plenty of iron and calcium.
- Eating regular, healthy meals with plenty of iron and calcium can help protect a child against lead poisoning because, (1) more lead is absorbed into the body on an empty stomach and (2) more lead is absorbed when iron and calcium are lacking from the diet. Foods rich in Vitamin C can help the body to best use the calcium and iron it takes in. Cut back on high fat foods, such as fried foods and butter. Fat can increase lead absorption.

What foods are high in calcium?

- Milk low-fat or nonfat milk and foods made with milk (such as soups, milk-based ice cream, and puddings)
- ✤ Yogurt low-fat yogurt
- Cheese pizza, macaroni and cheese
- Fish/seafood sardines, trout, cod, mackerel, tuna, salmon, crab, lobster
- Vegetables turnip tops, cabbage, collards, kale, broccoli, spinach, beets
- Tofu

What foods are high in iron?

- ✤ Fruits oranges, pineapples, raisins, prunes, dates and other dried fruits
- Beans and nuts baked beans, almonds, and other nuts
- ✤ Meat lean beef, pork, and chicken
- Cereal iron fortified, either hot or cold
- ✤ Fish/seafood clams, mussels, oysters, tuna, trout, cod,
- ✤ Eggs, liver, and wheat germ
- Vegetables -- leafy greens

Promoting Lead Education in the Community Role plays

Time: 45 minutes

Method: Divide participants into groups of four. Give each group about 10 minutes to prepare one of the following role plays. Remind the participants that the most effective way to educate the community is to engage individuals in a dialogue. Encourage participants to ask many questions of the community member during their roles as promotores to facilitate this exchange of ideas. Note that simply lecturing to the community members is likely to turn them off. Tell them that they are welcome to use any of the materials and props that were used during the workshop. Visit each group as they are preparing to see if they have any questions. Have each group present their role play to the rest of the participants. After each group presents their role play, be sure to provide feedback. Ask the other participants to help you point out what was done well and what can be improved.

- Promotores de salud visit the home of a woman who is pregnant and also the mother of a toddler and explain to her some of the ways her children might be exposed to lead at home.
- Promotores de salud visit a farmworker couple and explain how good nutrition is important to prevent lead poisoning for their children.
- Promotores de salud visit a family living in a rural area in a house with paint peeling off the interior walls. They discuss the possible existence of lead in the paint because the house was built in the early 1970s.

Promotores de salud visit the family of a car mechanic who often works on cars in front of his house. How can he protect himself and his family from lead poisoning?

Teach Back to Your Community:

Time: Rest of time remaining in day (you want to make sure to set aside ideally one to two hours depending on the size of the group.

Objective: To allow participants time to practice how they want to share their messages with their community members. Additionally, this activity is used as a way to build confidence and garner experience in public speaking/presentations.

Materials: flipchart paper, markers, props (list mentioned above), promotores' presentation guideline (guide attached separately)

Method:

- Give each participant a promotores' presentation guideline (set of laminated cards)
- Have them review it individually for about 10 minutes to familiarize themselves with the messages.
- Break participants up into pairs and assign one message to each pair (or have them choose)
- Give participants about 10 to15 minutes to practice how they would like to communicate that theme to the rest of the group. Encourage them to be creative in their presentation styles.
- Circulate while they are practicing to offer advice and feedback
- Have each pair come to the front of the room to present. Explain that you would like the rest of the group to give feedback after they are done.
- Ask group for feedback. What did they like? What could they do differently to strengthen their presentation?
- When all groups have presented, have them switch partners and do the activity again selecting a different theme.

Final Activity: Making an Action Plan

Objective: To give participants the opportunity to deepen their understanding of the problems created by take-home and at-home pesticide exposures and lead, identify the risks within their home environments, and come up with practical steps to take that lead toward solutions.

Time: 30 Minutes

Materials: hazard maps from previous activity, markers, flipchart paper, worksheet on action plan

Method:

- ✤ Have participants gather their hazard maps that they created in the earlier activity.
- Since they have now learned about lead, ask them to add to their hazard maps illustrating what they learned about lead.
- If there are any additions regarding pesticide exposures they would like to make they could add those now.
- Briefly have the participants share their hazard maps with the large group, focusing primarily on their additions regarding lead.
- ✤ Hand the "Action Plan" worksheet out to the participants.
- ✤ Give participants about 15 minutes to fill this out.
- Once everyone has finished bring group back together. Ask if there are any questions or final thoughts.
- Conclude activity by asking everyone to share their most important step that they are planning to take.

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Un Plan de Acción: Como se Puede Proteger Mas a su Hogar

Time: 30 Minutes

- ✤ Identifica los riesgos (en general) adentro y afuera de su casa.
- Cuáles son sus retos mayores en hacer y mantener un ambiente seguro en su hogar?
- ✤ Identifica tres riesgos que le gustaría cambiar.
 - 1. 2.
 - 3.
- Cuáles son los pasos que usted puede tomar para disminuir los riesgos? Incluye un calendario que explica cuando puede cumplir con cada paso.
- Cuáles son los materiales que necesita para hacer sus pasos?
- Por último, cual es el cambio que usted le gustaría que pasara?

Conclusion

Time: 15 Minutes

Evaluation #1

Materials: flower parts (flower petal cut-outs; middle of flower; flower stem); smiley faces; bug parts (spray can, bugs); markers; tape

- ✤ Hand out petals, smiley faces, and bugs to participants.
- Explain that the petals represent things that they learned this weekend; smiley faces represent what they liked about the training; and bugs represent what they disliked or would change about the training.
- Give the participants enough time to think about what they would like to put on their petal, about 10 or 15 minutes.
- Then have each participant come up to the front and present their petal, bug, and smiley face.
- ↔ Write what they say on their item and tape it to the wall in the correct spot.
- ✤ At the end, ask if the participants have additional comments they would like to add.

Alternatively you can do the evaluation method below:

Evaluation #2

Materials: Ball of yarn

Wrap-Up

- Ask the group to stand in a circle with the facilitator holding the ball of yarn.
- Explain that you will ask each person a few questions-and pose and answer them yourself first. After you finish answering the questions, hold on to the end of the ball of yarn and then throw it to another participant across the circle from you. Ask the person who caught the ball of yarn the same questions. After they finish answering have them hold on to a piece of the yarn as they throw the rest of the ball to yet another participant (the idea is that you are creating a web). The questions are as follows:
- ♦ What are two things you learned during this training?
- What did you like the most?
- What would you like to learn more about in the future?
- What is one thing that you will do differently (behavior change) as a result of this training?
- Ask if anyone has any additional things to add to the group.
- Thank everyone for their participation and contribution to the trainings.

Exposure to Pesticides

What is exposure?

Exposure means that you have come into contact with a pesticide and it has entered your body.

How can a pesticide enter my body?

- > Pesticides can enter your body in three ways:
 - 1. Breathing in the air that contains the pesticide;
 - 2. Eating or drinking something that contains the pesticide; and,
 - 3. Touching something that has the pesticide on the surface or within it.



If I'm exposed to a pesticide, will I get sick?

- > This depends on many factors about the exposure:
 - The way in which the pesticide enters the body; and,
 - The quantity of the pesticide that there is in the body.
- The factors that determine if you will get sick as a result of exposure to pesticides include:
 - The type of pesticide (if it is very dangerous);
 - The quantity (to how much was the person exposed);
 - The duration (for how long the exposure occurred); and
 - The frequency (how many times the person was exposed).
- > People also react in different ways to pesticides.
 - Some people can be exposed to a pesticide, but they don't become sick.
 - Other people can be more sensitive to pesticides and get sick as a result of the exposure.
 - Children can be more sensitive to pesticides and can get sick more easily than adults.

Source: Agency for Toxic Substances and Disease Registry (ATSDR)

Handout 1: Exposure to Pesticides





Who Is at High Risk for Lead Poisoning?

Small children (younger than 6 years old)

Young children are at high risk for lead poisoning because their bodies and nervous systems are still developing. Risks are increased because they put everything in their mouths and they have a lot of contact with floors, dust and dirt that can contain lead particles. In addition, children absorb 50% of the lead that enters their bodies.



How does lead affect children's health?

- behavioral and learning problems
- slower growth and development
- speech and hearing problems
- learning disabilities
- high level exposures can result in death

Pregnant women

A pregnant woman absorbs 50% of the lead that enters her body, compared to other adults who absorb 10%. In addition, the lead stored in her body since before the pregnancy can be easily passed on to the fetus. Lead can also cause problems during the pregnancy and affect the development of the fetus.



How can lead affect a pregnancy?

- premature birth
- low birth weight
- miscarriage or stillbirth
- brain damage to the fetus

Adults exposed to lead at work or through their hobbies

Some occupations (like mechanics, carpenters, painters and plumbers) and hobbies (like leaded pottery, furniture refinishing or home remodeling) can expose adults to high levels of lead. Adults engaged in these activities should take precautions to limit their exposure to lead, especially pregnant women. They should also bathe and change clothes before touching other members of their families.



Handout 2: Who is at High Risk?

How does lead affect an adult's health?

- danger to the reproductive system
- high blood pressure
- digestive problems
- nervous disorders
- difficulties with memory and concentration

Good Nutrition Can Protect your Child from Lead Poisoning

If your child eats foods rich in calcium and iron, it is more difficult for lead to enter the bloodstream. Greasy foods can increase the amount of lead absorbed by the body.

Foods rich in calcium:



Foods rich in iron:



Foods rich in Vitamin C Help your body to use the calcium and iron



Limit your intake of caffeine and greasy foods



Handout 3: Good Nutrition